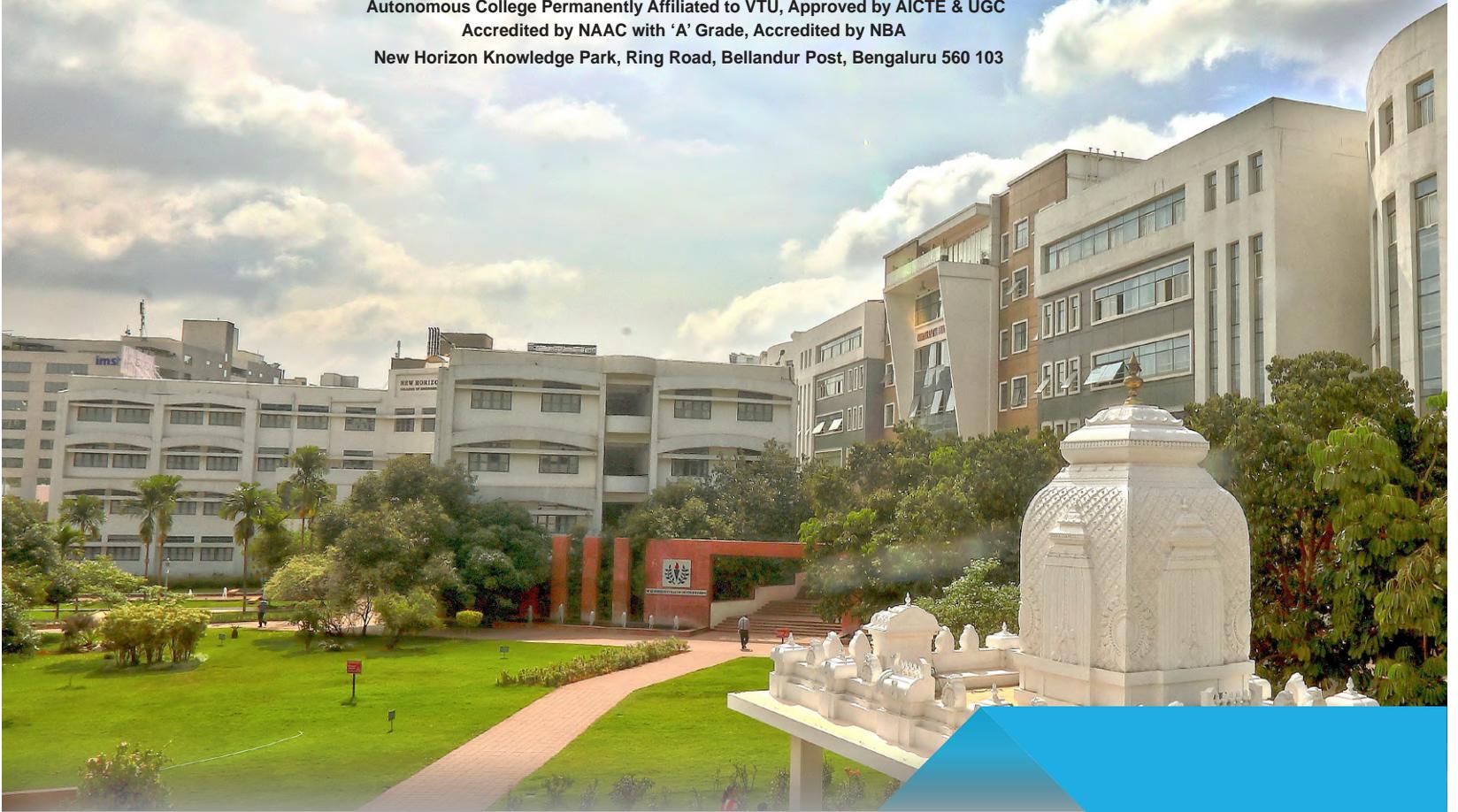




Autonomous College Permanently Affiliated to VTU, Approved by AICTE & UGC
Accredited by NAAC with 'A' Grade, Accredited by NBA
New Horizon Knowledge Park, Ring Road, Bellandur Post, Bengaluru 560 103



Department of Electronics & Communication Engineering **SELF ASSESSMENT REPORT (SAR)**

Submitted to



+91 9880534935, +91-80-66297777
www.newhorizonindia.edu

**Self Assessment Report for Accreditation
of
B.E. Electronics & Communication
Engineering
(TIER-I)**



**National Board of Accreditation,
NBCC Place, 04th Floor East Tower,
Bhisham Pitamah Marg,
Pragati Vihar, New Delhi – 110 003**

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING



**(AUTONOMOUS INSTITUTION AFFILIATED TO VISVESVARAYA TECHNOLOGICAL UNIVERSITY
(VTU), BELGAVI)**

**Ring Road, Kadubisanahalli, Bellandur Post, Near Marathalli
Bangalore 560103**

Serial Code & Link to the Item	Item	Page No.
PART A	Institutional Information	1-8
PART B	Criteria Summary	9
	Program Level Criteria	
1	Vision, Mission and Program Educational Objectives	10-29
2	Program Curriculum and Teaching – Learning Processes	30-205
3	Course Outcomes and Program Outcomes	206-263
4	Students' Performance	264-397
5	Faculty Information and Contributions	398-521
6	Facilities and Technical Support	522-557
7	Continuous Improvement	558-589

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 | <input type="checkbox"/> |
| University | <input type="checkbox"/> |
| Deemed University | <input type="checkbox"/> |
| Autonomous | <input checked="" type="checkbox"/> |
| Any other (Please specify) | <input type="checkbox"/> |

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	<input type="checkbox"/>
State Government	<input type="checkbox"/>
Government Aided	<input type="checkbox"/>
Self - financing	<input checked="" type="checkbox"/>
Trust	<input checked="" type="checkbox"/>
Society	<input type="checkbox"/>
Section 25 Company	<input type="checkbox"/>
Any Other (Please specify)	<input type="checkbox"/>

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

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	B.B.A., B.Com., B.C.A.	Ring Rd, near Marathalli, Kaverappa Layout, Kadabeesanahalli, Bengaluru, Karnataka 560103
New Horizon College Kasturinagar	1998	B.B.A., B.Com., B.C.A.	3rd A Cross, 2nd A Main Rd, East of NGEF Layout, Kasturi Nagar, Bengaluru, Karnataka 560043

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

Table A.7

S. No	Program Name	Program Applied level	Year of Start	Year of AICTE approval	Initial Intake	Intake Increase	Current Intake	Accreditation Status*	From	To	Program for consideration	Program for duration
1.	Bachelor of Engineering (BE)	UG	2001	2001	60	Yes	180	Granted accreditation for 3 years for the period (specify period)	2017	2020	Yes	4

*** Write applicable one:**

Applying first time

- *Granted provisional accreditation for two/three years for the period (specify period)*
- *Granted accreditation for 5/6 years for the period (specify period)*
- *Not accredited (specify visit dates, year)*
- *Withdrawn (specify visit dates, year)*
- *Not eligible for accreditation*
- *Eligible but not applied*

8. Programs to be considered for Accreditation vide this application

Table A.8

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.

9. Total number of employees:

A. Regular Employees (Faculty and Staff):

Table A.9a

Items		CAY		CAYm1		CAYm2	
		Min	Max	Min	Max	Min	Max
Faculty in Engineering	M	124	137	127	141	139	154
	F	107	118	104	115	101	112
Faculty in Maths, Science & Humanities teaching in engineering Programs	M	31	34	27	30	26	28
	F	44	48	42	46	40	44
Non-teaching staff	M	102	113	99	109	103	114
	F	125	138	125	138	123	136

Note: All the faculty whether regular or contractual (except Part-Time), will be considered. The contractual faculty (doing away with the terminology of visiting/adjunct faculty, whatsoever) who have taught for 2 consecutive semesters in the corresponding academic year on full time basis shall be considered for the purpose of calculation in the Faculty Student Ratio. However, following will be ensured in case of contractual faculty:

1. Shall have the AICTE prescribed qualifications and experience.
2. Shall be appointed on full time basis and worked for consecutive two semesters during the particular academic year under consideration.
3. Should have gone through an appropriate process of selection and the records of the same shall be made available to the visiting team during NBA visit

CAY- Current Academic Year

CAYm1- Current Academic Year minus1= Current Assessment Year

CAYm2 - Current Academic Year minus2=Current Assessment Year minus 1

B. Contractual Staff Employees (Faculty and Staff):*Table A.9b*

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

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
MCA	Shift1 √	Shift2

Table A.10

Engineering and Technology- UG Shift-1

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

Engineering and Technology- UG Shift-2

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

Engineering and Technology- PG Shift-1

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

Engineering and Technology- PG Shift-2

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

Engineering and Technology- MBA Shift-1

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

Engineering and Technology- MCA Shift-1

Item	2019-20	2018-19	2017-18
Total no. of Boys	68	82	96
Total no. of Girls	33	49	36
Total no. of students	101	131	132

Note: In case the institution is running programs other than engineering programs, a separate table giving similar details is to be included.

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 hands-on 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:

i. Name: Dr. Manjunatha

Designation: Principal

Mobile No: 9901916000

Email id: principal@newhorizonindia.edu

ii. NBA coordinator:

Name: Dr M S Ganesha Prasad

Designation: Dean, Prof & Head – Mechanical Engg.

Mobile No: 9886921136

Email id: dean_mee@newhorizonindia.edu

PART B: Criteria Summary

Name of the program: **Electronics & Communication 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	84.73
5.	Faculty Information and Contributions	200	193.73
6.	Facilities and Technical Support	80	80
7.	Continuous Improvement	75	75
Institute Level Criteria			
8.	First Year Academics	50	46.74
9.	Student Support Systems	50	50
10.	Governance, Institutional Support and Financial Resources	120	120
	Total	1000	976

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

CRITERION 1

VISION – MISSION

&

PROGRAM EDUCATIONAL OBJECTIVE

CRITERION 1	VISION, MISSION AND PROGRAM EDUCATIONAL OBJECTIVES	50
--------------------	---	-----------

About the institute:

New Horizon College of Engineering was established in the year 2001 as a self-financing minority institute, founded and managed by “New Horizon Educational and Cultural Trust”, which has completed 50 years of footing in the field of quality education. The Motto of the Trust is “IN PURSUIT OF EXCELLENCE”, and through New Horizon College of Engineering, the trust is involved in imparting quality technical education to the deserving & meritorious students. The trust has seven high performing Institutions covering the entire gamut of educational needs of the society from kindergarten till Doctoral Program in various disciplines of learning.

New Horizon college of Engineering is now an Autonomous college affiliated to Visvesvaraya Technological University (VTU) Belagavi, approved by All India Council for Technical Education and University Grants Commission. It is an ISO 9001:2008 certified Institution, and is accredited by NAAC with ‘A’ grade. The institution is located in the IT corridor of Bangalore, and is surrounded by MNCs and IT giants.

New Horizon College of Engineering started with 4 UG programs with an approved intake of 60 in Electronics and Communication Engineering, Information Science & Computer Science and 40 in Electrical and Electronics Engineering. Over the years, the Institution has grown leaps and bounds. Within a short span of time the institute acquired UG, PG & Research programs. With the development in infrastructure, with the addition of new courses, along with the induction of educated & experienced faculty, and thus creating an excellent academic ambience, the college today has 7 programs at the under-graduate level and 4 programs at the post-graduate level. The campus has 9 Industry sponsored laboratories, which are established in technical collaboration with the industries of high repute, and these centers offer interdisciplinary courses with the curriculum framed by industry experts.

In addition, the institution has separate centers such as, Center for Research & Development, Center for Life Skills and Lifelong Learning, Center for Entrepreneurship Development, Industry-Institute Interaction Cell etc. New Horizon Educational and Cultural Trust is a Recipient of Prestigious “Rajyotsava State Award 2012” Conferred by the Government of Karnataka. Dr. Mohan Manghnani, Chairman of New Horizon Educational and Cultural Trust was awarded and declared “THE DOYEN – GUARDIAN OF KNOWLEDGE” by The Hindu Group on 27th March, 2017. New Horizon College of Engineering has been awarded with Best Engineering College in India-South. In addition, it has been awarded for filing the highest number

of patents, by the 32nd Indian Engineering Congress. The institute has Indo-French partnership agreement, which aims to strengthen the overall education system for teachers as well as students. This agreement provides a study-abroad program in which the students can study in the universities of France, for a period of one semester. The institution has been honored with Best Institution towards Industry Focus Education delivery for full employability.



Figure 1.1: Dr. Mohan Manghnani, Chairman of New Horizon Educational Institutions, was awarded and declared “THE DOYEN – GUARDIAN OF KNOWLEDGE” by The Hindu Group on 27th March, 2017.



Figure 1.2: Dr. Mohan Manghnani, Chairman and Managing Trustee of New Horizon Educational Institutions received the prestigious state award “Kannada Rajyotsava 2012” from the Hon'ble chief Minister of Karnataka.



Figure 1.3: Dr. Marlene Kanga, President, World Federation of Engineering Organizations (WFEO) from Australia has presented an "Award for Filing Highest Number of Patents" to New Horizon College of Engineering (NHCE), Bangalore during 32nd Indian Engineering Congrats held at Hotel Le Royal Meridian, Chennai on 21 Dec 2017, Organized by the Institution of Engineers (India) which is the largest professional body in the World. Padmashri Prof. R. M. Vasagam and Dr. R. Venkatesan, Chairman, IPR Cell, IEI, KLC both National Council Members of IEI look on.



Figure 1.4: Mr. Suresh Prabhu Hon’ble Minister for Commerce and Industry and Civil Aviation has presented an “Award for The Most Preferred Institute with Global Exposure” to New Horizon College of Engineering, Bangalore during the 12th ASSOCHAM Higher Education Summit 2019 at New Delhi on 21st February 2019



Figure 1.5: New Horizon College of Engineering has been awarded "Technology Excellence Award" by 7th Indian Technology Congress-2019 for "*Creating Front Ranking Higher Educational Institution*". The award was presented by Dr. C.N. Ashwathanarayan - Deputy Chief Minister of Karnataka and Minister of Higher Education, IT & BT and Science & Technology on 4th September 2019 at NIMHANS Convention Center, Bengaluru. *Padma Shri.* Prof. R. M. Vasagam, Chairman, ITC Awards Committee and Dr. Wooday P Krishna, Vice President, ITC look on.

About the department:

The field of Electronics and Communication Engineering is the one that offers a whole new world of exciting challenges and opportunities. It plays a significant role in almost every sphere of our life, whether it is planetary mission or remote sensing, smart city or self-driving cars, robots or smart mobiles or IoTs, Electronics and Communication Engineering is at the core.

The Department of Electronics and Communication Engineering at New Horizon College of Engineering (NHCE) was established in the year 2001 with an intake of 60 students. The intake of the department then increased to 120 during the year 2006, and the department progressed in its intake to 180 in 2012. The department hosts a recognized ‘research center’ of Visvesvaraya Technological University (VTU), Belagavi and offers Ph.D. program.

The curriculum designed for the four year B.E. degree program ensures not only a sound understanding and strong foundation in all areas of Electronics and Communication Engineering, but also promotes additional activities and updates, which will enhance the employability as well as the entrepreneurship.

The Department of Electronics and Communication takes pride in highly qualified, motivated and experienced faculty members. The faculty members have rich academic, research and industry experience. Apart from the regular faculty members, technology experts from reputed organizations visit department of ECE to interact with students, and to run industry relevant technology courses to enrich their competency skills. The department has signed MoU with Edusaksham, to train students in VLSI domain, and to conduct relevant events of value addition. The department has also signed MoU with “Electronics for You”, for encouraging students to implement mini and main project ideas.

The Department of Electronics and Communication Engineering has a total strength of 629 students in the current undergraduate program. The course work of this program strongly emphasizes on learning the fundamentals and analyzing the latest technology, to develop the creativity amongst students, by encouraging them to take up real world projects. The Department of Electronics and Communication Engineering has a vision of creating high quality engineering professionals who can transform society and earn global recognition.

The Department of Electronics and Communication Engineering has eight laboratories equipped with modern tools and equipment’s, to fulfill the curriculum requirement and to carryout research activities. Class rooms are equipped with necessary teaching aids to provide healthy ambience for effective learning. Department conducts frequent workshops, seminars and guest-lectures to give an exposure on current trends in the

area of Electronics and Communication Engineering. Students are motivated to participate in National and International co-curricular events, which happen both in-house and off-campus. The Department has the credit of receiving awards both in state level and internationally.

The department has 3 student clubs known as ‘Technology Sharing’ Club, ‘Electronics Hobby’ Club, and ‘Professional Connect’ Club, in which students conduct various activities to have knowledge enrichment on changing technologies, to learn the skill of transforming project into product, and to be connected to professionals. Some of the activities happen in association with professional bodies such as IETE, ISTE, IEEE and MTS. Apart from these clubs, students are encouraged to be part of co-curricular as well as extra-curricular clubs that function at the institutional level.

The students of Department of Electronics and Communication engineering get absorbed in reputed companies such as Intel, Cisco, Sankalp Semiconductors, Schneider Electric, IBM, Hewlett Packard, Sony, Nokia, Cognizant, Microchip, VMware, Wipro, TCS, Capgemini, ARM, Centurylink, FTD automation, ITC Infotech, L&T Infotech, Mindtree, Broadcom, Mphasis, Oracle, Qualcomm, Eurofins, and many other reputed organizations.

CRITERION-1: VISION, MISSION & PROGRAM EDUCATIONAL OBJECTIVES (50)

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

INSTITUTE VISION

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.

INSTITUTE MISSION

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 their involvement 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 extra-curricular activities.

DEPARTMENT VISION

To create high quality engineering professionals who can serve the society and earn global recognition.

DEPARTMENT MISSION

To build strong foundation in Electronics and Communication Engineering aspects by exposing students to state of the art technology and research.

To strengthen the curriculum through interaction with industry experts to equip the students with the required competency.

To mould students to share technical knowledge and to practice professional and moral values.

1.1 B. Appropriateness / Relevance of the Statements

The Vision and Mission Statements of the department indicate the institution-central uniqueness. The department aims to work and mirror the philosophical goals of the institute.

The Statements endorse to outfit the inspirational bearing, and mirror the picture of the institution conduct, through which the activities are guided. The statements are precise, concise, and enhance the aims of the Stakeholders.

Rationale for the Department's Vision:

As the technical needs of the society are ever growing both in national and international arena, the vision of the department is stated by considering the present advances with electronics and communication technologies, as well as by envisioning the advents of the same in future.

Towards the accomplishment of its Vision, the department offers varieties of courses such as 20 core courses, 28 professional elective courses and 3 open elective courses. In addition, the department guides and evaluates the mini-projects in each semester of II and III years, along with internship and main project in the final year. The department is also part of the study-abroad program, and the department motivates the students for higher education.

Rationale for the Department's Mission:

- To accomplish the Vision of the department, the Mission should be progressive.
- Providing excellent infrastructure, state-of-the-art laboratories, and having qualified, experienced and eminent faculty members, so as to improve the quality of technical education.
- Promoting student-teacher interactions, providing conducive environment to learn, and thus encouraging the students to involve in research, thus building interaction with outside world, are identified as source of the basic needs to meet the present day technical challenges.
- Introducing professional ethics and morale, and life skills in the curriculum to inculcate social commitment among students.

1.1 C. Consistency of the department statements with the institutional statements

- In characterizing vision and mission of the department, most extreme consideration had been taken to be reliable with the institute vision and mission statements, with the feedback from the stakeholders as the input.
- The vision and mission statements of the department are highly correlated with vision and mission statements of the institute.

Table 1.1: Mapping of Department Vision with Institute Vision

Institute Vision	Department Vision
To emerge as an institute of eminence in the fields of engineering, technology and management in ² servicing the industry and the nation by empowering students with a ¹ high degree of technical, managerial and ¹practical competence.	To create ¹ high quality engineering professionals who can ² serve the society and earn ¹ global recognition.

Table 1.2: Mapping of Department Mission with Institute Mission

Institute Mission	Department Mission
To ¹ strengthen the theoretical, practical and ethical dimensions of the learning process by ² fostering a culture of research and innovation among faculty members and students.	To build ¹ strong foundation in Electronics and Communication Engineering aspects by exposing students to ² state of the art technology and research.
To encourage ³ long-term interaction between the academia and industry through the involvement in the design of curriculum and its ⁴ hands-on implementation.	To strengthen the curriculum through ³ interaction with industry experts to equip the students with the ⁴ required competency.
To strengthen and mould students in ⁵ professional, ⁶ethical, social and environmental dimensions by encouraging participation in co-curricular and extracurricular activities.	To mould students to share technical knowledge and to practice ⁵ Professional and ⁶ moral values.

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

The Program Educational Objectives (PEOs) of the UG program in Electronics and Communication Engineering are established through consultation process amongst stake holders as described in section 1.4 and these address the following broad categories:

- (i) Preparation: Employment/Higher studies
- (ii) Core Competence: Discipline knowledge
- (iii) Professionalism: Professional Value-Knowledge development
- (iv) Life Long Learning: Environment
 - What our graduates could do best?
 - How our graduates would perform problem solving, and using which skills?
 - What value addition our graduates will have?

The PEOs of the program are:

PEO-1: To produce graduates with understanding of fundamentals and applications of Electronics and Communication Engineering.

PEO-2: To hone graduates with ability to apply, analyze, design and develop electronic systems.

PEO-3: To enhance graduates with latest technologies to enable them to engineer products for real world problems.

PEO-4: To build leadership qualities, management skills, communication skills, moral values, team spirit and lifelong learning ability for the graduates.

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

1.3 A. Adequacy in respect of publication & dissemination

The Vision, Mission and PEOs are published and disseminated at:

- ❖ Institute website:
<http://newhorizonindia.edu/nhengineering/>
- ❖ Department website:
<http://newhorizonindia.edu/nhengineering/department-of-electronics-and-communication-engineering/>
- ❖ HOD's Chamber
- ❖ Staff rooms
- ❖ Laboratories
- ❖ Department Notice Boards
- ❖ Department corridors
- ❖ Syllabus books
- ❖ Course files
- ❖ Lab manuals
- ❖ Practical record books
- ❖ Internal Assessment books
- ❖ Department Newsletter- ECE CONNECT
- ❖ College Prospectus

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 interactions. (Refer Figure 1.6)

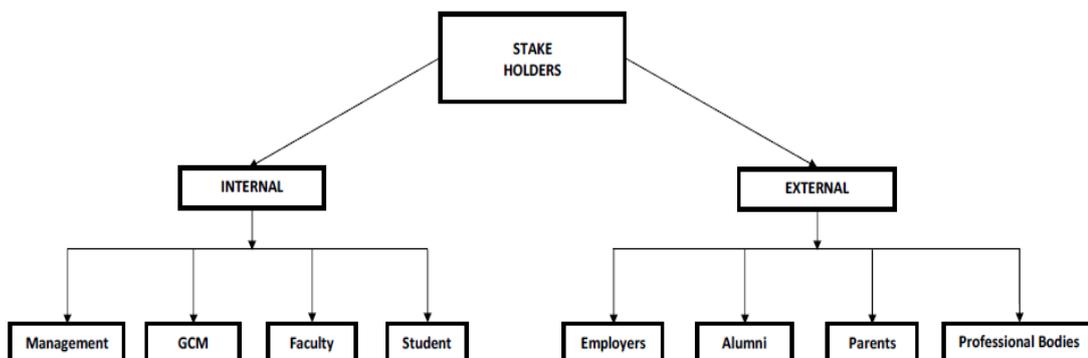


Figure 1.6: Stakeholders

1.3 B. Process of dissemination among stakeholders

As the students are the immediate stakeholders, during the beginning of every academic year, an orientation program is conducted at the department, to all the II year students, during which, the students are made aware of the vision, mission and PEO statements of the department. In addition, every year, a general interaction program is conducted to the pre-final and final year students separately, discussing the purpose as well as the importance of these statements.

Further, the Vision & Mission statements along with the PEOs, are disseminated to all the other stakeholders of the program, by the following means:

- Academic Council Meetings
- Department Advisory Board meetings
- Faculty meetings
- Alumni meetings
- Student workshops /Club activities
- Industry expert interactions
- Faculty Development Programs
- Professional activity meetings
- Parent-Teacher Meetings

In addition to the above, dissemination of PEOs to various stakeholders of the program is done at the meetings of faculty members, Board of Studies (BoS) and Program Assessment Committee (PAC).

1.3 C. Extent of Awareness of Vision, Mission & PEOs among the Stakeholders

ROLE OF STAKEHOLDERS:

Student:

- Most prominent role in the program.
- Their feedback is considered to introduce innovative teaching and learning methodologies.
- Their input will help the program to introduce the elective courses to meet the changing trends.

Faculty:

- Plays a vital role in working of the program.
- Involves in various committees to check the consistency of the program.
- Provides input for designing the program, establishment of PEOs/POs, Course Outcomes and assessment.

Alumni:

- They are a measure of long term success of the program.
- Alumni feedback helps in the curriculum design to meet the changing trends in engineering and technology.
- Recall their experiences during their stay in the institute and advice the department with necessary inputs with respect to student's career.
- They are the ambassadors of the program.

Employer:

- Represents the major end users of the graduates.
- Gives higher focus to the program on future data to create awareness with the industries.
- Gives inputs which overcome the gap between program and industry.

Parents:

- Expect their wards to be in good professional career or/and higher education.
- Interact with the department for their specific expectations out of the program.

Professional bodies:

- Help students to interact with industries.
- Help in conducting seminars/workshops.
- Help the graduates to take up research work.

To ensure awareness to the external as well as internal stakeholders, the Vision, Mission and PEOs are published in the institute's website, Departmental website, Principal's chamber, college brochure, college and Department newsletters, HoD's Chamber, staffrooms, departmental laboratories, and display boards in the department corridors. The extent of awareness is monitored during the regular interactions / relevant meetings.

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

A. Process for defining Vision and Mission of the department

The department established its Vision and Mission through consultative process involving the stake holders of the institute / department such as Management, Faculty members, students, staff, parents, alumni and employers, keeping in mind the future scopes of the department and the societal requirements, and this process is illustrated in Figure 1.7. In establishing the Vision and Mission of the department, the following steps were followed:

Step 1: Vision and Mission of the institute are taken as basis.

Step 2: Program Assessment Committee (PAC) collects the views of Professional bodies, Industry experts, Alumni members and Parents, and conducts brainstorming sessions to prepare draft statements.

Step 3: The Department Advisory Board (DAB) shortlist and finalize the statements.

Step 4: The statements are reviewed by Internal Quality Assurance Cell (IQAC) to check consistency with the Institute Vision and Mission.

Step 5: If the statements are approved by IQAC, establish the vision and mission statements or else review and update the statement.

Table 1.3: Constitution of PAC

Designation	Current Designation
Chairperson	Head of the Department
Program Chair	PAC Coordinator
Members	Module Coordinators

Table 1.4: Constitution of DAB

Designation	Current Designation
Chairperson	Head of the Department
Members	Senior faculty members
Member	External Academician
Members	Industry Experts (2)
Members	Alumni (2)
Members	Students from each batch (2)

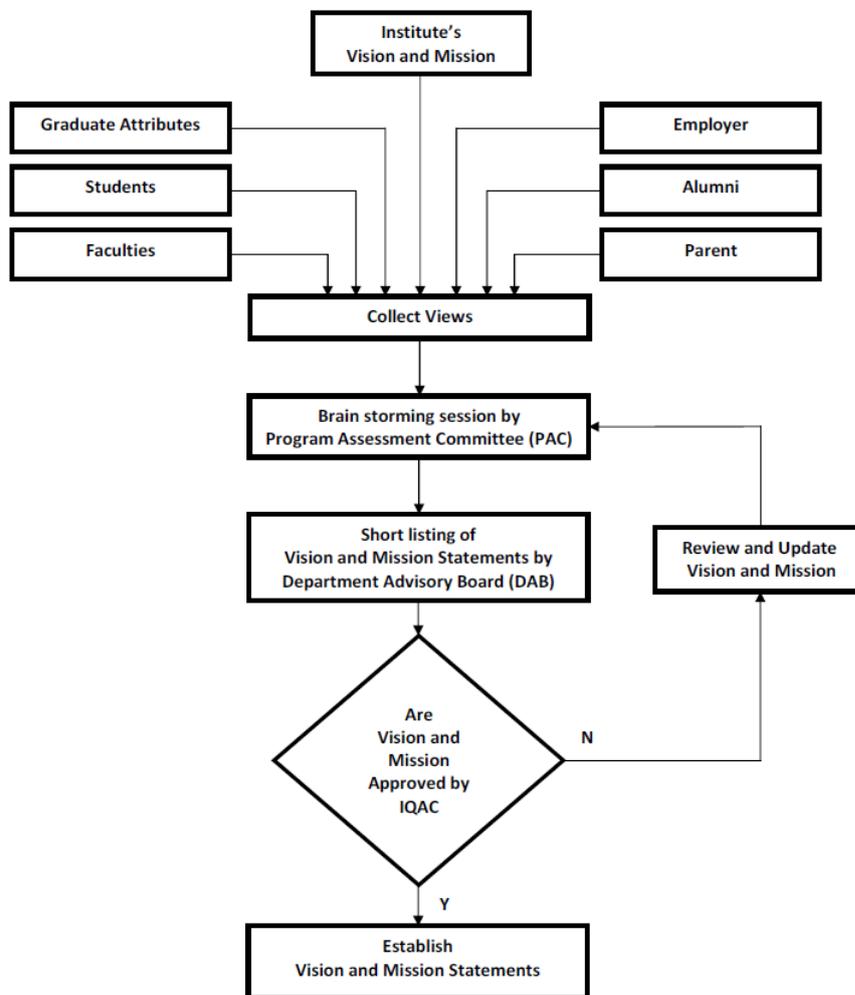


Figure 1.7: Process for defining Vision and Mission of the department

B. Process for defining the Program Educational Objectives of the Program:

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:

Step 1) Vision and Mission of the department are taken as basis to interact with various stake holders, and program outcomes defined by NBA are also kept in view.

Step 2) Program coordinator consults the stakeholders and collects their views and submits the views to Program Assessment Committee (PAC).

Step 3) PAC summarizes the collected views and expresses its opinion on the views and forward the same to Departmental Advisory Board (DAB).

Step 4) DAB deliberates on the views expressed by the PAC and formulates the accepted views based on which PEOs are drafted.

Step 5) After the formulation of PEOs, the PEO statements are reviewed by IQAC.

Step 6) Final decision is taken by IQAC for the establishment of PEOs.

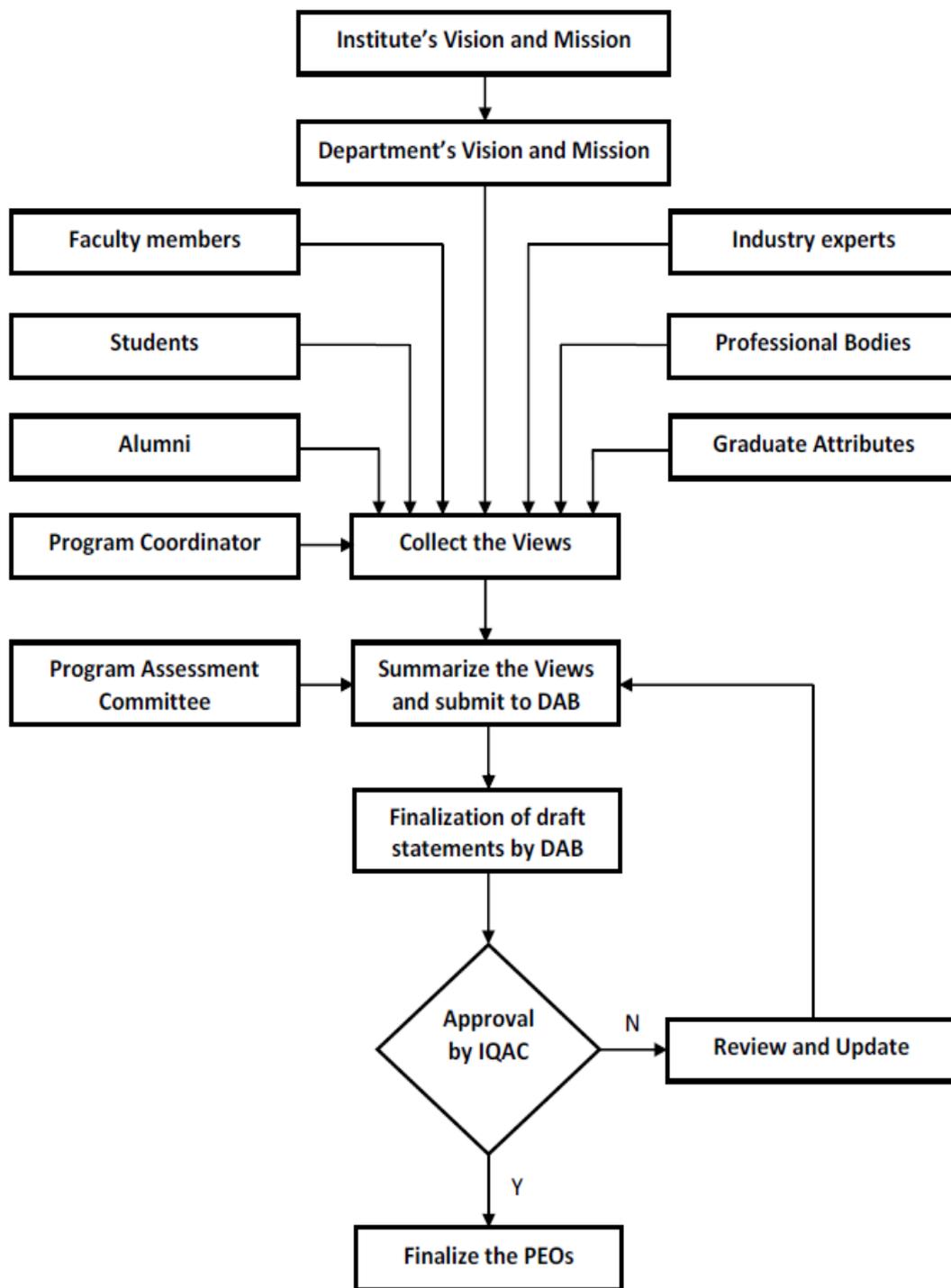


Figure 1.8: Illustration of the process for establishing the PEOs

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

The consistency of PEOs with Mission of the department is shown in Table 1.5.

Table 1.5: Consistency of PEOs with Mission of the department

Mission Statements	To build strong foundation in Electronics and Communication Engineering aspects by exposing students to state-of-the-art technology and research.	To strengthen the curriculum through interaction with industry experts to equip the students with the required competency.	To mould students to share technical knowledge and to practice professional and moral values.
PEO-1	3	2	1
PEO-2	3	3	2
PEO-3	3	3	2
PEO-4	2	2	3

Correlation levels are defined as:

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

Consistency/justification of co-relation parameters of the PEO-Mission matrix

Mission 1 Statement:

The correlation between **PEO1 and M1 is high** because, to produce graduates with understanding of fundamentals and applications of Electronics and Communication Engineering we have to build strong foundation in Electronics and Communication Engineering aspects by exposing students to state-of-the-art technology and research.

To hone graduates with the ability to apply, analyze, design and develop electronic systems, we have to build strong foundation in Electronics and Communication Engineering aspects by exposing the students to state-of-the-art technology and research. Hence the correlation between **PEO2 and M1 is high**.

To enhance graduates with latest technologies and enabling them to engineer products for real world problems, it is very essential to build strong foundation in Electronics

and Communication Engineering aspects by exposing students to state-of-the-art technology and research. Hence the correlation between **PEO3 and M1 is also high**. The correlation between **PEO4 and M1 is medium** because PEO4 emphasizes more on leadership qualities and lifelong learning.

Mission 2 Statement:

The correlation between **PEO1 and M2 is medium** because PEO1 addresses the fundamentals and applications, and hence competency is not addressed here.

The correlation between **PEO2 and M2 is high** because strengthening of the curriculum through interaction with industry experts is very much essential to equip the students with the required competency.

The correlation between **PEO3 and M2 is high** because the knowledge of latest technologies and the relevant application areas in the real world can be clearly comprehended by means of interaction with industry experts.

The correlation between **PEO4 and M2 is medium** because PEO4 achieves communication skills, team spirit and lifelong learning.

Mission 3 Statement:

The correlation between **PEO1 and M3 is low** because the student will be able to share technical knowledge to external world only after thoroughly understanding the fundamentals of Electronics and Communication Engineering.

The correlation between **PEO2 and M3 is medium** as this PEO is more inclined towards problem solving and higher order cognitive skills.

The correlation between **PEO3 and M3 is medium** as this PEO is addressing need of becoming aware of the latest product needs.

The correlation between **PEO4 and M4 is high** because both the mission and objectives are well aligned.

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

CRITERION 2

PROGRAM CURRICULUM AND TEACHING - LEARNING PROCESSES

CRITERION 2	PROGRAM CURRICULUM AND TEACHING LEARNING PROCESSES	100
--------------------	---	------------

2.1 Program Curriculum (30)

2.1.1 State the process for designing the program curriculum (10)

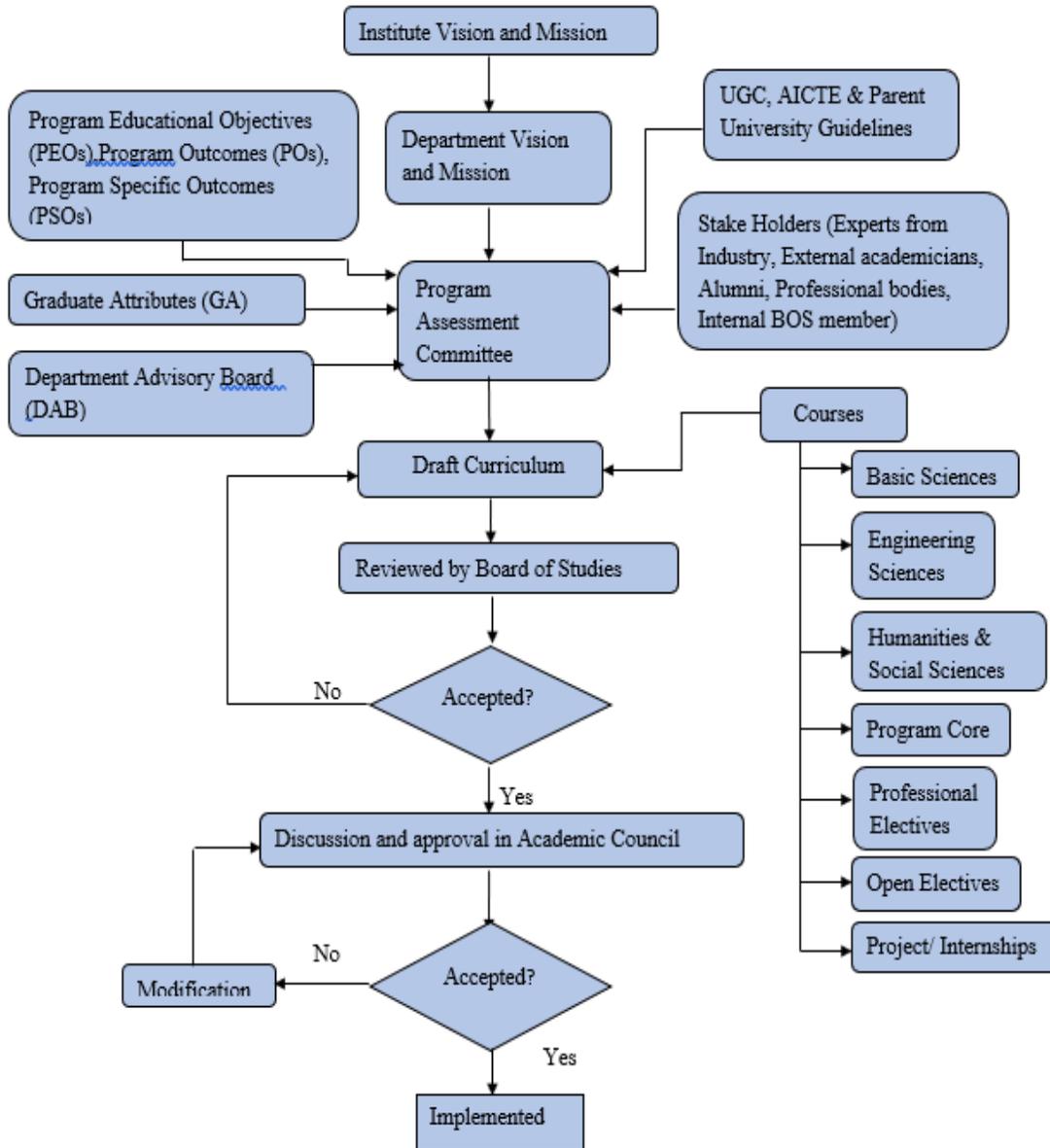


Figure.2.1.1: Process for designing/ revision of Program Curriculum

The program curriculum is drafted by Program Assessment Committee (PAC) based on the comments and reviews received from Stake Holders such as experts from Industry, external academicians, Professional bodies, Alumni, Internal BOS member considering PEOs, PSOs& POs of the department. Curriculum is then reviewed by the Board of Studies committee constituted at the department level. The BOS consists of internal faculty members, experts from the industry, senior academician, university nominee and alumni. The prepared curriculum is discussed and corrections/suggestions from BOS members are incorporated. Proceedings of the BOS meeting, are submitted for the approval in academic council meeting. The accepted curriculum is implemented.

2.1.2 Structure of the Curriculum (5)

B.E. Program

Department of Electronics and Communication Engineering
SCHEME OF TEACHING AND EXAMINATION (175 Credits)

ID	Course Code	Course Title	Lecture (L)	Tutorial (T)	Practical (P)	Total Hours	Theory Credits	Practical Credits	Total Credits
1	18MAT11	Applied Mathematics-I	2	2	0	4	3	0	3
2	18PHY12	Engineering Physics	3	0	0	3	3	0	3
3	18MEE13	Elements of Mechanical Engineering	3	0	0	3	3	0	3
4	18CIV14	Elements of Civil Engineering	3	0	0	3	3	0	3
5	18EEE15	Basic Electrical Engineering	3	0	0	3	3	0	3

Criterion-2 Self-Assessment Report (SAR)

6	18PHL16	Engineering Physics Lab	0	0	2	4	0	2	2
7	18EEL17	Basic Electrical Engineering Lab	0	0	2	4	0	2	2
8	18HSS171	Essential English	Mandatory Course			2	0	0	0
9	18MAT21	Applied Mathematics –II	2	2	0	4	3	0	3
10	18CHE22	Engineering Chemistry	3	0	0	3	3	0	3
11	18CSE23	Introduction to Programming with C	3	0	0	3	3	0	3
12	18MEE24	Computer Aided Engineering Drawing	1	0	4	5	3	0	3
13	18ECE25	Basic Electronics	3	0	0	3	3	0	3
14	18HSS26	Professional Communication	2	0	0	2	2	0	2
15	18CHL27	Engineering Chemistry Lab	0	0	4	4	0	2	2
16	18CSL28	Programming with C Lab	0	0	4	4	0	2	2

Criterion-2 Self-Assessment Report (SAR)

17	18HSS272	Constitution of India and Professional Ethics	Mandatory Course			2	0	0	0
18	19MAT31	Engineering Mathematics-III	2	2	0	4	3	0	3
19	19HSS322	Life Skills for Engineers	3	0	0	3	3	0	3
20	19ECE33	Digital Electronic Circuits	3	0	0	3	3	0	3
21	19ECE34	Analog Electronic Circuits	3	0	0	3	3	0	3
22	19ECE35	Network Analysis	3	0	0	3	3	0	3
23	19ECE36	Signals and Systems	2	2	0	4	3	0	3
24	19ECL37	Digital Electronic Circuits Lab	0	0	3	3	0	1.5	1.5
25	19ECL38	Analog Electronic Circuits Lab	0	0	3	3	0	1.5	1.5
26	19ECL39	Mini Project-I	-	-	-	0	-	2	2
27	19MAT41	Engineering Mathematics-IV	2	1	0	4	3	0	3

Criterion-2 Self-Assessment Report (SAR)

28	19HSS421	Economics for Engineers	3	0	0	3	3	0	3
29	19HSS423	Environmental Science and Awareness	0	0	0	1	0	0	0
30	19ECE43	System Design using HDL	3	0	0	3	3	0	3
31	19ECE44	Digital Signal Processing	3	0	0	3	3	0	3
32	19ECE45	Control Systems	2	2	0	4	3	0	3
33	19ECE46	Linear Integrated Circuits	3	0	0	3	3	0	3
34	19ECL47	Hardware Description Language Lab	0	0	3	3	0	1.5	1.5
35	19ECL48	Digital Signal Processing Lab	0	0	3	3	0	1.5	1.5
36	19ECL49	Mini project-II	-	-	-	0	-	2	2
37	20ECE51	Analog Communication	3	0	0	3	3	0	3
38	20ECE52	Microprocessors	3	0	0	3	3	0	3

Criterion-2 Self-Assessment Report (SAR)

39	20ECE53	CMOS VLSI Design	3	0	0	3	3	0	3
40	20ECE54	Information Theory and Coding	3	0	0	3	3	0	3
41	20ECE55	Engineering Electromagnetics	2	2	0	4	3	0	3
42	20ECE56X	Professional Elective-I	3	0	0	3	3	0	3
43	20ECL57	Microprocessors Lab	0	0	3	3	0	1.5	1.5
44	20ECL58	CMOS VLSI Design Lab	0	0	3	3	0	1.5	1.5
45	20ECL59	Mini project-III	-	-	-	0	-	-	2
46	20ECE61	Digital Communication	3	0	0	3	3	0	3
47	20ECE62	Embedded System Design	3	0	0	3	3	0	3
48	20ECE63	Microelectronic Circuits	3	0	0	3	3	0	3
49	20ECE64X	Professional Elective-II	3	0	0	3	3	0	3

Criterion-2 Self-Assessment Report (SAR)

50	20ECE65X	Professional Elective-III	3	0	0	3	3	0	3
51	20ECL66	Communication Lab	0	0	3	3	0	1.5	1.5
52	20ECL67	Embedded System Design Lab	0	0	3	3	0	1.5	1.5
53	20ECL68	Mini project-IV	-	-	-	0	-	2	2
54	NHOPXX	Open Elective-I	3	0	0	3	3	0	3
55	21ECE71	Wireless and Mobile Communications	3	0	0	3	3	0	3
56	21ECE72	Antennas and Wave propagation	3	0	0	3	3	0	3
57	21ECE73	Fiber Optic Communication	3	0	0	3	3	0	3
58	21ECE74X	Professional Elective-IV	3	0	0	3	3	0	3
59	21ECE75X	Professional Elective-V	3	0	0	3	3	0	3
60	21ECL76	Advanced Communication Lab	0	0	3	3	0	1.5	1.5

Criterion-2 Self-Assessment Report (SAR)

61	21ECL77	EDA Software Workshop Lab	0	0	3	3	0	1.5	1.5
62	21ECL78	Project Phase-1	-	-	-	0	-	2	2
63	NHOPXX	Open Elective-II	3	0	0	3	3	0	3
64	21ECE81X	Professional Elective-VI	3	0	0	3	3	0	3
65	21ECE82X	Professional Elective-VII	3	0	0	3	3	0	3
66	21ECL83	Internship	-	-	-	0	-	4	4
67	21ECL84	Project Phase-2	-	-	-	0	-	10	10
		Total				188			175

2.1.3 State the components of the curriculum

Batch: 2018-2022, Credits -175

Table: 2.1.3.1 Program Curriculum Grouping Based on Course Components (Batch 2018-2022)

Course Component	Curriculum Content (% of total number of credits of the program)	Total Number of contact hours	Total number of credits
Basic Sciences	12.57%	22+8	22
Engineering Sciences	12.57%	28	22
Humanities and Social Sciences	4.57%	6+6	8
Program Core	41.14%	130	72
Program Electives	12%	21	21
Open Electives	3.43%	6	6
Project(s)	11.43%	0	20
Internships/Seminars	2.29%	0	4
Any other (Please Specify)	-	-	-
Total number of Credits			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

The structure of the curriculum designed for B. E. in Electronics and Communication 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) and Institute of Engineers India (IEI).

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 analyze and design complex electronics and communication devices, software, and systems containing hardware and software components.

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 Electronics and Communication Engineering are as follows:

The student will be able:

- PSO1: To demonstrate the ability to design and develop complex systems in the areas of next generation Communication systems, IoT based embedded systems, Advanced Signal and Image Processing, latest semiconductor technologies, RF and Power Systems
- PSO2: To demonstrate the ability to solve complex Electronics and Communication Engineering problems using latest hardware and software tools along with analytical skills to contribute to useful, frugal and eco-friendly solutions

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 2.1.4.1 shows the substantial mapping of the courses with POs & PSOs for batch 2015-2019 and Figure 2.1.4 .1 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: 2.1.4.1 POs/PSOs Vs Courses Mapped with High Correlation for Batch 2015-2019

POs/PSOs	Courses
PO1	Basic Electronics, Electronic Circuits-1, Network Analysis, Signals and Systems, Logic Design, Engineering Mathematics- IV, Electronic circuits-II, Digital Signal Processing, Control Systems, System design using HDL, Analog Communication, Microcontroller, CMOS VLSI Design, Information Theory and Coding, Engineering Electromagnetics, Optical Fiber Communication, Digital Communication, Embedded System Design, Microelectronics circuits, Microwaves and Radar, Routing and Switching, Wireless and mobile Communications, Antennas and Wave Propagation, Satellite Communications, Biomedical Signal and Image processing, Low power VLSI Design, Renewable Energy, Routing and switching – 2, Routing and switching-3, Project Phase-I, Project Phase-II, Project Phase- III
PO2	Electronic Circuits-1, Network Analysis, Signals and Systems, Logic Design, Engineering Mathematics- IV, Electronic circuits-II, Digital Signal Processing, Control Systems, System design using HDL, Analog Communication, Microcontroller, CMOS VLSI Design, Information Theory and Coding, Engineering Electromagnetics, Optical Fiber Communication, Digital Communication, Embedded System Design, Microelectronics circuits, Microwaves and Radar, Routing and Switching, Wireless and mobile Communications, Antennas and Wave

	Propagation, Satellite Communications, Biomedical Signal and Image processing, Low power VLSI Design, Renewable Energy, Routing and switching – 2, Routing and switching-3, Project Phase-I, Project Phase-II, Project Phase- III
PO3	Signals and Systems, Logic Design, Engineering Mathematics- IV, Electronic circuits-II, Digital Signal Processing, Control Systems, System design using HDL, Analog Communication, Microcontroller, CMOS VLSI Design, Optical Fiber Communication, Digital Communication, Embedded System Design, Microelectronics circuits, Microwaves and Radar, Routing and Switching, Wireless and mobile Communications, Antennas and Wave Propagation, Satellite Communications, Biomedical Signal and Image processing, Low power VLSI Design, Renewable Energy, Routing and switching – 2, Routing and switching-3, Project Phase-I, Project Phase-II, Project Phase- III
PO4	Signals and Systems, Logic Design, Engineering Mathematics- IV, CMOS VLSI Design, Microwaves and Radar, Routing and Switching, Wireless and mobile Communications, Antennas and Wave Propagation, Satellite Communications, Biomedical Signal and Image processing, Low power VLSI Design, Routing and switching – 2, Routing and switching-3, Project Phase-I, Project Phase-II, Project Phase- III
PO5	Signals and Systems, Logic Design, Engineering Mathematics- IV, Electronic circuits-II, Digital Signal Processing, Microcontroller, CMOS VLSI Design, Wireless and mobile Communications, Embedded System Design, Routing and switching – 2, Routing and switching-3, Internship, Project Phase-I, Project Phase-II, Project Phase- III
PO6	Electronic circuits-II, Engineering Electromagnetics, Microelectronics circuits, Antennas and Wave Propagation, Biomedical Signal and Image processing, Renewable Energy, Routing and switching – 2, Routing and switching-3, Project Phase-I, Project Phase-II, Project Phase- III
PO7	Engineering Electromagnetics, Microelectronics circuits, Low power VLSI Design, Renewable Energy, Project Phase-I, Project Phase-II, Project Phase- III

PO8	Project Phase-I, Project Phase-II, Project Phase- III
PO9	Electronic Circuits-1, Signals and Systems, Logic Design, Digital Signal Processing, Microcontroller, CMOS VLSI Design, Embedded System Design, Routing and Switching, Renewable Energy, Routing and switching-3, Project Phase-I, Project Phase-II, Project Phase- III
PO10	Renewable Energy, Routing and switching-3, Internship, Project Phase-I, Project Phase-II, Project Phase- III
PO11	Internship, Project Phase-I, Project Phase-II, Project Phase- III
PO12	Electronic Circuits-1, Network Analysis, Signals and Systems, Digital Signal Processing, Control Systems, CMOS VLSI Design, Information Theory and Coding, Engineering Electromagnetics, Embedded System Design, Microelectronics circuits, Routing and Switching, Biomedical Signal and Image processing, Renewable Energy, Routing and switching-3, Internship, Project Phase-I, Project Phase-II, Project Phase- III
PSO1	Electronic Circuits-1, Network Analysis, Signals and Systems, Electronic circuits-II, Digital Signal Processing, Control Systems, System design using HDL, Analog Communication, Microcontroller, CMOS VLSI Design, Information Theory and Coding, Engineering Electromagnetics, Optical Fiber Communication, Digital Communication, Embedded System Design, Microelectronics circuits, Microwaves and Radar, Routing and Switching, Wireless and mobile Communications, Antennas and Wave Propagation, Biomedical Signal and Image processing, Low power VLSI Design, Renewable Energy, Routing and switching – 2, Routing and switching-3, Project Phase-I, Project Phase-II, Project Phase-III
PSO2	Network Analysis, Signals and Systems, Digital Signal Processing, Analog Communication, Optical Fiber Communication, Embedded System Design, Antennas and Wave Propagation, Biomedical Signal and Image processing, Renewable Energy, Routing and switching – 2, Routing and switching-3, Project Phase-I, Project Phase-II, Project Phase-III

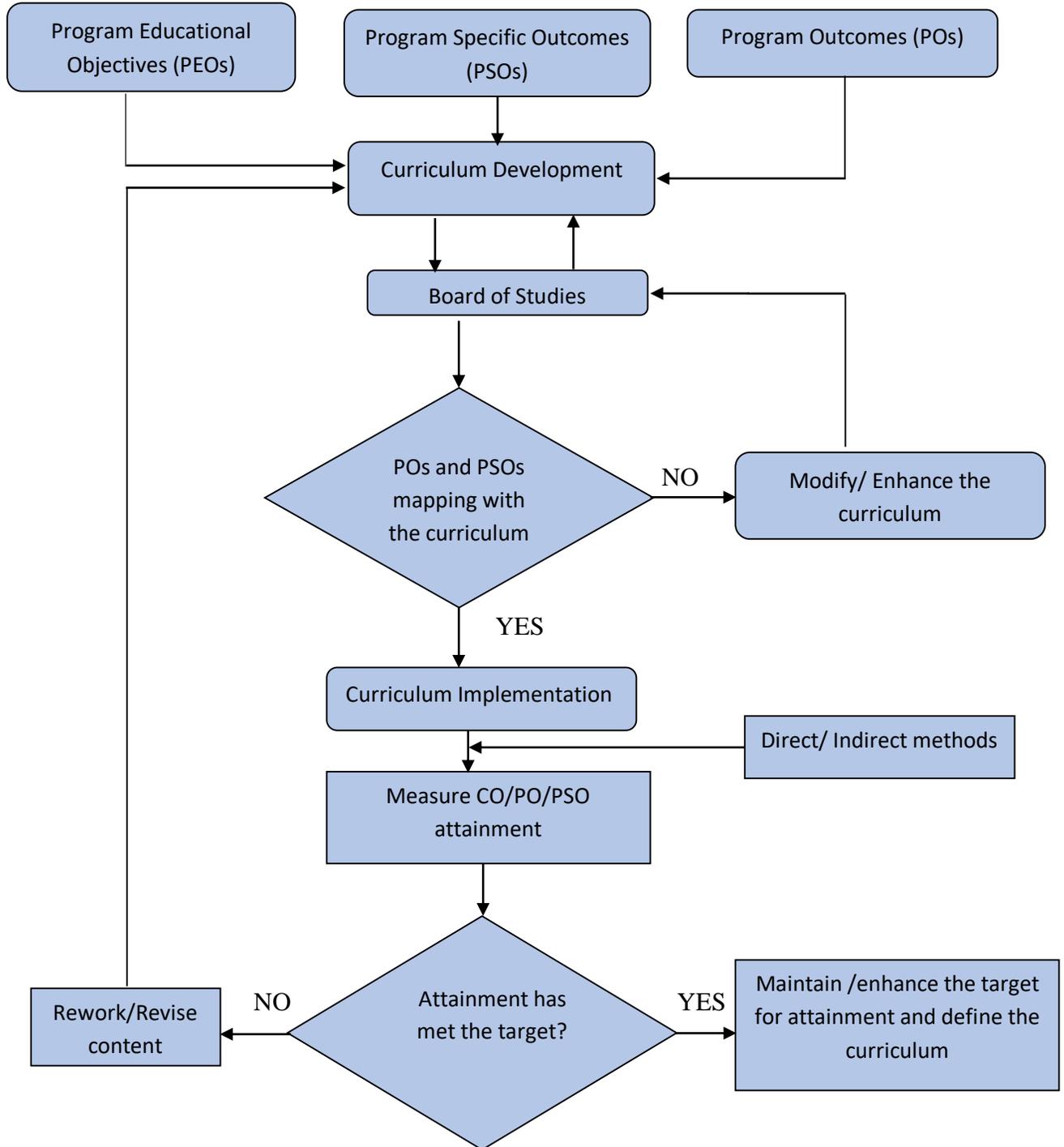


Figure 2.1.4 a: Process to ensure the compliance and attainment of POs & PSOs

2.2 Teaching and Learning

2.2.1. Describe Processes Followed to Improve Quality of Teaching & Learning (15)

Learning is brought about through teaching, teaching process is the arrangement of environment within which the students can interact and study how to learn. The process of teaching learning aims at transmission of knowledge, imparting skills and formation of attitudes, values and behavior. The process followed to improve the quality of teaching and learning in the department of Electronics and Communication is described in Figure.

2.2.1.1

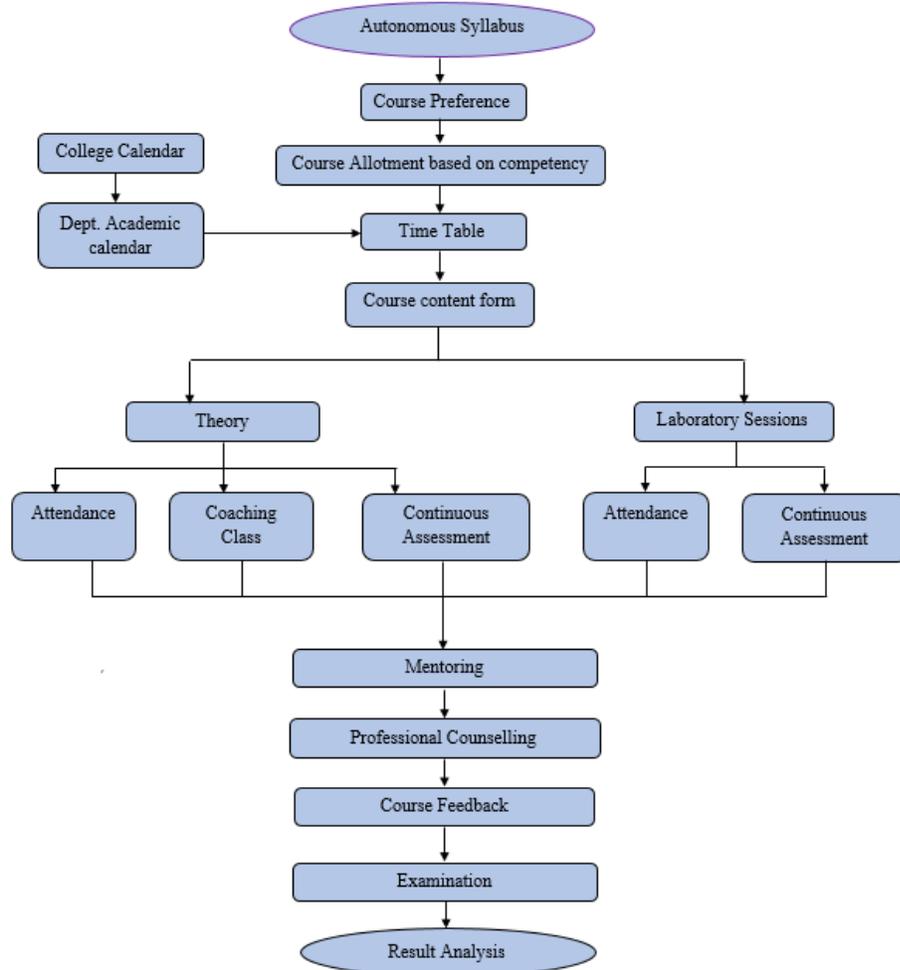


Figure 2.2.1.1: Teaching Learning Process

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

- A. Adherence to Academic Calendar
 - a. Preparation of academic action plans
- B. Pedagogical Initiatives - Content Delivery (method of instruction)
 - a. Digital library
 - b. Contineo
 - c. Course Handouts
 - d. Project Based Learning
- C. Methodologies to support weak students and encourage bright Students
 - a. Mentoring System
 - b. Identification of Weak Students / Fast Learners
 - c. Action Taken
- D. Quality of Class Room Teaching
- E. Conduct of Experiments
- F. Continuous Assessment in the laboratory
- G. Student Feedback and action taken

A. Adherence to Academic Calendar

Academic Calendar: Department prepares the 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 2.2.1.2

- a. The academic calendar is prepared as per VTU guidelines in consideration with the Public holidays listed by parent University (VTU)
- b. Dates for continuous internal evaluation (IA Test, Assignment, Quiz) are well planned in the calendar.
- c. With prior consultation of the expert's dates of guest lecture, workshops and industrial visits are planned in the calendar.
- d. It is published in the student management software tool (Contineo)

Criterion-2 Self-Assessment Report (SAR)

- e. Figure 2.2.1.2 shows the calendar of events of the department for academic year i.e., 2019-20 (Even semester)

NEW HORIZON COLLEGE OF ENGINEERING												
DEPARTMENT OF ELECTRONICS AND COMMUNICATION												
CALENDAR OF EVENTS FOR EVEN SEM (IV, VI & VIII) SEMESTER (B.E) 2019-20												
Commencement: 16/01/2020 (for IV, VI and VIII Semesters)						Last Working Day: 05/05/2020 (for II, IV, VI and VIII Semesters)						
MONTH	Week No.	MON	TUE	WED	THU	FRI	SAT	SUN	Events/Holidays	Internal Tests/Submissions/Activities	Assignments/Quizzes/Mini Projects/Self Study etc.	
JAN	1	13	14	15	16	17	18	19	15th - Sankranti	16th - Commencement of B.E II, IV, VI & VIII Sem	IV Semester	VI Semester
	2	20	21	22	23	24	25	26	25th - Guest Lecture - 4th sem 25th - Industrial visit - 6th sem			
	3	27	28	29	30	31					A1-41, Q1-44	A1-61, Q1-64
FEB	3						1	2				
	4	3	4	5	6	7	8	9	8th - Guest Lecture - 4th Sem 8th - Industrial visit - 6th Sem		A1-42, Q1-45	A1-62, Q1-65
	5	10	11	12	13	14	15	16	15th - Guest Lecture - 6th Sem 15th - Industrial Visit - 4th Sem		A1-43, Q1-46	A1-63, Q1-66
	6	17	18	19	20	21	22	23	21st - Maha Shivaratri, 22nd - Holiday*	17th - 19th - I Internal Test		
	7	24	25	26	27	28	29		29th - Guest Lecture - 6th Sem 29th - Workshop - 4th Sem 29th - Industrial Visit - 8th Sem		A1-44, Q1-41	A1-64, Q1-61
MAR	7							1				
	8	2	3	4	5	6	7	8			A1-45, Q1-42	A1-65, Q1-62
	9	9	10	11	12	13	14	15	9th - Holi 14th - Guest Lecture - 6th Sem 14th - Industrial Visit - 4th Sem 14th - Industrial Visit - 8th Sem		A1-46, Q1-43	A1-66, Q1-63
	10	16	17	18	19	20	21	22	20th - Workshop - 6th Sem		A2-41, Q2-44	A2-61, Q2-64
	11	23	24	25	26	27	28	29	25th - Ugadi	26th - 28th - II Internal Test		
	12	30	31								A2-42, Q2-45	A2-62, Q2-65
APR	12			1	2	3	4	5				
	13	6	7	8	9	10	11	12	10th - Good Friday, 11th - Holiday*		A2-43, Q2-46	A2-63, Q2-66
	14	13	14	15	16	17	18	19	14th - Ambedkar Jayanthi		A2-44, Q2-41	A2-64, Q2-61
	15	20	21	22	23	24	25	26	25th - Workshop - 8th Sem		A2-45, Q2-42	A2-65, Q2-62
	16	27	28	29	30					27th - 29th - III Internal Test	A2-46, Q2-43	A2-66, Q2-63
MAY	16					1	2	3				
	17	4	5	6	7	8	9	10	1st - May Day	5th - Last Working Day of B.E II, IV, VI & VIII Sem		
	18	11	12	13	14	15	16	17	25th - Ramzan			
	19	18	19	20	21	22	23	24				
	20	25	26	27	28	29	30	31				
JUNE	21	1	2	3	4	5	6	7		3rd - Supplementary Semester Commencement		
	22	8	9	10	11	12	13	14				
	23	15	16	17	18	19	20	21				
	24	22	23	24	25	26	27	28				
	25	29	30									

HoD - ECE

Dean - Academics

Principal

NHCE/CAL/002

Figure 2.2.1.2: Calendar of Events for Even Semester 2019-20

B. Pedagogical initiatives

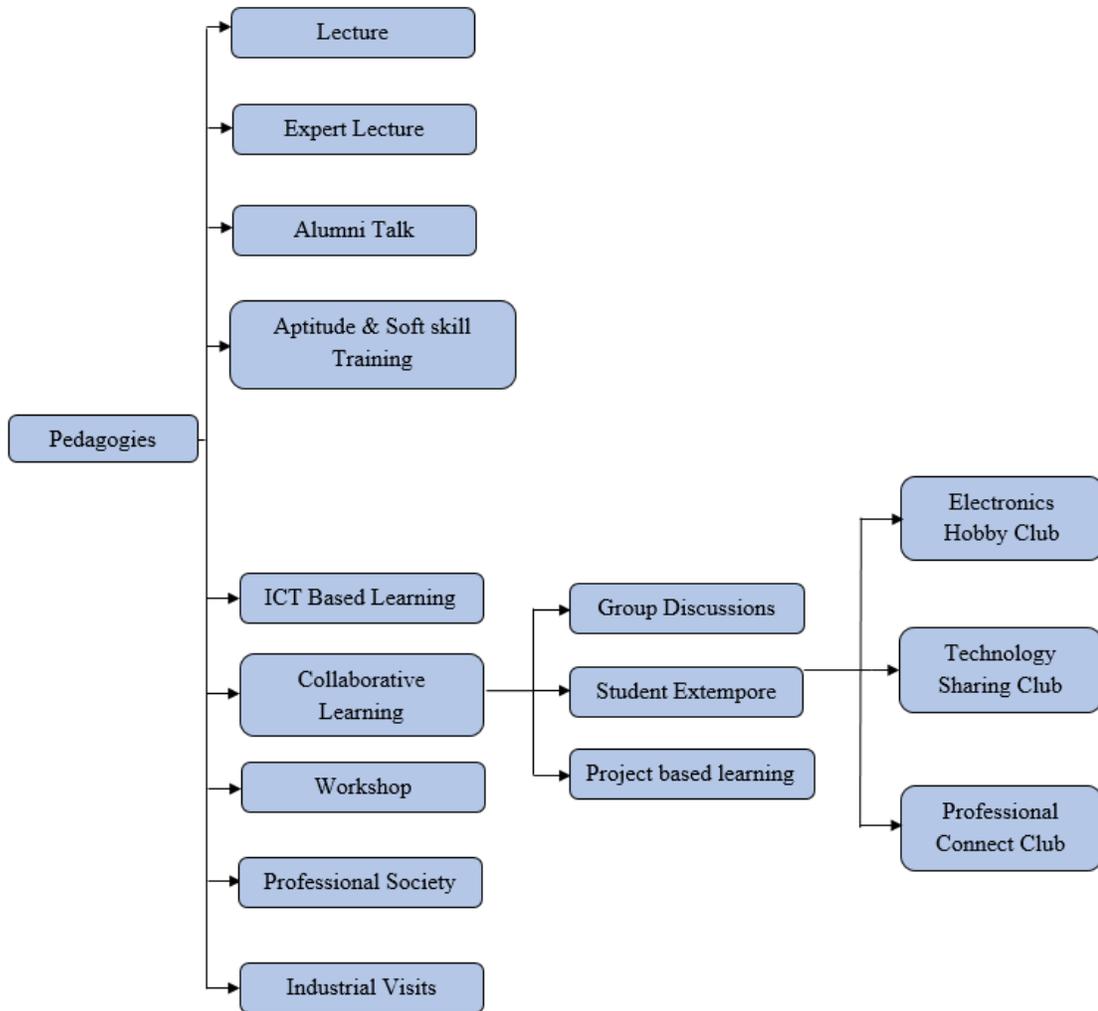


Figure 2.2.1.3: Pedagogical Initiatives

Course allocation is made based on the choice/ expertise of the faculty members well before the commencement of semester. 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. Once the courses are allocated, the faculty members prepare a

detailed lesson plan, assignment questions, quiz questions etc. for the assigned course. Course handout and relevant materials are also uploaded on digital library.

Pedagogies play an important role in delivering of content and it varies with the audience. Faculty members use various pedagogical methods for effective teaching learning process which are as follows:

➤ **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 provides access to study material in e-resources that enables real time learning and self-learning
 - Quiz
 - Automation tool for Student data management (Contineo)
 - Group discussions/tasks
 - Internship
 - Co-Curricular activity
 - Workshops
 - Expert talks
- **ICT based learning:** Use of Smart boards, LCD/LED projectors and provision for interactive teaching learning & High speed internet connectivity. Simulation software like

Xilinx, MATLAB, CADENCE and open source software are encouraged for effective learning.

- **Collaborative / Cooperative teaching and learning:** In classroom students are encouraged to give presentations to improve their technical and professional skills. Students share knowledge or discuss topics in small group or in peer mode
 - Collaborative learning is based on the view that knowledge is a social construct.
 - Collaborative learning can occur peer-to-peer or in larger groups.
 - This often occurs in a class session after students are introduced to flipped classrooms.
 - The benefits of collaborative learning include:
 - a. Development of higher order thinking, oral communication and leadership skills.
 - b. Promotion of student-faculty interaction.
 - c. Self-esteem, and responsibility.
 - d. Preparation for real life social and employment situations

- **NPTEL and SWAYAM:** The faculty members encourage students to take up MOOC courses such as NPTEL and SWAYAM to develop self-learning and life-long learning skills.

- **Assignments based problem solving:** Assignments are given to students to improve their higher order thinking. Assignments are based on COs that leads to achieve Program Outcomes.

- **Video based demonstration:** Demonstration of system or parts of a real world system using modern tools.

➤ **Guest Lecture:**

- Department, with the prime vision of enhancing technical competency of our students, has organized various guest lectures by inviting experts from Industry to lend valuable guidance on latest technical drive, industry expectations and avenues for knowledge enhancement. (Refer **Table 2.2.4.8 and 2.2.4.9**).

➤ **Industrial Visit:**

- 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 (Refer table 2.2.5.1 and 2.2.5.2 and 2.2.5.3). This gives them an insight of the work culture ethics prevailing in Industries.
- The visits also help the students to learn about people management, which is essential in any organization.

➤ **Internship:**

- At the end of every semester or in vacation, students are encouraged to carry out internship in reputed industries/public sectors to improve their professional skills.
- It helps the students to bridge the gap between the institute and the industry.

➤ **Conference:**

- Department organizes National level conferences on recent technologies in Electronics and Communication to enrich the knowledge of students and researchers.
- This conference provides a platform for students, researchers and faculty members to share their ideas and innovations.

- It also helps the attendees to interact with experts to enhance their ideas in the respective domain. Table 2.2.1.1 lists the details of National Conferences organized by the department during the respective academic years.

Table 2.2.1.1: National Conference details
CONFERENCE DETAILS 2017-2018

Sl.NO	Title of the Conference	Date	No. of Participants	No. of Days	Outcome
1	National Conference on Recent Trends in Electrical and Electronics TECHXCELLENCE-2017	19/04/2017	90	01	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
2	National Level Conference TECHORIZON -2018	19/05/2018	74	01	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2

CONFERENCE DETAILS 2018-2019

SL.NO	Title of the Conference	Date	No. of Participants	No. of Days	Outcome
1	National Level Conference TECHORIZON - 2019	27/04/2019	60	01	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2

CONFERENCE DETAILS 2019-2020

SL.NO	Title of the Conference	Date	No. of Participants	No. of Days	Outcome
1	INTERNATIONAL CONFERENCE ON “INNOVATIVE RESEARCH IN ENGINEERING AND MANAGEMENT AND SCIENCES” (ICIREMS – 2019)	19/12/2019 20/12/2019 21/12/2019	52	03	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2

➤ **Workshop:**

- Department organizes at least four workshops per academic year to facilitate the students in having a hands on training in a specific domain. (Refer Table 2.2.1.2)
- 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 2.2.1.2: Workshop Details

WORKSHOP DETAILS 2017-2018

SI. No	Workshop Topic	Date	No. of Participants	No. of Days	Outcome
1	Embedded System Design using ARM Cortex M4	28/03/2018	30	01	PO3, PO4, PO5, PO9, PSO1, PSO2
2	Research Paper Writing using Latex	20/03/2018	16	01	PO5, PO9, PO10
3	Cypress PSOC 5LP	18/11/2017	16	01	PO5, PO9, PSO1
4	Training based on learning IoT and Raspberry Pi	28/10/2017	52	01	PO3, PO4, PO5, PO9, PSO1, PSO2
5	Arduino Uno	16/09/2017	65	01	PO3, PO4, PO5, PO9, PSO1, PSO2

WORKSHOP DETAILS 2018-2019

SLNO	Workshop Topic	Date	No. of Participants	No. of Days	Outcome
1	Workshop on IoT and Embedded System Design	21/10/2018	42	02	PO3, PO4, PO5, PO9, PSO1, PSO2

WORKSHOP DETAILS 2019-2020

Sl.NO	Workshop Topic	Date	No. of Participants	No. of Days	Outcome
1	Workshop on PCB Designing and Fabrication	30/08/2019	55	01	PO3, PO4, PO5, PO9, PSO1, PSO2
2	Two Days Inter-Disciplinary Workshop on Robotics	30/09/2019 & 01/10/2019	48	02	PO3, PO4, PO5, PO9, PSO1, PSO2

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

a) Digital Library for self-learning

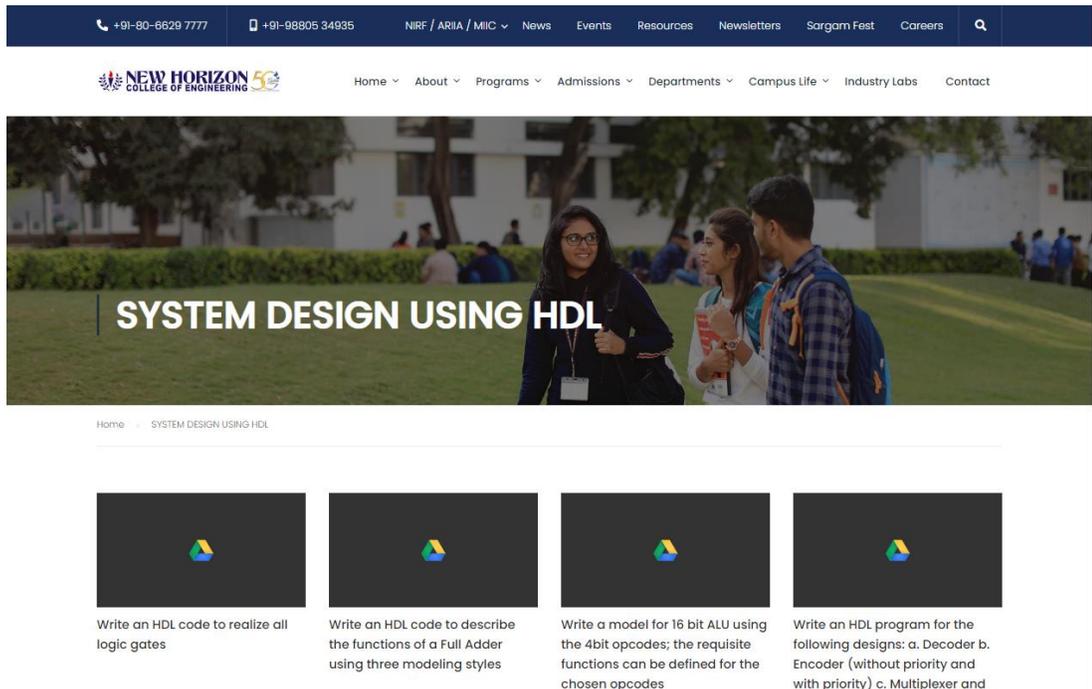


Figure 2.2.1.4: Departmental Website aiding online learning

b) 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 and OBE It can implement and administer autonomy - Foster academic excellence - Accelerate academic innovation.

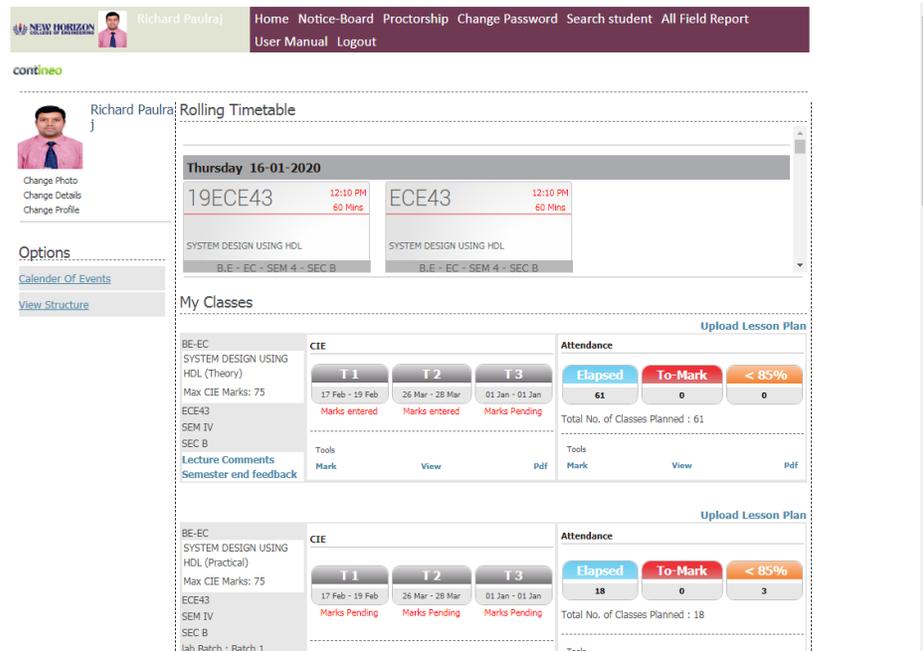


Figure 2.2.1.5: Tool for tracking student marks & attendance

c) Course Handout

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

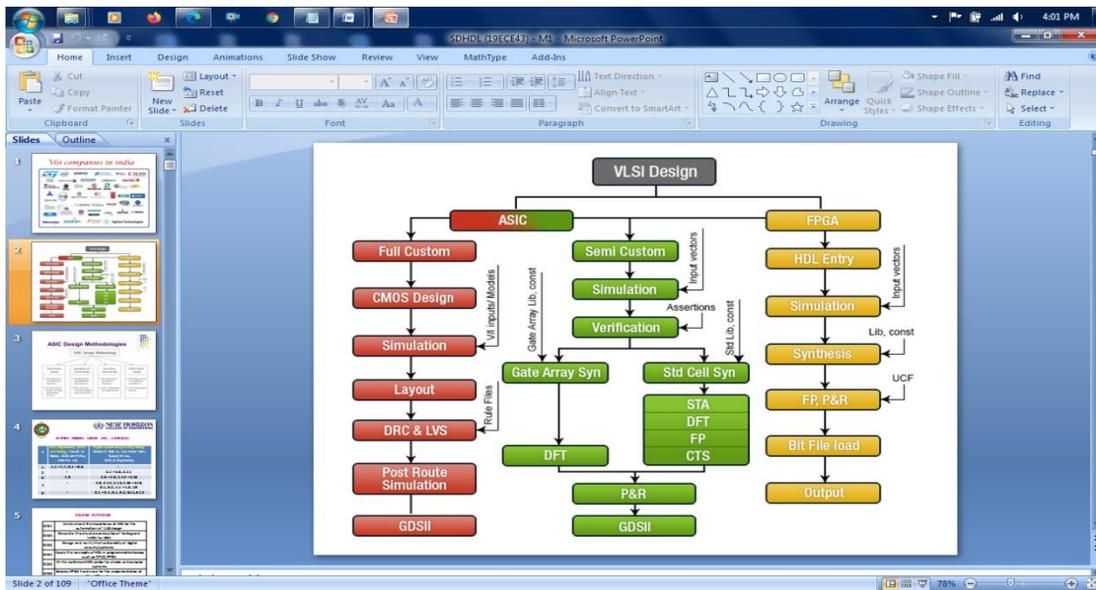


Figure 2.2.1.6: Snapshot of course handouts

d) 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 are encouraged to carry out multidisciplinary projects to apply their engineering knowledge from third semester onwards. 2-4 students in a group are allowed to choose their guide and in consultation with guide identify the project. The faculty mentor and the students collectively identify the Projects based on societal need and issues. At the end of the semester, projects are evaluated by the examiners. PBL steps (Figure 2.2.1.7) and a sample list of projects are mentioned in Table 2.2.1.3

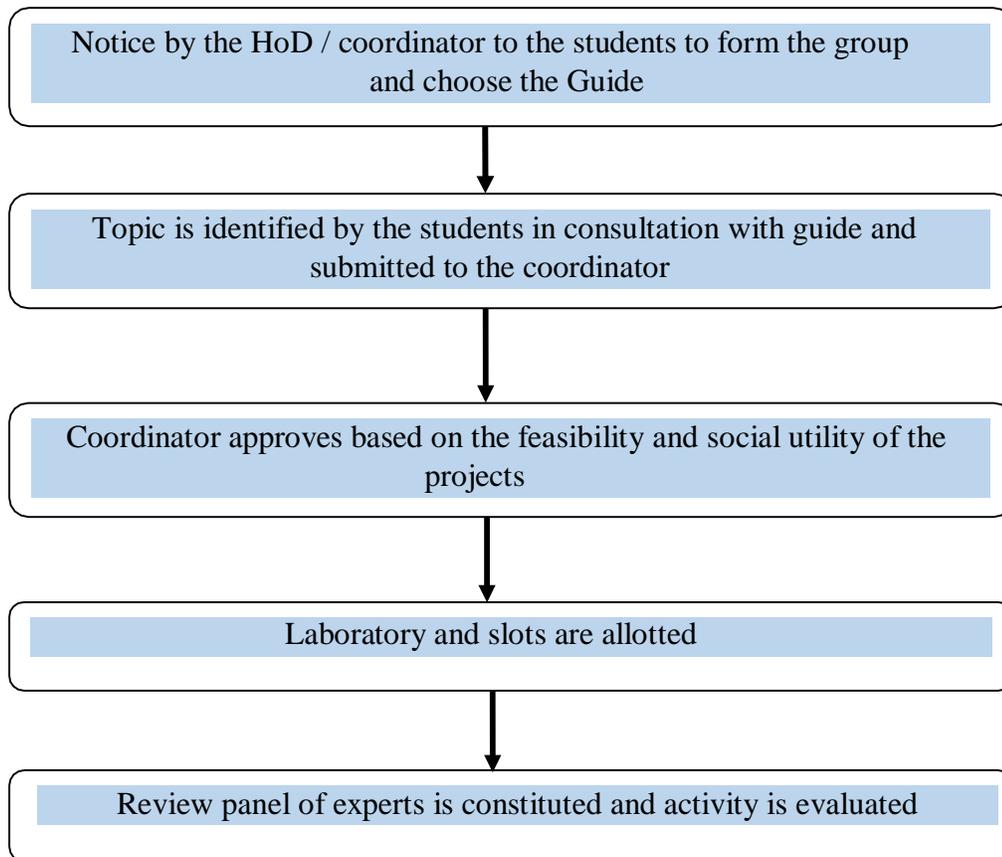


Figure 2.2.1.7 Flowchart – PBL Activities

Faculty and student’s involvement during Project Based Learning



Figure 2.2.1.8: Project Based Learning

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



PROPOSED METHODOLOGY

Circuit diagram of Graphical LCD Scope using Microcontroller

GRAPHICAL LCD SCOPE USING MICROCONTROLLER”

A MINI PROJECT

REPORT

Submitted by

- Lokesh N USN:1NH17EC139
- Prince chaurasiya USN:1NH17EC071
- Pavan y USN:1NH18EC427
- Shreekanta KS USN:1NH18EC416

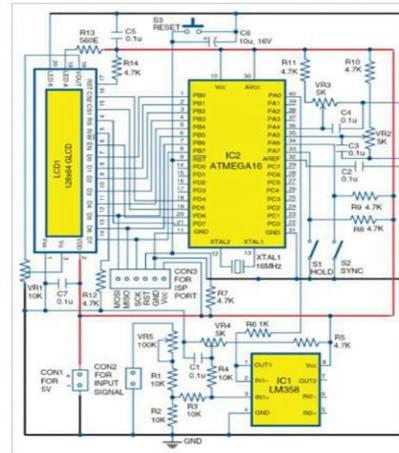


Fig 1: Circuit diagram of Graphical LCD Scope using Microcontroller

In partial fulfillment for the award of the degree of

BACHELOR OF ENGINEERING

IN

ELECTRONICS AND COMMUNICATION ENGINEERING

Graphical LCD works on the basic concept of the sampling theorem. Sampling frequency should be twice to the highest frequency component present in the signal as given in eq. $f_s \geq 2f_c$ Where, f_s : sampling frequency f_c : highest frequency control in the signal For the purpose of sampling, ADC is used which has conversion time of 30 microsecond[5]. This time should be utilized by us to display data on GLCD otherwise the time difference between three consecutive samples will

Figure 2.2.1.9: Front page & Sample of mini project work conducted by group of students

Table 2.2.1.3 Few sample of Project Based Learning Topics and details

S.No	Enrollment No.	Name	Sem/ Year/ Batch	Project Title	PO
1.	1NH18EC713	G Vaidhik Reddy	III SEM – C SEC	Voltage Level Detector Circuit	PO1, PO2, PO3, PO4, PO5, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
2.	1NH18EC744	S Yaswanth Reddy			
3.	1NH18EC756	Ujjawal Prakash			
4.	1NH18EC757	Vamshi Krishna			
5.	1NH17EC022	Dhanyashree	IV SEM -A SEC	Implementation of FIFO memory using Verilog	PO1, PO2, PO3, PO4, PO5, PO8, PO9, PO10, PO11, PSO1, PSO2
6.	1NH17EC045	Madhumitha R			
7.	1NH17EC053	Monika K Reddy			
8.	1NH17EC012	Bharath Y R	V SEM – A SEC	Robot for Exam Invigilation Using Raspberry Pie	PO1, PO2, PO3, PO4, PO5, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
9.	1NH17EC016	C O Pruthvi			
10.	1NH17EC031	Harshitha G			
11.	1NH17EC034	Jerin Johnson			
12.	1NH16EC717	Harshita P	VI SEM – C SEC	One touch Alarm System for Women’s Safety Security	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
13.	1NH16EC724	M Priyadarshini			
14.	1NH16EC730	Mounika E			

2.2.1.C. Methodologies to support weak students and encourage bright students

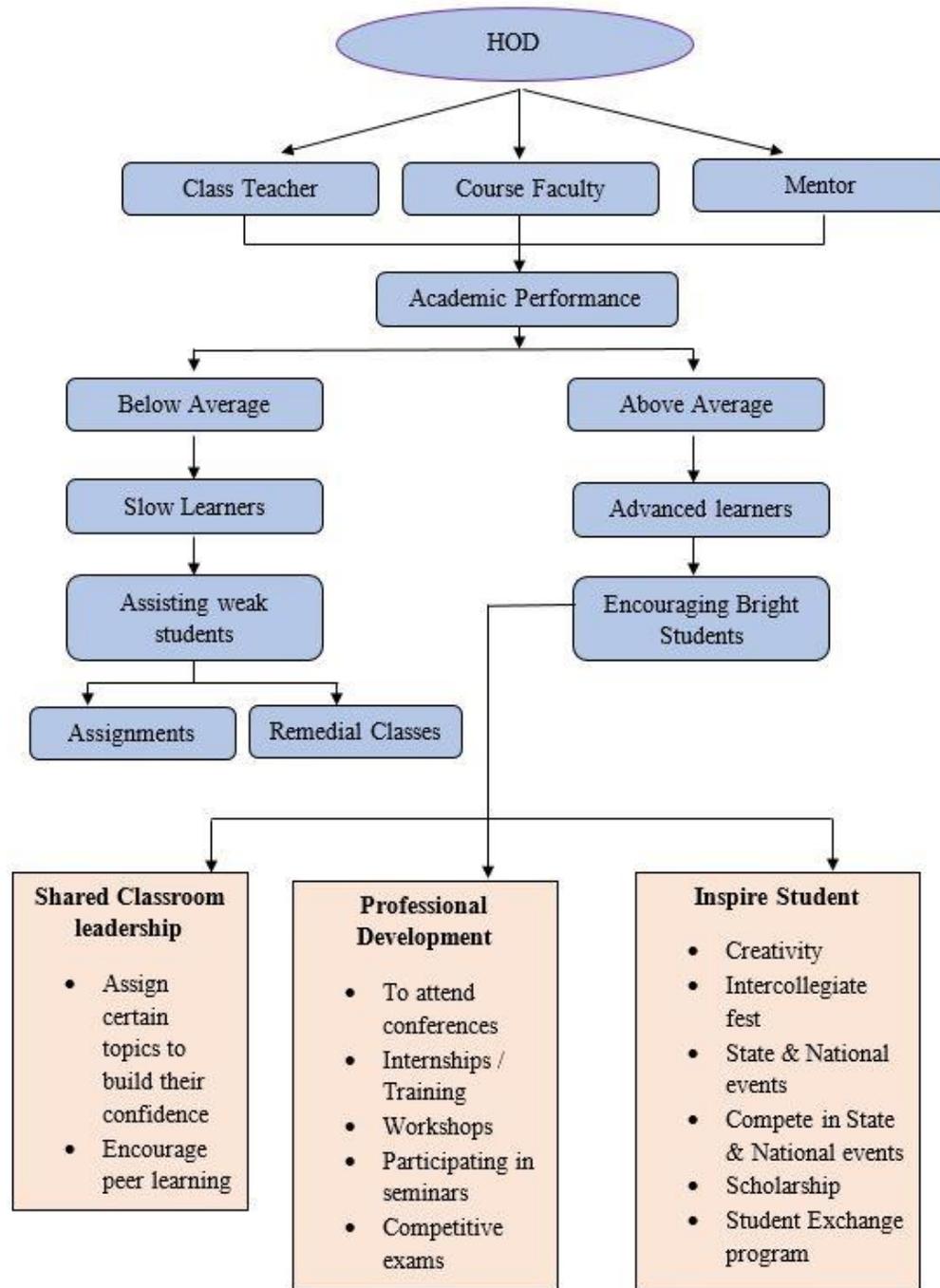


Figure 2.2.1.10: Process to identify and support weak students and encourage bright students

➤ Methodology to Support 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:

- Involve fast learners for peer tutoring the slow learners
- Students are motivated to take up value added courses, MOOC and e-learning courses.
- Students are given opportunity to take up study-abroad program for one semester
- Encourage students to do open ended or challenging lab based experiments
- Students are motivated to take up competitive exams like GATE, GRE, TOEFL, IELTS, CAT, PG CET etc.
- Students are encouraged to become members of professional bodies like ISTE / IEEE / MTS and organize technical events.
- Bright and diligent students are motivated and inspired to get top ranks in their SEE and in competitive examinations through mentoring.
- The bright students are encouraged to participate in symposia, workshops and seminars at National and International levels.
- They are provided with the guidance about technical paper writing, prototype building and patent filing.
- Financial support is given for bright students if needed for attending conferences/ workshops etc.

Impact observed on bright students

Table 2.2.1.4: Details of VTU toppers (2017-18)

Sl. No.	USN	NAME	VII Sem	VIII Sem	Total	%
1	1NH13EC102	Sithara T R	764	650	1414	86%

Sl. No.	USN	NAME	V Sem	VI Sem	Total	%
1	1NH14EC022	Meghana C	758	729	1487	83%

Table 2.2.1.5: Details of Autonomous toppers (2017-18)

Sl. No.	USN	SEM	NAME	III Sem	IV Sem	CGPA
1	1NH15EC053	7	Monisha	9.88	9.88	9.88

Sl. No.	USN	SEM	NAME	I Sem	II Sem	CGPA
1	1NH16EC081	V	Prithipa A	10	9.92	9.96
2	1NH17EC052	V	Mohammed Ghassan	10	10	10



Figure 2.2.1.11 a: Certificate received for AI4Good Hackathon



Figure 2.2.1.11 b: Group Certificate for Hackathon



Figure 2.2.1.11 c: Certificate of Appreciation



Figure 2.2.1.11 d: Team Photo for Hackathon

- **Methodology to Support Weak Students:**

The weak students are identified from their participation in classroom discussion, performance in the assessment tests (less than 15 out of 25), performance during the viva-voice, University result analysis, etc.

Actions taken:

- Department arranges remedial lectures for slow learners.
- Students are encouraged to conduct open ended lab based experiments
- The students are encouraged to participate in symposia, workshops and seminars at National and International levels.
- They are motivated to write technical papers and patent filing.
- Additional question bank is given to students to improve their learning.
- Mentor informs the parents regarding improvement in the performance of their ward on regular basis. Mentors are facilitated to understand personal and professional difficulties of students and it is resolved.
- Participative and progressive slow learners are given chance to improve team work to motivate and appreciate their efforts.
- Problem solving sessions are done and make sure that they understand it & exercise problems are solved with.

Impact Observed on Slow Learners

It is observed that the academic and overall performance of students is improved.

2.2.1D. Quality of classroom teaching

Classroom Teaching

Quality of content delivery in live lectures is evaluated randomly by visiting ongoing lecture classes. The Directors/Deans /HODs are permitted to 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 of evaluation report, necessary feedback is given to the faculty members to improve the quality of lectures.

Each classroom is spacious and equipped with Smart board, white/black board and audio visual aids to create a better ambience for effective teaching learning environment. Each lecture is scheduled for one hour. During the lecture, faculties take efforts to keep students engaged by reviewing and asking questions on previous lecture and interactively deliver the lecture planned for the day. At the end of the lecture, students are encouraged to summarize, ask doubts from the content taught.



Figure 2.2.1.12 a: Sample Classroom ambience photo



Figure 2.2.1.12 b: Sample Classroom photos with smart board



Figure 2.2.1.12 c: Sample Classroom activity showing conduction of Quiz through mobile

2.2.1.E. Conduct of experiments

Laboratory:

To ensure the quality of conduct of experiments in the laboratory, Lab advisor and Lab in-charges monitors the readiness of laboratory and quality of student's laboratory experiments. The Lab advisor takes runtime corrective measures to ensure quality of experiments. Sample of lab photos are shown below:



Figure 2.2.1.13 a: Sample photos of Labs



Figure 2.2.1.13 b: Sample photos of Labs

The working of each lab experiment was recorded and uploaded on our departmental website for helping students during the lockdown.

Table 2.2.1.6: Lab videos developed by faculties for the benefit of students

Name of the Lab	Online Link
DSP LAB	http://newhorizonindia.edu/nhengineering/dsp-lab-19ec148/
SYSTEM DESIGN USING HDL	http://newhorizonindia.edu/nhengineering/system-design-using-hdl/
DIGITAL COMMUNICATION LAB	https://drive.google.com/drive/folders/11ULOWC TMqYfLXonjx1UQe BYrPd HTS
EMBEDDED SYSTEM DESIGN	https://drive.google.com/file/d/120D6lrQPxpZOO gwV0bjd spHfmaR j0L/view
NHOP09 HANDS ON CONFIGURATIONS	http://newhorizonindia.edu/nhengineering/nhop09-hands-on-configurations/
NHOP12 HANDS ON CONFIGURATIONS	http://newhorizonindia.edu/nhengineering/nhop12-hands-on-configurations/
NHOP16 HANDS ON CONFIGURATIONS	http://newhorizonindia.edu/nhengineering/nhop16-hands-on-configurations/

2.2.1 F. Continuous Assessment in the laboratory

- Continuous Evaluation in every lab session
 - Continuous evaluation is done by the faculty in every lab session for 15 marks based on rubrics as shown in Table 2.2.1.7 and the average marks of all sessions will be considered for awarding final internal assessment.
 - Table 2.2.1.7 and Table 2.2.1.8 list the rubrics for continuous evaluation in every lab session and internal assessment respectively.

Table 2.2.1.7: Rubrics used for continuous evaluation in every lab session

	Allocated Marks	Low	Medium	High
Write up	5	Student has not written the content required for an experiment	Student has skipped the absolute points in explanatory sections for an experiment	Student has written & fulfilled the write-up in accordance with the given experiment
		0-1 Mark	2-3 Marks	4-5 Marks
Conduction/ Execution	5	Student has failed to perform the experiment Given circuit not rigged up/Given program not executed in the lab session.	Student has partially executed the experiment	Student has executed the experiment satisfactorily
		0-1 Mark	2-3 Marks	4-5 Marks
Result & Record Writing	5	Record not submitted in the lab session	Incomplete Record submitted	Completed record submitted
		0-1 Mark	2 - 3 Marks	4-5 Marks

Laboratory Courses Evaluation: Observation, individual report, laboratory examination and viva, are conducted and evaluated. The distribution of marks for continuous evaluation is shown in **Figure 2.2.1.14**

The continuous assessment in the laboratory also involves the conduction of internals to check the students.

Table 2.2.1.8: Rubrics used for continuous Evaluation of lab internals

Parameters	Allocated Marks	Low	Medium	High
Write up	15	Student ignorant of circuit design/flowchart/algorithm involved	Student unsure of expected results. Lack of interpretation of results obtained.	Student able to design circuits/flowchart /algorithm and analyze results obtained.
		0 Mark	1 - 7 Marks	8 - 15 Marks
Conduction / Execution	25	Student unable to rig up circuits, execute program relevant to a given experiment.	Student is partially able to rig up circuits, execute program relevant to a given experiment.	Student confidently gets the experiment done by correlating problem statement and outputs obtained.
		0 Mark	1 - 12 Marks	13 - 25 Marks
Viva Voce	10	Student did not answer any question	Student answered few questions	Student has answered considerable no. of / all questions.
		0 Mark	1 - 6 Marks	7 - 10 Marks

2.2.1 G. Student Feedback of Teaching Learning Process and actions taken

- Faculty Feedback Performance for every course is assessed from students with various parameters as defined by the Institution.
- Some of the parameters are:
 - Clarity in explaining the subject
 - Modulation of voice is done during teaching
 - Course explained was easy to understand
 - Faculty answers to your queries
 - Coverage of topic/course is on time
 - The concepts were explained with example and others
 - Content quality is relevant and useful

Action taken

- Faculty members are encouraged to attend domain based FDPs
- Mentors are assigned to non- performing faculties to encourage & support them to improve their quality of teaching.
- Course handouts are reviewed by the mentors/senior faculty and suggestions are given to improvise it.

2.2.2 Quality of end semester examination, internal semester question papers, assignments and evaluation (15)

2.2.2 A Process for internal semester question paper setting and evaluation and effective process implementation (3)

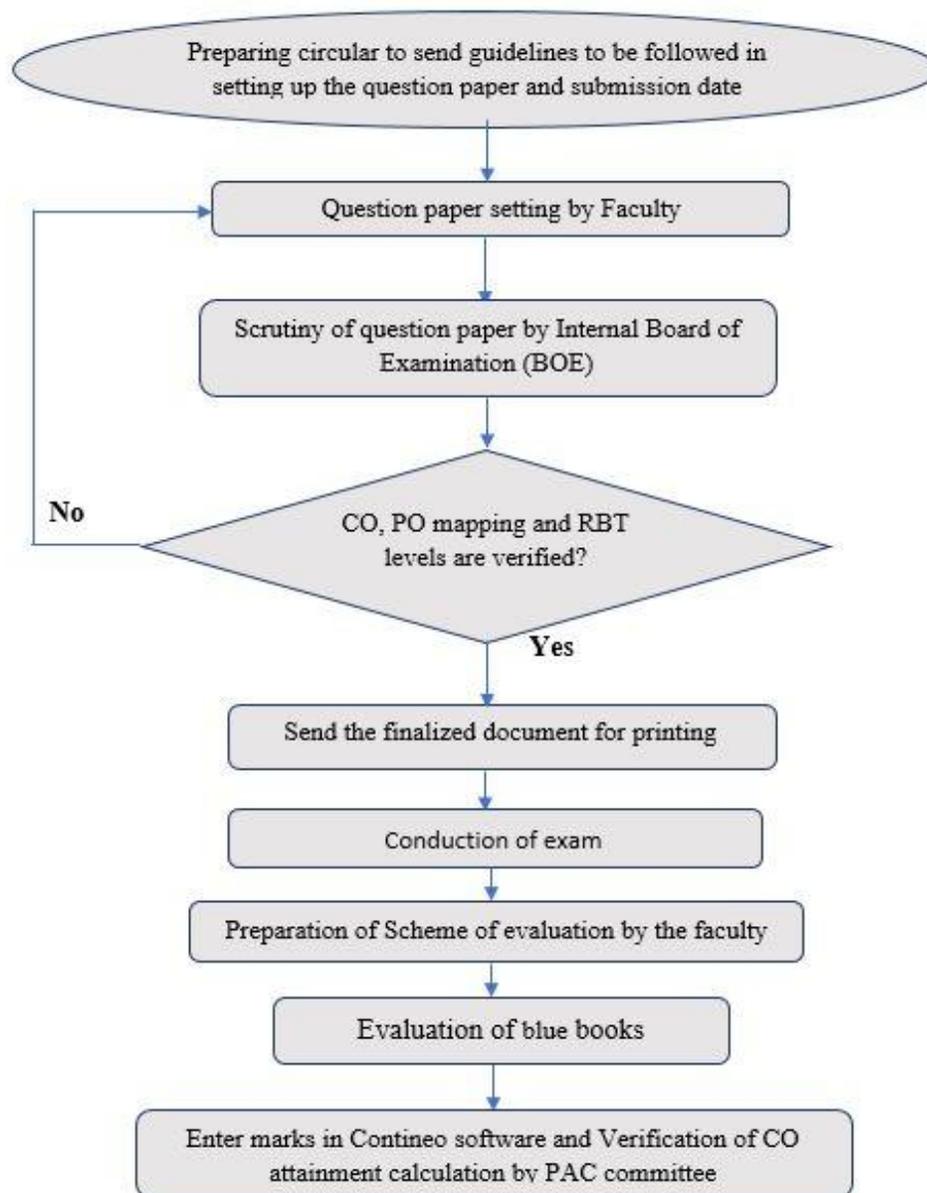


Figure 2.2.2.A Process for internal semester question paper setting and evaluation and effective process implementation

Internal Question paper preparation:

1. Through HoD question paper requisition circular will be sent to all the faculty member asking to follow the RBT level and the CO's. in the question paper (as per Dean Academics guidelines).
2. Minimum five days of submission dates from the issue of circular will be given to faculty member to submit the question paper.
3. Department Internal Test Board of Examination (BOE) will be constituted to scrutiny the internal test question paper (as per Dean Academics guidelines).
4. After the scrutiny, any discrepancies are found in the question papers, those question paper will be sent to the respective faculty members for correction.
5. After scrutiny and correction question papers are sent for printing.
6. Received question papers from the printing are sorted and bundled according to room allotment.
7. Question papers are distributed according to test time table.

Blue book distribution, attendance sheet and Room allotment:

1. Numbering will be made on each blue book and distributed accordingly.
2. Students need to write their respective blue book number on attendance sheet before signing for attendance in front of their USN.
3. Each student blue book number entry and student signature in the attendance sheet will be checked by room invigilator.
4. On each attendance sheet (room, semester and course wise) Student's USN, Name, Blue book number, and signature.
5. Each room invigilators enter the number of absent and present in the attendance sheet along with date and signature.
6. According to time table in each class room, on each desk two students will be allotted (not more than 32 students).
7. One faculty member is allotted to each class room.

8. Students room allotment details are displayed on each class room notice board and semester examination notice board.
9. Blue book and question paper distribution from Internal test control room.
10. Room Invigilator list will be prepared according to time table and the room requirement and circulated to all the faculty members.

Quality of Evaluation:

1. All the course coordinators are informed to prepare scheme of evaluation according to marks allotted to each question.
2. Faculty members evaluate the answer scripts according to the scheme of evaluation prepared by them.
3. Faculty members discuss the question paper and show the answer scripts to students in the respective classes.
4. If any discrepancies are found in allocation of marks, then the faculty clarify their doubts and if necessary, changes the marks
5. The sample of answers and evaluation are maintained as blue books.

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

Table 2.2.2.1: Marks distribution for theory courses

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

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

Table 2.2.2.2: Sample Format of marks distribution in CIE

NEW HORIZON COLLEGE OF ENGINEERING													
DEPARTMENT OF ELECTRONICS AND COMMUNICATION													
CIE BREAK-UP FOR ODD SEMESTER 2019-20													
Sl. No.	Course Code	Course Name	Semester	Test 1	Test 2	Test 3	Assignment 1	Assignment 2	Quiz 1	Quiz 2	Self-study Report	Co-curricular Report	Total CIE Marks
1	19ECE31	Applied Mathematics-III	3	25	25	25	7.5	7.5	5	5	NA	NA	50
2	DMAT31	Basic Engineering Mathematics-I	3	20	20	20	5	NA	NA	NA	NA	NA	25
3	19HSS322	Life Skills for Engineers	3	Refer to Sheet2									
4	19ECE33	Digital Electronic Circuits	3	25	25	25	7.5	7.5	5	5	NA	NA	50
5	19ECE34	Analog Electronic Circuits	3	25	25	25	7.5	7.5	5	5	NA	NA	50
6	19ECE35	Network Analysis	3	25	25	25	7.5	7.5	5	5	NA	NA	50
7	19ECE36	Signals and Systems	3	25	25	25	5	5	2.5	2.5	NA	10	50
8	ECE51	Analog communication	5	25	25	25	7.5	7.5	5	5	NA	NA	50
9	ECE52	Microcontrollers	5	25	25	25	7.5	7.5	5	5	NA	NA	50
10	ECE53	CMOS VLSI design	5	25	25	25	7.5	7.5	5	5	NA	NA	50
11	ECE54	Information theory & coding	5	25	25	25	5	5	2.5	2.5	NA	10	50
12	ECE55	Engineering Electromagnetics	5	25	25	25	7.5	7.5	5	5	NA	NA	50
13	ECES66	Programming with data structures	5	25	25	25	5	5	2.5	2.5	10	NA	50
14	ECE71	Wireless and Mobile Communication	7	25	25	25	7.5	7.5	5	5	NA	NA	50
15	ECE72	Antennas & Wave Propagation	7	25	25	25	5	5	2.5	2.5	NA	10	50
16	ECE733	Satellite Communication	7	25	25	25	5	5	2.5	2.5	10	NA	50
17	ECE735	Artificial Intelligence & Cognitive Computing	7	25	25	25	5	5	2.5	2.5	10	NA	50
18	ECE742	Low Power VLSI Design	7	25	25	25	5	5	2.5	2.5	10	NA	50
19	ECE746	Renewable Energy	7	25	25	25	5	5	2.5	2.5	10	NA	50
20	ECE753	Network Security & Cryptography	7	25	25	25	NA	NA	NA	NA	25	NA	50
21	ECE759	Python & R Programming	7	25	25	25	NA	NA	NA	NA	25	NA	50

Semester End Examination:

1. Semester End Examination is conducted by Controller of Examination Department
2. COE communicates to the external and internal members to prepare the questions as per the guidelines.
3. BoE of the department ensures that the question papers are set to covers the COs and Revised Bloom's Taxonomy (RBT) levels of learning.
4. Total Ten Questions, two from each module to be set uniformly covering the entire syllabus.
5. Student has to attempt compulsorily one question from each module, (Internal Choice is given).

Audit:

We send our SEE question paper, CIE question paper, representative assignments and scheme of evaluation for audit purpose to the senior faculty of higher learning institute.

2.2.2. B 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 and PO attainments are calculated based on that. Sample Question paper is given below:

NEW HORIZON COLLEGE OF ENGINEERING, BANGALORE
(Autonomous Institution affiliated to VTU, Accredited by NBA &NAAC with Grade ‘A’)

Department of Electronics and Communication Engineering
TEST-III(ODDSem-2018-19)

Academic Year:2018-19

Sem: VII A, B, C

Course: Wireless and Mobile Communication

Code: ECE71

Date:12.11.2018

Max.Marks:25

Answer ALL of the following (Each question carries 5 marks)

Sl. No	Question	Marks	BTL	CO
1	Explain the different types of diversity techniques used in case of cellular communication. (OR)	5	L2	CO3
2	Explain the types of diversity combining techniques used in case of cellular communication. Compare the techniques with respect to their performance.			
3	Compare and contrast the channel capacities of SISO, SIMO, MISO, and MIMO. (OR)	5	L4	CO3
4	Explain spatial multiplexing and Analyze how it is different from spatial diversity?			
5	Explain in detail the MIMO based system architecture. (OR)	5	L2	CO5
6	Distinguish between single carrier and multi-carrier systems.			
7	In OFDM system frequency domain setting is such that the spacing between two subcarriers is 312.5 KHz. The frequency spacing includes cyclic prefix of 800 ns added to OFDM symbol. What will be the final symbol duration with cyclic prefix? What will be the OFDM symbol duration without cyclic prefix? Will there be any loss of spectrum efficiency due to addition of cyclic prefix? (OR)	5	L3	CO4
8	A data rate of 5 Mbps is targeted in a multipath radio environment by using BPSK. The maximum delay spread is 25 μs. The number of subcarriers is 128 for multicarrier transmission. Compare the ISI effect if the system is single carrier and multi-carrier system.			
9	Illustrate the need to transmit pilot carriers. Analyse how will they help the wireless system? (OR)	5	L4	CO4
10	Analyse the channel modelling used in a rich scattering environment with no LOS path.			

Figure. 2.2.2 B Sample Internal Question Paper

2.2.2 .C Evidence of COs coverage in class test / midterm tests

Figure. 2.2.2 B shows IA3 question paper for Wireless and Mobile Communication course. In this internal test, three COs are contributed. COs are mapped with RBT levels. In this question paper, the distribution of CO3 is 40%, the distribution of CO4 is 40% and distribution of CO5 is 20%

2.2.2. D Quality of Assignment and its relevance to COs

1. Assignment is one of the assessment tool for all the courses. The assignment questions are framed in such a way to encourage self-learning habit in students.
2. Assignment issue and submission dates are mentioned well in advance in calendar of events
3. Assignment questions are prepared according to RBT levels and COs
4. Three different assignment sets are created for each section students.
5. Assignments are verified for its relevance to COs by the PAC committee, before sending to the students.
6. Assignment scheme is prepared by the faculty for evaluation.

2.2.3 Quality of student projects (20)

2.2.3 A. Major Projects (Final Year Project)

Project work carried out by the students aim at applying of theoretical and practical knowledge gained to provide technical solutions to real world problems. We also ensure that the projects address and attain the PO's and PSO's. The students are encouraged and motivated to do quality projects that address the environment friendliness, societal needs, safety etc.

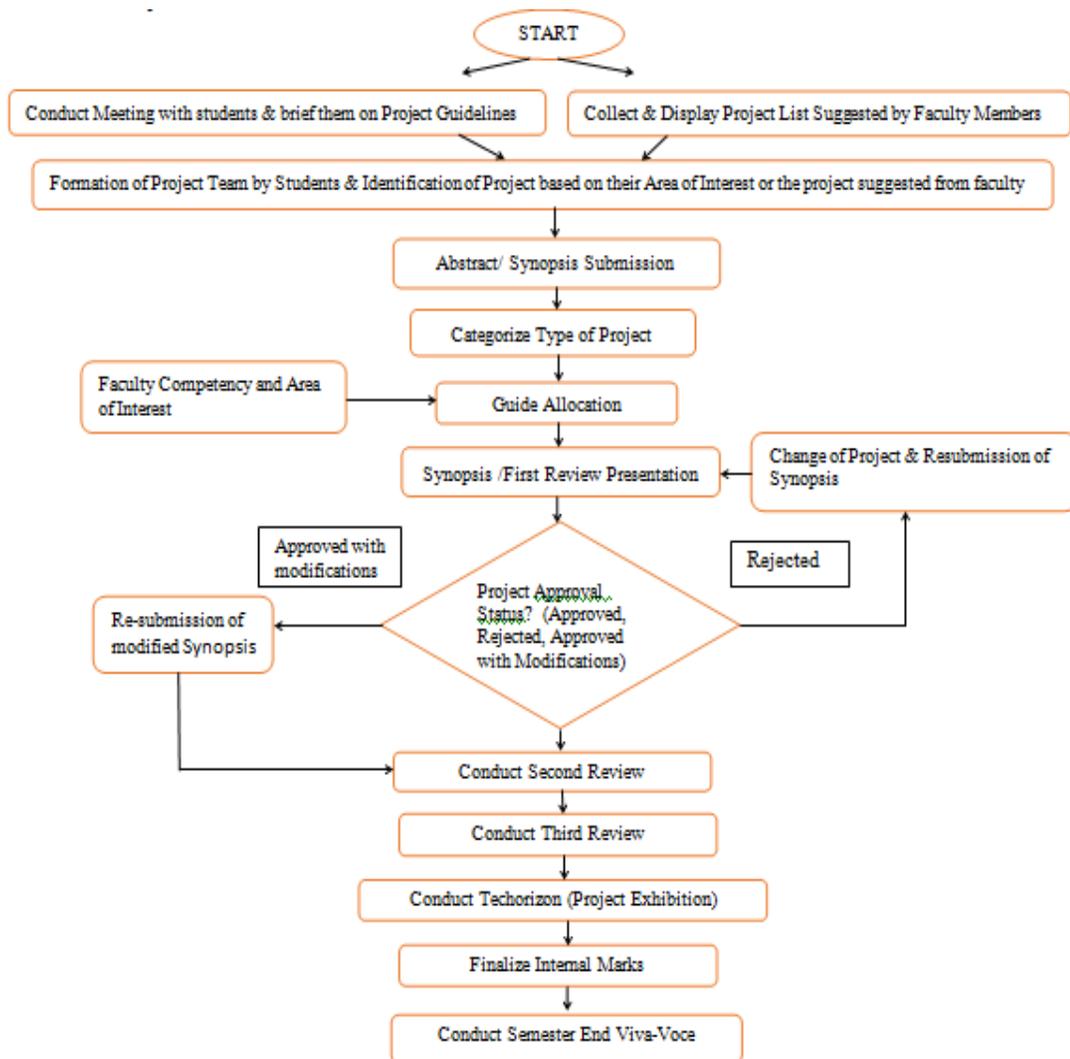


Figure 2.2.3.a: Process Flow of BE Final Year Project

Project Identification and Allocation:

- Conduct meeting with students in the presence of HoD, Professors, Associate Professors and project coordinators addressing the guidelines and timelines. Simultaneously, the project coordinators collect & display the list of projects suggested by the faculty members.
- Students can choose from the suggested projects or find a problem statement for the execution of the project based on their area of interest.
- Students have to identify their team members and submit the synopsis to the project coordinator.
- Based on the students' chosen area and faculty's competency skills suitable guide will be allotted.
- Conduct First Review which involves project synopsis presentation by the project team in the presence of Review Panel members comprising of guide, domain expert and project coordinators.
- Based on the inputs given by the Panel members students might need to identify another project title and resubmit the synopsis or improve the existing one.

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

All projects carried out by the students are mapped with PO's and PSO's based on the type of project and their applications addressing issues related to environment and societal safety.

Table 2.2.3a: List of few samples of student final year projects Batch 2014-18

S. No.	Project Batch No.	Name of the Student	Title of the Project	Type of Project (Application /Product/ Research)	Environment Related	Ethics	Societal Safety	Mapping with POs/ PSOs
1.	7	Akshay Kumar Nayak (1NH14EC739) Aaliya Ashfaq (1NH14EC700)	Embedded Based Food Quality Detection with Bio Sensor	Application		✓	✓	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PO11, PSO1, PSO2
2	9	Antonita Aishwarya (1NH14EC742) Priyanka P (1NH15EC415) Jayashree R (1NH14EC746) Jayashree Devi (1NH15EC408)	Fall Detection System for Elderly People	Application		✓	✓	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PO11, PSO1, PSO2
3	23	Karthik K (1NH14EC064) Mahalakshmi T S (1NH14EC072) Manasa H R (1NH14EC075)	VLSI implementation of AES encryption/decryption algorithm	Application		✓	✓	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PO11, PSO1, PSO2
4	35	Arun R (1NH14EC705) Bhavani R (1NH14EC707) Rethana Jennifer (1NH14EC732)	Smart Pillbox	Application		✓	✓	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PO11, PSO1, PSO2
5.	51	Shraddha Kiran (1NH14EC755) Soumyashree C Javali (1NH14EC757) Akash Bhardwaj (1NH14EC738)	An Effective real time solid waste management system	Application	✓	✓	✓	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2

Criterion-2 Self-Assessment Report (SAR)

6.	41	Sanjana K (INH14EC117) Sushmitha (INH14EC134) Suraksha Chaudhary (INH14EC153)	Mute Speech: A Proficient Technique to Communicate with Differentially Abled People Using a Combination of Sensor Devices	Application		✓	✓	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PO11, PSO1, PSO2
7	42	Fiona Nikhita Pinto (INH14EC710) Neha Singh (INH14EC150) Dinaz Sholapur Wala	High Voltage High Frequency Electro Spinning Nano Fibre Generator	Research		✓		PO1, PO2, PO3, PO4, PO5, PO8, PO9, PO10, PO11, PO12, PSO1, PSO2
8	43	Pavan Kumar Reddy (INH14EC092) Amruth Raju (INH14EC012) Prahlad Reddy (INH14EC156)	Smart Ultrasonic Insects Repellant with DTMF and Manual Control for Agriculture	Application		✓	✓	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PO11, PSO1, PSO2
9	48	Rini Elizabeth Alex (INH14EC106) Ruby Khan (INH14EC108) Muheed Pasha (INH14EC081)	Wireless Transfer of Solar Power for charging mobile devices in a vehicle	Application	✓	✓		PO1, PO2, PO3, PO4, PO5, PO7, PO8, PO9, PO10, PO11, PSO1, PSO2
10	56	Anu Reddy (INH14EC017) Varsha A (INH14EC142) Sirisha S (INH14EC126)	Advanced foot step power generation system	Application	✓	✓		PO1, PO2, PO3, PO4, PO5, PO7, PO8, PO9, PO10, PO11, PSO1, PSO2

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 projects. The projects which are implemented based on application of theoretical and practical concepts have been classified as application type. The projects based on innovative design, improved simulation and comparative analysis of algorithm performance have been classified as research based projects. The projects demonstrated with hardware working prototype model have been identified as product type. The summary of analysis report of the projects is given in the following table.

Table B.2.2.3b is describing the number of projects completed by students of batch 2015-19, 2014-18 and 2013-17 categorized as application based, product based and research based.

Table 2.2.3b: Types of Major Projects carried out in three Academic Years

Academic Year	Type of projects		
	Application	Product	Research
2018-2019	60	3	12
2017-2018	50	-	7
2016-2017	56	2	9

Project Execution:

- All the students must report to their internal guides and update them on the progress of their project work.
- The project team should give a presentation cum demonstration depicting the progress and partial output of their project work during second Review to the Review Panel members.
- A final presentation and demonstration of the project is carried out by the project team during the third/ final review.

- On successful completion of third review the project team submits the project report.
- A project exhibition- Techorizon, is conducted at college level where the students are encouraged to demonstrate their project work.

Continuous Monitoring and Evaluation of Project

- The progress of a project is monitored by the guide on weekly basis.
- All Students will report to Project Guide on weekly basis and discuss the work done, challenges faced during the project work.
- The continuous progress is assessed through periodic review by panel (first review and second review before final review) for 150 marks based on Rubrics, as shown in table 2.2.3c, 2.2.3d, 2.2.3e, which is then scaled down to 50 Marks.
- Projects will be evaluated on the basis of
 - Working principle, implementation methodology, design Block Diagram & components specifications, application of projects and future scope.
 - Demonstration of the project work and the final output.
 - Viva-Voce by panel of Experts.
- Figure 2.2.3b shows the marks distribution for internal assessment of major projects.

Table 2.2.3c: Rubrics for Major Project - First Review

Rubrics for Major Project First Review			
Academic Year (2018-2019)			
Parameter	>70%	40 to 70%	<40%
Problem Identification	Problem identified is in accordance with current technology (latest), proper statement of	Problem identified is not based on latest technology, proper statement of	Incomplete description of problem statement, no relevant examples mentioned.

	problem with many examples.	problem with limited examples.	
Literature Survey	Referred to more than Five articles; appropriately summarized; includes recent references.	Referred to more than three articles; appropriately summarized; NO recent references.	No references included.
Hardware/Software Specification	Proper Specification of Hardware/Software used in the project.	Limited Specification of Hardware and software used in project.	Incomplete specification of hardware and Software used in the project.
Expected Results and applications	Proper idea of nature of graphs /model to be built and applications where it can be used.	Limited idea of nature of graphs /model to be built and applications where it can be used.	There is no mention of the expected results.

Table 2.2.3d: Rubrics for Major Project - Second Review

Rubrics for Major Project Second Review			
Academic Year (2018-2019)			
Parameter	>70%	40 to 70%	<40%
Detailed block diagram/Explanation of Algorithm used in project	Proper Explanation of block diagram and algorithm used in project.	Limited description and explanation of block diagram and algorithm used in project.	Incomplete details of the block diagram and algorithm used.
Technologies Implied/ Explanation	Proper description and justification of intermediate results obtained in second phase of the project.	Limited description of intermediate results obtained without necessary details/ justification in second phase of the project.	Incomplete description of intermediate results obtained in second phase of the project.

Progress/ Intermediate Results	Proper demonstration of intermediate results.	Limited demonstration of intermediate results.	Incomplete demonstration of intermediate results.
Individual Contribution and meeting guide	Clear distribution of workload among the team members Use of Gantt chart for Project Scheduling / Meeting with guide and updating the work carried out on time/ Clear distribution of workload among the team members.	Distribution of workload among the team members is not scheduled properly but used Gantt chart for Project Scheduling/ Meeting with guide but no clarity in updation of work carried out/ Distribution of workload among the team members is not scheduled.	No distribution of proper workload among team members and no Gantt chart/ No timely meeting with guide and no updation of work carried out so far/ No distribution of proper.

Table 2.2.3e: Rubrics for Major Project - Third Review

Rubrics for Major Project Third Review			
Academic Year (2018-2019)			
Parameter	>70%	40 to 70%	<40%
Presentation and Justification of Final Output	Proper Explanation and justification of output obtained in the final phase of project.	Limited Explanation and justification of output obtained in the final phase of project.	No justification of output obtained in the final phase of project.
Demonstration of final results	Successful demonstration of output of the project during final phase.	Partial demonstration and explanation of output of the project during final phase.	No working model/simulation results of output of the project during final phase.
Project Report	Submission of report on time as per the report guidelines.	Submission of report on time but guidelines are not followed properly.	No timely submission of report and guidelines are also not followed properly.

Participation in Tech Horizon/Paper Publication	Student has presented ppts and demonstrated the project completely in tech horizon event or published paper in scopus index journal.	Student has presented ppts and demonstrated the project partially in tech horizon event or published paper in UGC journal.	Student has not participated in tech horizon event/ Publication in non-recognized journal.
Monthly Assessment and Individual Contribution	Meeting with guide and updating the work carried out on time/ Clear distribution of workload among the team members Use of Gantt chart for Project Scheduling.	Meeting with guide but no clarity in updating of work carried out/ Distribution of workload among the team members is not scheduled properly but used Gantt chart for Project Scheduling.	No timely meeting with guide and no updating of work carried out so far/ No distribution of proper workload among team members and no Gantt chart.

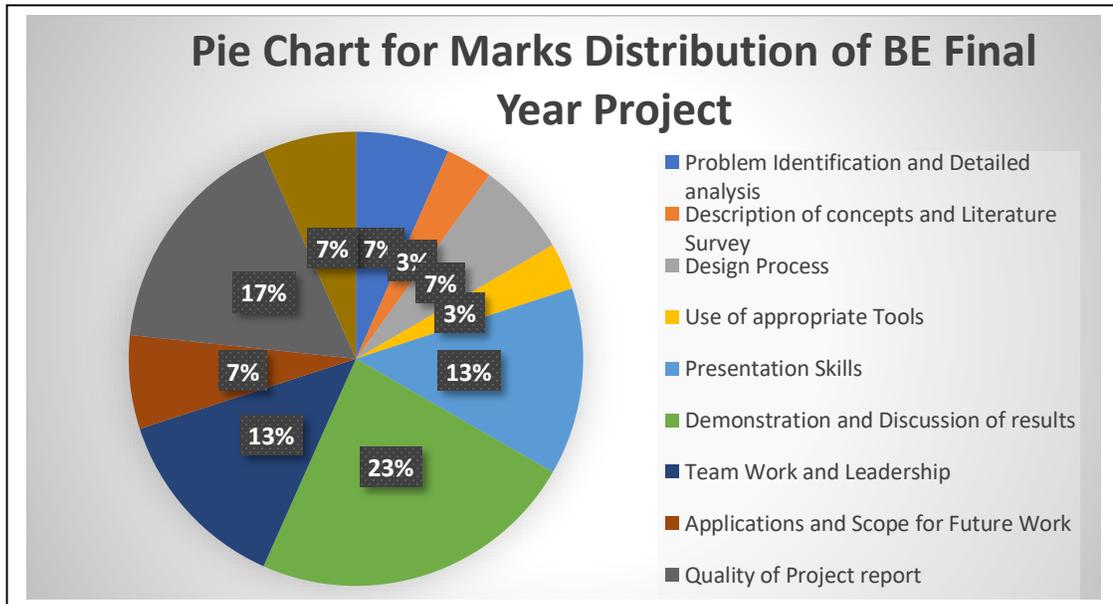


Figure 2.2.3.b: Mark Distribution for Internal Evaluation- Major Projects

Funded/Sponsored Projects:

List of funded/sponsored major projects is given in table 2.2.3f.

Table 2.2.3f: List of Funded/Sponsored Projects

S. No.	AY	Project Batch No.	Name of the Student	Title of the Project	Funding Agency	Year	Amount	Guide
1.	2019 2020	21	Shripad Aithal-1NH16EC097 AkshayRao-1NH16EC007 Sindhu C.R-1NH16EC101 Rushab-1NH16EC086	Advanced IoT Solution to Monitor Underpass Water Level Management System	KSCST	2020	Rs. 4000	Dr. Jayanthi
2.		14	Mohan Kumar (1NH16EC413) Dilip Kumar (1NH16EC401) Prasanna Kumar (1NH15EC724)	Development of underwater ROV for drowned human body detection	KSCST	2019	Rs. 7000	Dr. Naveen H
3.	2018 2019	48	Mohammed Musaver (1NH15EC050) Mohammed Shabaz (1NH15EC051) Nalini K (1NH15EC057) Kavya DR (1NH15EC038)	Under water acquisition and enhancement R.O.V	KSCST	2019	Rs. 8000	Dr. Sanjeev Sharma Dr. Naveen H

2.2.3 B. Mini Projects:

Mini Project work carried out by the students aims at applying theoretical and practical knowledge **gained during the respective semesters** thereby inculcating the learning by doing amongst the students.

Project Identification, Allocation, Continuous Monitoring and Evaluation:

The process of mini project identification, allocation and monitoring and evaluation is summarized in table 2.2.3g.

Table 2.2.3g: Processes of Mini-project identification, allotment, monitoring and evaluation

Steps	Tasks	Related process description
Step-1	Project Identification	<ul style="list-style-type: none"> Projects are identified by the students in their respective area of interest. Students must submit a synopsis based on their identified project. Project coordinators approve the synopsis or ask for its resubmission if required.
Step-2	Allotment	<ul style="list-style-type: none"> Projects Guides are allocated to them based on faculty expertise and synopsis submitted. The laboratory is assigned, and the resources are provided to students for project development.
Step-3	Continuous Monitoring	<ul style="list-style-type: none"> The progress of a project is monitored by the guide on weekly basis. The continuous monitoring is done through two periodic reviews by panel (first review and final review).
Step-4	Evaluation	<ul style="list-style-type: none"> Internal Assessment of the project team members is done based on project objectives and quality of the project by the internal guide along with the review panel member (Problem statement, Effectiveness of the solution, presentation, report with plagiarism check certificate, and individual contribution, etc). The continuous progress is assessed through periodic review by panel (first review and final review) for 25 marks each based on Rubrics given in table 2.2.3h, 2.2.3i. Final IA marks are calculated by taking the average of two reviews. Semester End Examination is conducted wherein the project team members are assessed by an Internal and an External examiner. This includes presentation by the project team and demonstration of the project followed by Viva-Voce.

Table 2.2.3h: Rubrics for Mini Project - First Review

First Review - Evaluation Rubrics Mini-Projects				
PART-A: Project Identification / Implementation - 20 Marks				
1	Problem Statement	Allotted marks: 5		
		Excellent (4 - 5)	Good (2 - 3)	Fair (0 - 1)
		5 → Problem statement is excellent & scope for future enhancement 4 → Problem statement is excellent	3 → Concept is clear & able to frame the problem statement 2 → Able to frame the problem statement	Statement is not clear
2	Requirement collection	Allotted marks: 3		
		Excellent (3)	Good (2)	Fair (0 - 1)
		Identifying the proper requirements with sufficient information. (Both functional & nonfunctional).	Specifying the requirements with less information.	Few requirements are specified.
3	Methodology	Allotted marks: 2		
		2 → Well defined	1 → Moderately defined	0 → Not defined properly
4	Presentation Skill	Allotted marks: 5		
		Excellent (4 - 5)	Good (2-3)	Fair (0-1)
		5 → Interactive Presentation well aligned with problem statement and proper template 4 → Presentation well aligned with	3 → Engaging Presentation, moderately aligned with problem statement and proper template 2 → Engaging Presentation	1 → Presentation was not aligned with problem statement and less information.

		problem statement and proper template.	&insufficient information	
5	Q & A	Marks Allotted: 5		
PART-B: Meeting Guide/Deadline/Individual Contribution- 05 Marks				
1	Meeting Guide	Allotted marks: 5		
		Excellent (4 - 5)	Good (2 - 3)	Fair (0-1)
		5→ Regular, Progress in Work is excellent & Timeline followed 4→Regular, progress in work is excellent & Timeline not followed	3→ Regular, progress in work satisfactory & Timeline followed 2→Regular, progress in work satisfactory &Timeline not followed	1→ Not Regular, progress in work not satisfactory & Timeline not followed

Table 2.2.3i: Rubrics for Mini Project – Final Review

Second Review - Evaluation Rubrics Mini Projects						
PART A - Demonstration / Implementation – 15 Marks						
1	Work Done	Allotted marks: 10				
		Excellent (10)	Very Good (8-9)	Good (6-7)	Satisfactory (3-5)	Poor (1-2)
2	Q & A	Allotted marks: 05				
		Excellent (5)	Very Good (4)	Good (3)	Satisfactory (2)	Poor (1)
PART B- Proper Formatting / Presentation- 05 Marks						
1	Presentation	Allotted marks: 05				
		Excellent (5)	Very Good (4)	Good (3)	Satisfactory (2)	Poor (1)

PART C - Report and Plagiarism Check - 05 Marks					
1	Report copy and Plagiarism report	Allotted marks: 5			
		Excellent (5)	Very Good (4)	Good (3)	Satisfactory (2)

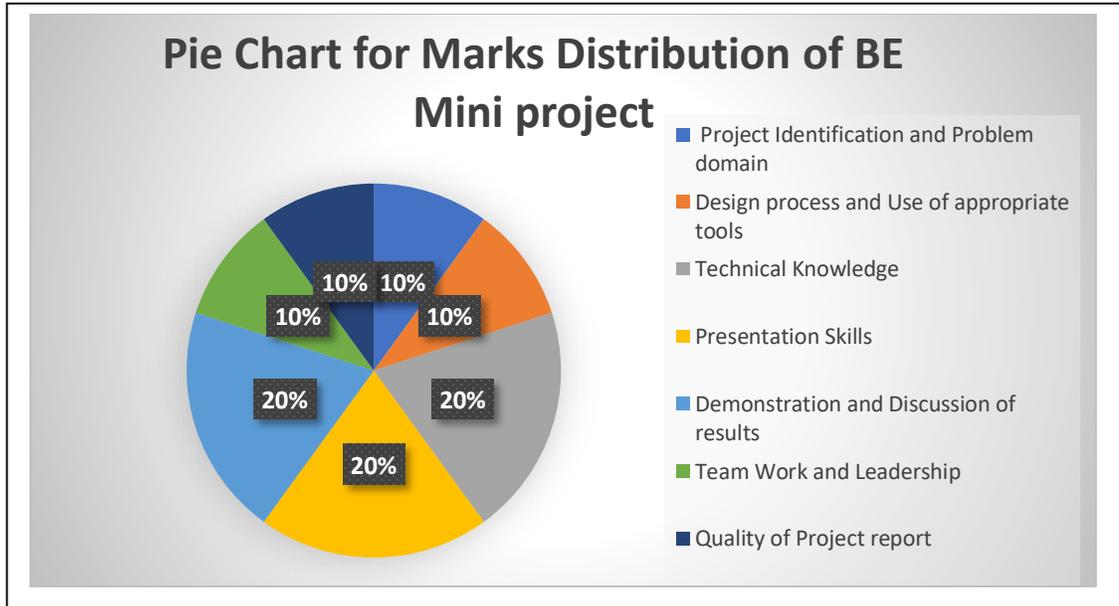


Figure 2.2.3.c: Types and relevance of the projects and their contribution towards attainment of POS and PSOs

All projects carried out by the students are mapped with PO's and PSO's based on the type of project and their applications addressing issues related to environment and societal safety. Few sample mini projects mapped with PO's is shown in table 2.2.3j.

Table 2.2.3j: List of few samples of Mini projects

S. No	Sem	Project Batch No.	Name of the Student	Title of the Project	Type of Project (Application/Product/Research)	Environment Related	Ethics	Societal Safety	Mapping with POs/PSOs
1	III	AG2	Devashrutha S 1NH17EC021 Mohammed Ghassan 1NH17EC052 Naveen K M 1NH17EC056	GRMOT MINE	Application		✓	✓	PO1, PO2, PO3, PO4, PO5, PO6, PO8, PO9, PO10, PO11, PSO1, PSO2
2	IV	BG27	Stanislaus Lasrado 1NH17EC099 Prince Chaurasiya 1NH17EC071 Saikat Samanta 1NH17EC084	PWM using FPGA to control a light bulb's intensity using Google Assistant	Application	✓	✓		PO1, PO2, PO3, PO4, PO5, PO7, PO8, PO9, PO10, PO11, PSO1, PSO2
3	VI	AG9	G Avinash 1NH16EC030 Madan Gowda 1NH16EC047 Mithun V 1NH16EC057	Design of a Ring Oscillator using Micro-Wind Software	Application		✓		PO1, PO2, PO3, PO4, PO5, PO8, PO9, PO10, PO11, PSO1, PSO2

Outcome of Student’s Project:

Students enhance their innovative project work to convert it into relevant technology application or product. Students are motivated to file patent for their innovative projects design/ model. While carrying out the project work students learn how to work in team and individually. Students are also involved in deciding the budget of their project and accordingly selecting the components without compromising the functionality. This aids students to gain finance and management related skills. Further it steers students to enter into entrepreneurship.

Students are also encouraged to present their project work in National/international Conferences, and project exhibitions. They are also motivated to publish a paper based on their project work in journals. The list of paper published or presented is listed in table 2.2.3k.

Table 2.2.3k: List of Publications out of project work

S. No.	Name of Conference/ Journal (International/National)	Title of Paper	Name of Author(s)	Year of Publication
1.	International Journal of Information and Computing Science, vol. 6, Issue 5, pp. 286-289, May 2019, DOI: 16. 10089.IJICS. 2019.V6I5.18.309	Smart and Reliable Techniques for Blind Spot Detection	Sai Prashanth, Mr. Aravinda K, Dr. Sanjeev Sharma	April 2019
2.	International Journal of Information and Computing Science, vol. 6, Issue 5, pp. 290-293, May 2019, DOI: 16. 10089.IJICS. 2019.V6I5.18.309	Implementation of D-PLL using Microwind	Mr. K. Aravinda, Mr. Madhubabu K Mr. Avinash G Mr. Mithun Mr. Madan Gowda	April 2019
3.	International Journal of Information and Computing Science, vol. 6, Issue 5, pp. 402-405, May 2019, DOI: 16. 10089.IJICS. 2019.V6I5.18.311	Low-Cost Electronic Power Supply System for Nanosatellite Bus	Mr. Mukti Biswas Mr. Aravinda K Mr. Denzel Mr. Nikhil	April 2019
4.	International Journal of Information and Computing Science, Volume 6, Issue 5, May 2019, Page no. 300 - 305, ISSN NO: 0972-1347	Implementation of DSA Algorithm using MATLAB	Ms. Lipsa Dash Mr. Karthik CV Mr. Madhubabu K Mr. Mohit R Mr. Ashish Kumar Mr. Manjunath N	May 2019

5.	International Journal of Management, Technology and Engineering, Volume IX, Issue VI, JUNE/2019, Page no. 1588 -1594, ISSN NO: 2249-7455	Channel Estimation in MU-MIMO Systems for Wireless Communication	S P Rahul Kumar S Reshma Shruthi Rajamani Lipsa Dash	June 2019
6.	IOSR Journal of Electronics and Communication Engineering (IOSR-JECE), Volume 14, Issue 4, ISSN: 2278-8735	Implementation of Control Circuitry for Ultra-Low Power Rom	Ms. Riya Dey Mr. Pamisetty Udayabhanu Ms. Neethu Johny	July 2019
7.	Journal of Emerging Technologies and Innovative Research (JETIR), Volume 6, Issue 5, ISSN: 2349-5162	Raspberry Pi Mystic Mirror Using Alexa	Ms. Monika Gupta Mr. A M Amarjith Mr. K Girivardhan Mr. Maurya Reddy	May 2019
8.	International Journal for Research in Applied Science & Engineering Technology, Volume 6, Issue V	Embedded based food quality detection with bio sensor technology	Akshay Kumar Nayaka Aaliya Ashfaq Ms. Rajini	May 2018
9.	International Journal for Research in Applied Science & Engineering Technology, Volume 6, Issue IV	An Android based wireless ECG monitoring system for cardiac arrhythmia	S Divya Sonia Mahadev Suchithra S Mr. Bhimasen	April 2018
10.	International Journal for Research in Applied Science & Engineering Technology, Volume 6, Issue V	Design of two bit ALU using CMOS &GDI Logic architecture	Sachin R Sachin R M Sanjay S Nayak Mr. Rajiv Gopal	May 2018
11.	International Journal for Research in Applied Science & Engineering Technology, Volume 6, Issue V	Passenger Bus alert system for easy navigation blind	V Sowmya Priya Soundarya M Niketha Ms. Thanuja	May 2018
12.	International Journal for Research in Applied Science & Engineering Technology, Volume 6, Issue V	Techniques for Pixel based Image Fusion of Real Image	Rahul J U Anand R Jagadeesh V S Bharat M Ms. Jayanthi	May 2018

13.	International Conference on Electrical, Electronics and Communication Engineering-Volume 7, Issue 42018	VLSI implementation of OFDM Transmitter chain	Pawan Kaushik Deekshitha R Chandana S M Ms. Monika Gupta	April 2018
14.	Perspective in communication, Embedded-Systems and signal processing, Volume 2, Issue 2	VLSI implementation of AES encryption/decryption algorithm	Karthik K Mahalakshmi T S Manasa H R	May 2018
15.	International Journal for Research in Applied Science & Engineering Technology, Volume 6, Issue V	Human Pulse Monitoring and Alert system	Shereen John Dilip Kumar R P Shama Mohsin S Ms. Maheswari	May 2018
16.	International Journal for Research in Applied Science & Engineering Technology, Volume 6, Issue V	Design and Development of GUI based Under Water Monitoring System	Meghana C Keerthana R Pallavi G A Mr. Naveen	May 2018
17.	International journal of Engineering Trends and Technology, Volume 59	Assessment of noise reduction in ultra sound images of common caotit and brachial activities	Gaurav Kumar Gupta Mohammed Asif Avijnan M Ms. Ishani Mishra	May 2018
18.	International Journal of creative Research Thoughts, Volume 6, Issue 2	Smart Reading Glasses: Conversion of Image Text into Speech	Sowmya N Yaduguri Sravani Beulah James Ms. Nayana	April 2018
19.	International Conference on NHSET 2018, New Horizon College of Engineering	Flexible Compartments IOT Driven Pill-Box	Arun R Bhavani R Rethna Jennifer S Ms. Lipsa Dash	13/04/2018
20.	International Journal of Scientific Research in Computer Science, Engineering and	Zigbee based wireless system	Sharat S Sonal S Agnes Maria Ms. Lipsa Dash	April 2018

	Information Technology, Volume 4, Issue 5			
21.	International Journal of Creative Research Thoughts, Volume 6, Issue 2	Smart Id Card based child security device	Alankrit Mishra Monika Yadav Malbika Singh Ms. Divya Sharma	April 2018
22.	International Journal for Research in Applied Science & Engineering Technology, Volume 6, Issue V	Smart Mirror (With a Personal AI)	Akhil Ravishankar Baba Kedarnath Sahu Purushothaman E	May 2018
23.	International Journal for Research in Applied Science & Engineering Technology, Volume 6, Issue V	IC Layout Design of Carry Lookahead Adder at 90mm Technology	Rohith Prasad K M Harish P Rigil Gracious Kandati Praveen Kumar Mr. Rajiv Gopal	May 2018
24.	International Journal for Science and Advance Research in Technology, E-Journal, Volume 4, Issue 4	Charging Devices using Wireless transfer of solar power	Ms. Maheswari, Rini Elizabeth Alex Ruby Khan Muheed Pasha	April 2018
25.	International Journal for Research in Applied Science & Engineering Technology, Volume 6, Issue V	Harnessing Energy from Piezo Sensors Through Foot Steps	Dr. Nisha K.C. R Anu Reddy Varsha A Sirisha S	May 2018

The list of patents filed based on student’s project work is listed in table 2.2.31.

Table 2.2.31: List of Patents filed out of Student’s Project Work

SI. No	Name of Authors	Patent details			
		Title of patent	Application No	Date of Publication	Publication Reference
1.	Mr. Mohammed Ghassan Mr. Devashrutha S Mr. Naveen K M Dr. Sanjeev Sharma Mr. Naveen H	Novel System and Method of GRZMOT Mine	20194104 8771	28.11.19	E- 2/3821/201 9-CHE

2.	<p>Denzel Abraham George Tarun Sai Reddy, Shyam Hariraj Rajkumar, Sainath Vamshi, Sanketh S Huddar Nikhil Riyaz, Athira Ajayakumar Dr. Nisha K C R Ashwin Shankar Reddy Vishwa Gopal, Sriram Gupta K Bhavana Savanth, Jaiteg Singh Joshua Tom Jaccob Dr. Mohankumar. S</p>	<p>Novel System, Design and Methods of Circular Stack Can Satellite (CSCS)</p>	<p>20194104 6496</p>	<p>15-11-19</p>	<p>E- 2/3624/201 9-CHE</p>
3.	<p>Hariraj Rajkumar, Sainath G V Sanketh S H, Nikhil R Athira A K, Dr. Nisha K C R Denzel A G, Tarun S T Shyam S, Ashwin S R Vishwa Gopal, Sriram G K, Bhavana Savanth, Jaiteg Singh, Joshua T J, Dr. Mohankumar. S</p>	<p>Novel System, Design and Methods of Compact CanSat: Satellite in a CAN</p>	<p>20194104 6497</p>	<p>15/11/19</p>	<p>E- 2/3625/201 9-CHE</p>

2.2.4 Initiatives related to industry interaction (10)

Program curriculum provides various methods for industry interaction in addition to the initiatives taken by the management. The institution has signed MoU with Cisco Labs, Schneider Electric India Private Limited, Hewlett Packard enterprise, Adobe, VMware and SAP.

MOUs were signed with industries to emphasize on

- Internship
- Industrial Visits
- Industry supported Laboratory and activities

Table 2.2.4.a shows Memorandum of understanding signed between department of ECE and various industries.

Table 2.2.4a. List of MoUs with Industries

Sl. No	Name of the Company	MOU Date and Period	Role
1	Compute Silicon	26/4/2019-30/4/2021	The purpose of this collaboration is to work on the prototype development, promote awareness of latest technologies, provide opportunities to NHCE students for internships and project developments from the latest areas of technologies
2	Electronics for You	1/5/2019-30/4/2020	The purpose of this collaboration is to set up an EFY-Certified Skill development Centre in the institution, in partnership with EFY
3	eduSaksham	17/9/2018-16/9/2021	To provide trainings for meeting the industry standards and assist the students in job oriented/placement with different companies

2.2.4.a Industry supported laboratories (2)

The industry supported laboratories develop 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 2.2.4.A

Table 2.2.4.A. Details of Industry supported Laboratories

Sl. No	Name of the company	Objectives/Description	Outcomes
1	 CISCO Networking Academy	<ul style="list-style-type: none"> To inculcate networking skills to meet the current and future needs of the Information Technology (IT) industry. To enrich the young minds with intellectual, technical and practical skills for serving the fast growing industry. 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. 	<p>POs: PO1, PO3, PO4, PO5, PO9, PO10, PO12</p> <ul style="list-style-type: none"> CCNA Routing and Switching provides an integrated and comprehensive coverage of networking topics, from fundamentals to advanced applications and services, while providing opportunities for hands-on practical experience and career skills development. Students will be prepared to take the Cisco CCENT® certification exam after completing a set of two courses and the CCNA Routing and Switching certification exam after completing a set of four courses.

<p>2</p>	 <p>CoE - Schneider Electric India Private Limited and French Ministry of</p>  <p>National Education</p>	<ul style="list-style-type: none"> • To carry out vocational training programmes in initial and continuing education in the fields of electricity, automation and energy management. • To develop, within an international framework of “academic-industry” links, training programmes in continuing education for technical teachers, training of young engineers and technicians and to prepare them for the job market in the field of electricity, automation and energy management. 	<p>POs: PO1, PO2, PO3, PO4, PO5, PO6, PO12 PSOs: 1,2</p> <ul style="list-style-type: none"> • The MOU has resulted in setting up of laboratory in industrial automation. For academic year 2017-18 a course is offered on Industrial Automation as an industrial open elective in various departments and is a core subject for students of Electrical and Electronics Engineering. • In future it is planned for valued added program for practicing engineers, teachers and students of other institution and colleges.
<p>3</p>	 <p>HP Vertica CoE</p>	<ul style="list-style-type: none"> • 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 Banking, Telecom, Manufacturing, E- commerce, Retail etc. • HP E will be engaged in 	<p>POs: PO1, PO2, PO3, PO4, PO5, PO6, PO11, PO12</p> <p>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 Big Data so that they are industry ready professionals.</p>

		<p>overall development of students will invite Industry professional to enhance Big Data Analytics skills through hands on sessions, guest lecturers etc.,</p>	
4	 VMware IT Academy	<ul style="list-style-type: none"> • 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 	<p>POs: PO1, PO4, PO5, PO9, PO10, PO12</p> <ul style="list-style-type: none"> • 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 Department to hone their skills in VMware Technologies.

<p>5</p>	 Adobe Digital COE	<ul style="list-style-type: none"> • 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 Practice Projects by Wipro Technologies immediately after their 8th Semester examinations. 	<p>POs: PO1, PO5, PO9, PO10, PO12</p> <p>Adobe is providing required technological and domain related expertise to faculties and students of New Horizon College of Engineering. Courses are offered as an elective for the students of the Department to hone their skills in Adobe Systems.</p>
<p>6</p>	 SAP Next Generation Lab	<ul style="list-style-type: none"> • Hackathons where a 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 	<p>POs: PO1, PO5, PO9, PO10, PO12</p> <p>SAP modules are integrated as electives in NHCE courses. NHCE to be given special privilege for Industry Visit to SAP LABS.</p>

		on SAP HANA Cloud Platform, SAP S/4HANA – ERP, Analytics, Design Thinking.	
7		<ul style="list-style-type: none"> • Quest Global Services India Pvt Ltd (Quest Global India) is establishing Industrial Internet of Things (IIoT) Centre of Excellence. • It prepares Ready to Deploy (R2D) Resources enabling the candidates in developing the understanding and 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/HM development. 	<p>POs: PO1, PO5, PO9, PO10, PO12</p> <p>Courses are offered as an elective for the students of the Department to hone their skills in Industrial Internet of Things.</p>

2.2.4.b Industry involvement in the program design and curriculum (3)

The industry experts are involved in designing the curriculum. Additional open electives as per the suggestion from the industry experts are included as in table 2.2.4.b

Table 2.2.4.3 shows list of Open electives designed by industries included in the curriculum

Table 2.2.4.b Open Electives

Code	Course	COE
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 Generation Lab
NHOP08	Schneider - Industrial Automation	Schneider Electric India Private Limited
NHOP09	CISCO- Routing and Switching - 1	CISCO Networking Academy
NHOP10	Data Analytics	HP Vertica
NHOP11	Machine Learning	SAP Next Generation Lab
NHOP12	CISCO-Routing and Switching - 2	CISCO Networking Academy
NHOP13	Industrial IOT-Embedded Systems	Quest Global
NHOP14	Blockchain	HP Vertica
NHOP15	Product Life Cycle Management	SAP Next Generation Lab

BoS Members Part of the industry

Table 2.2.4. b1 shows BOS members part of the industry

Table: 2.2.4. b1 Industry BOS members

Sl No	Industry Expert	Expert Details	Academic Year
1	Mr. Ravishankar	Director, Anora laboratories Pvt Ltd.	2017-18
2	Ms. Srividya	Alumni (2011-2015 Batch) Physical Design Engineer Intel Technologies India Pvt. Limited	2017-18
3	Mr. Manohar R	Alumni (2012-2016 Batch) Design Engineer Sony India Software Centre, Bangalore	2017-18
4	Mr. Ravishankar	Director, Anora laboratories Pvt Ltd.	2018-19
5	Ms. Srividya	Alumni (2011-2015 Batch) Physical Design Engineer Intel Technologies India Pvt. Limited	2018-19
6	Mr. Manohar R	Alumni (2012-2016 Batch) Design Engineer Sony India Software Centre, Bangalore	2018-19
7	Mr. Ravishankar	Director, Anora laboratories Pvt Ltd.	2019-20
8	Ms. Srividya	Alumni (2011-2015 Batch) Physical Design Engineer Intel Technologies India Pvt. Limited	2019-20
9	Mr. Manohar R	Alumni (2012-2016 Batch) Design Engineer Sony India Software Centre, Bangalore	2019-20

Cisco supported laboratory (Centre of Excellence) has been established in the Department of Electronics and Communication Engineering. Figure 2.2.4.1 shows our respected chairman Dr. Mohan Manghnani, inaugurating the CISCO COE. Figure. 2.2.4.2 shows participation of Pricncipal, Deans, Directors, HODs and faculty in charges in the inauguration of the CISCO Lab.



Figure 2.2.4.1 Inauguration of CISCO LAB, ECE NHCE



Figure 2.2.4.2 Inauguration of CISCO LAB, ECE NHCE

ENROLLMENT OF STUDENTS FOR CISCO CENTRE OF EXCELLENCE LAB

Table 2.2.4.2a shows the enrollment of students for CISCO COE

Table 2.2.4.2a shows the enrollment of students for CISCO COE

Date	Total Students	Professional Elective Student Count	Open Elective Student Count
Jan 2018 – Jun 2018	345	235	105

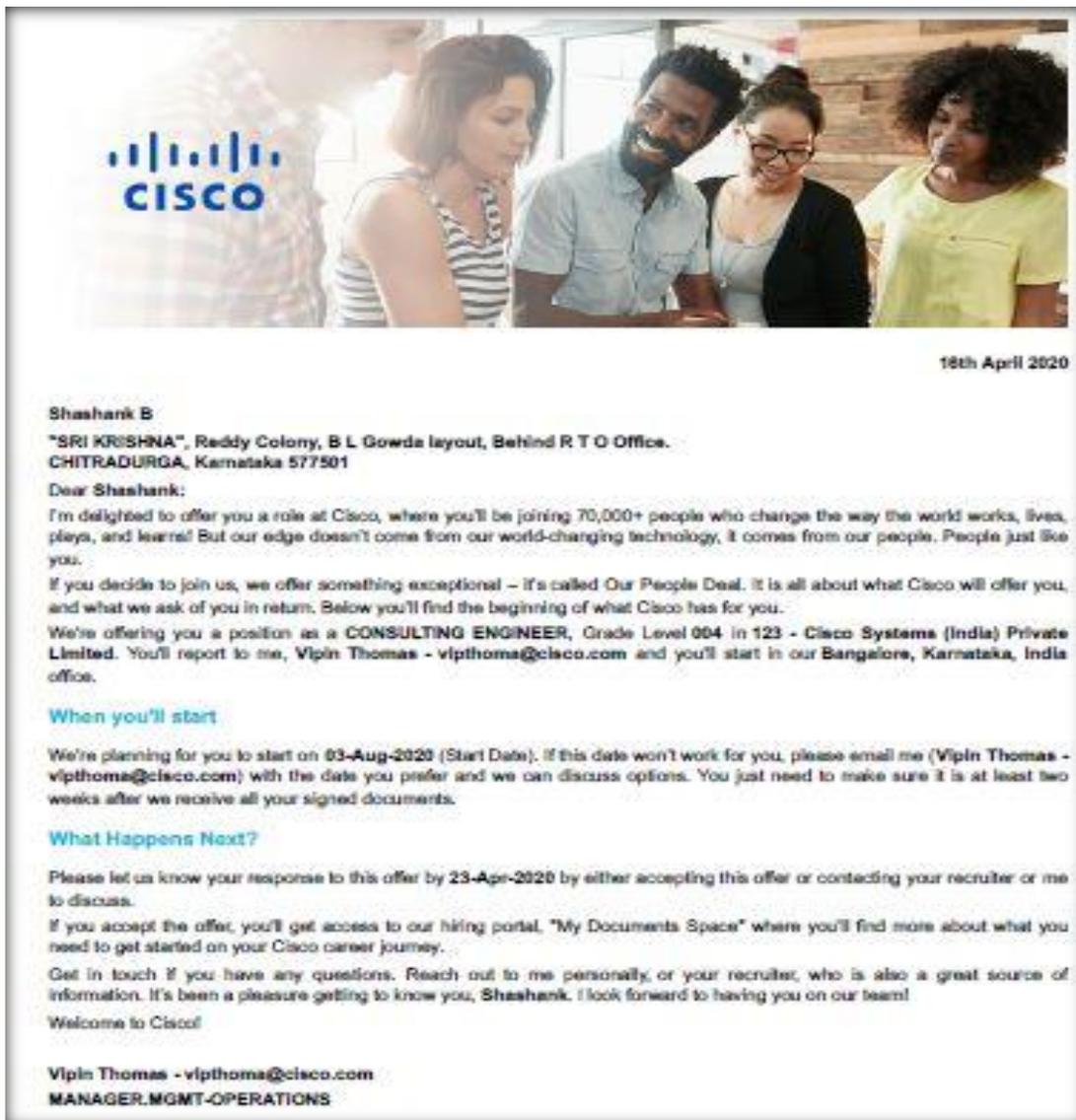


Figure 2.2.4.5b CISCO OFFER LETTER

- ❖ CISCO NETWORKING ACADEMY every year organizes, "Women Rock-IT" live TV broadcasts and hear from some "Rock'in" women who have challenged stereotypes and turned their passion for technology into rewarding and successful careers. Refer Figure 2.2.4.5c below

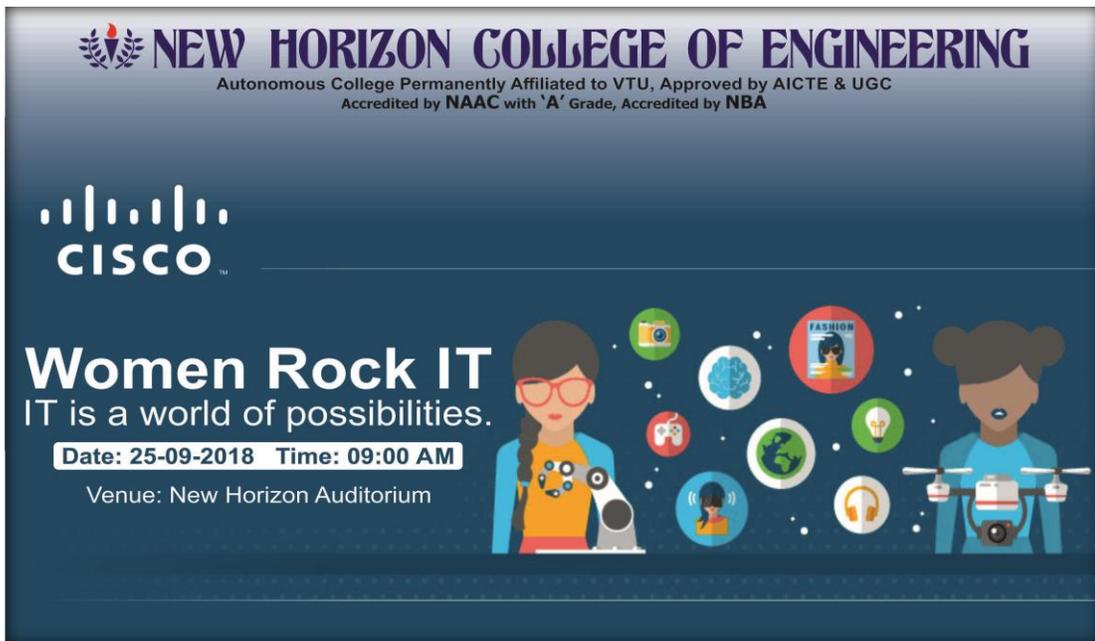


Figure 2.2.4.5c Women Rock IT

Some of the takeaways of the above activity was to

- Learn the benefits of a technology career.
- Be connected to successful female role models
- Learn how job seekers looking to switch careers can tap into a technology career.
- Bring it all together with self-study courses.

The Curriculum of Cisco's course Routing and Switching 1, 2 and 3 is shown in Figure 2.2.4.1, 2.2.4.2 and 2.2.4.3 respectively.

Routing and Switching-01			
Course Code	: NHOP09	Credits	: 04
L:P:T:S	: 3:0:0:1	CIE Marks	: 50

Exam Hours : 03+03

SEE Marks : 50

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

CO1	Describe the devices and services used to support communications in data networks, Internet and Role of Protocol Network.
CO2	Describe and Understand Physical Layer devices and protocol, Data Link layer device and Protocol, Network layer Protocol , Transport Layer Protocol
CO3	Build a simple Ethernet network using routers and switches
CO4	Design, calculate, and apply subnet masks and addresses to fulfil given requirements in IPv4 and IPv6 network
CO5	Describe and analyse the operations of Static and Dynamic routing
CO6	Configure and troubleshoot basic operations of a small switched network

Mapping of Course Outcomes to Program Outcomes:

	PO1	PO2	PO3	PO4	PO5	P O 6	P O 7	PO8	PO9	PO 10	PO 11	PO 12
CO1	2	2	-	3	3	1	1	-	1	2	-	3
CO2	3	3	3	3	3	-	-	-	2	1	-	2
CO3	3	3	3	3	3	-	-	-	2	1	-	2
CO4	2	2	-	3	3	1	1	-	1	2	-	3
CO5	3	3	2	3	3	-	-	-	2	2	-	3
CO6	3	3	3	3	3	-	-	-	2	2	-	3

SYLLABUS

S l	Contents of Module	H r s	COs
1	Exploring the Network		
	Exploring the Network: Globally Connected Communicating in a Network-Centric World, LANs, WANs, and the Internet The Network as a Platform, The Changing Network Environment, and The Expanding NetworkConfiguring a Network Operating System. Configuring a Network Operating System: IOS Bootcamp, Getting Basic Addressing Schemes. Network Protocols and Communications: Rules of Communications, Network Protocols and Standards, Using Requests for Comments, Moving Data in the Network.	9	CO1

	Hands On : Introduction to Packet Tracer Navigating the IOS Configuring Initial Switch Settings Basic Device Configuration Investigating OSI and TCP/IP Model		
2	Network Access Layers		
	Network Access:Physical Layer Protocols, Network Media, Data Link Layer Protocols, Media Access Control.Ethernet, Ethernet Protocol Address Resolution Protocol,LAN Switches,Basic Switch Configuration, Switch Security: Management and Implementation		
	Hands On	9	CO2,C03,CO6
	Identify MAC and IP Address Examine the ARP Table Basic Switch Configuration Configuring SVI Switch Port Security		
3	Network and Transport Layer		
	Network Layer:Network Layer Protocols, Routing ,Routers ,Configuring a Cisco Router ,Transport Layer:Transport Layer Protocols, TCP and UDP, Initial Configuration of a Router, Routing Decisions, Link Aggregation Concepts, Router Operation		
	Hands On	9	CO2,CO3
	Configure Initial Router Settings Connect a Router to a LAN Troubleshoot Default Gateway Issues Investigate Unicast, Broadcast and Multicast Traffic Exploring TCP and UDP Communication		
4	IP Addressing (IPv4 and IPv6)		
	IP Addressing, IPv4 Network Addresses, IPv6 Network Addresses, Connectivity Verification, Subnetting IP Networks, Subnetting an IPv4 Network, Addressing Schemes, Design Considerations for IPv6,and Review of CIDR,VLSM		
	Hands- On	9	CO4,CO6
	Configure IPv4 Addressing Configure IPv6 Addressing Manually Configure LLA Manually Configure Global Unicast Address Manually & Auto-Config mode Verifying IPv4 and IPv6 Addressing Troubleshooting IPv4 and IPv6 Addressing Subnetting Scenario for IPv4 Implementing Subnetted IPv6 Addressing Schemes		
5	Application layer		
	Application Layer Protocols ,Well-Known Application Layer Protocols and Services, The Message Heard Around The World,		

	Create and Grow Network, Keeping the Network Safe ,Basic Network Performance Managing IOS Configuration Files,Static Routing ,Static Routing Implementation, Configure Static and Default Routes, Configure Summary and Floating Static Routes, Troubleshoot Static and Default Route issues,Integrated Routing Services,Routing Dynamically, Dynamic Routing Protocols, RIP and RIPng Routing		
	Hands- On	9	CO5,CO3, CO6
	Configuring Secure Password and SSH Using Show Commands Configure Records on DNS Server Configure Static Route and Default Route Troubleshoot Static Route and Default Route Configure Summary Route and Floating Route		

TEXT BOOKS:

1. CCNA Routing and Switching – Todd Lammle, 2nd Edition, Sybex Publisher

REFERENCE BOOKS:

1. CCNA v2.0 R&S Lab Workbook 200-120.
2. CISCO CCNA Routing and Switching , CISCO Press ,ICND2 200-101
3. Computer Networks, Andrew S. Tanenbaum, Fourth Edition Pearson Education
4. Data Communications and Networking, Behrouz.A.Forouzan, Tata McGraw Hill, 4th Edition

Assessment Pattern

CIE- Continuous Internal Evaluation

Theory (50 Marks)

Bloom's Taxonomy	Tests	PT	
		Activity	Quizzes
Marks	20	20	10
Remember	10	-	5
Understand	5	-	5
Apply	5	10	-
Analyze	-	5	-
Evaluate	-	-	-
Create	-	5	-

SEE- Semester End Examination

Practical (50 Marks)

Bloom's Taxonomy	Tests
Remember	5
Understand	5
Apply	20
Analyze	10
Create	10

Figure 2.2.4.1 Routing and Switching 1

ROUTING AND SWITCHING - 2			
Course Code	:NHOP12	Credits	:04
L: P: T: S	:3:0:0:1	CIE Marks	:50
Exam Hours	:03	SEE Marks	:50

Course Outcomes: At the end of the Course, the student will have the ability to:

- NHOP12.1** Design logically separate networks using Virtual LANs and IEEE802.1Q trunking protocol
- NHOP12.2** Analyze Dynamic Host Configuration Protocol (DHCP) operation for scalable networks
- NHOP12.3** Design security controls using Standard Access Control Lists and Network Address Translation for IPv4 networks
- NHOP12.4** Examine the operation of VLAN trunking protocol and Spanning tree protocols for network scalability
- NHOP12.5** Assess the redundancy at layer 2 and layer 3 network devices using standard protocols
- NHOP12.6** Evaluate the network connectivity using EIGRP routing and engage in self learning by troubleshooting the network configurations

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
NHOP12.1	3	3	3	-	3	-	-	-	-	-	-	-	3	3
NHOP12.2	3	3	-	-	3	-	3	-	-	-	-	-	3	3
NHOP12.3	3	3	3	-	3	3	-	-	-	-	-	-	3	3
NHOP12.4	3	3	-	-	3	-	3	-	-	-	-	-	3	3
NHOP12.5	3	3	3	3	3	-	-	-	-	-	-	-	3	3
NHOP12.6	3	3	3	3	3	3	3	-	2	2	-	2	3	3

Mapping of Course Outcomes to Program Outcomes:

Module No	Module Contents	Hrs.	COs
1	Introduction to VLAN and DHCP Virtual LAN : VLAN Segmentation, VLAN Implementations, Inter-VLAN Routing Using Routers, Troubleshoot VLAN , Dynamic Host Configuration Protocol : DHCPv4 , DHCPv6, Troubleshoot DHCP	9	NHOP1 2.1 NHOP1

	<p>Hands On : Configure a switch port to be assigned to a VLAN based on requirements. Configure a trunk port on a LAN switch. Configure legacy Inter-VLAN Routing Configure Router-on-a-Stick Inter-VLAN Routing Configure and troubleshoot a router as a DHCPv4 server. Configure a router as a DHCPv4 client. Configure stateless DHCPv6 for a small to medium-sized business. Configure stateful DHCPv6 for a small to medium-sized business.</p>		2.2 NHOP1 2.6
2	<p>Access Control Lists and NAT Access Control List : ACL Operation, Standard IPv4 ACLs, Troubleshoot ACLs, NAT: NAT Operation, Configure NAT, Troubleshoot NAT, Device Discovery, Device Management, Device Maintenance Hands On: Configure standard IPv4 ACLs to filter traffic to meet networking requirements. Configure a standard ACL to secure VTY access. Configure static NAT using the CLI. Configure dynamic NAT using the CLI. Configure PAT using the CLI. Configure port forwarding using the CLI.</p>	9	NHOP1 2.3 NHOP1 2.6
3	<p>LAN Design, Scaling VLAN & Spanning tree Protocol LAN Design: Campus Wired LAN Designs, Campus Network Device Selection, Scaling VLAN : VTP, Extended VLANs, and DTP, Troubleshoot Multi-VLAN Issues, Layer 3 Switching, Spanning Tree Concepts, Varieties of Spanning Tree Protocols, Spanning Tree Configuration. Hands On: Configure extended VLANs. Configure Dynamic Trunking Protocol (DTP). Configure Inter-VLAN routing using Layer 3 switching. Troubleshoot Inter-VLAN routing in a Layer 3 switched environment Configure PVST+ in a switched LAN environment. Configure Rapid PVST+ in a switched LAN environment.</p>	9	NHOP1 2.4 NHOP1 2.6
4	<p>Ether Channel , HSRP & Dynamic Routing Link Aggregation Concepts, Link Aggregation Configuration, First Hop Redundancy Protocols, Distance Vector Dynamic Routing, Link-State Dynamic Routing, Hands- On: Configure link aggregation. Troubleshoot Link aggregation Configure Ether Channel Troubleshoot Ether Channel Configure and troubleshoot HSRP using Cisco IOS commands.</p>	9	NHOP 12.5 NHOP 12.6
5	<p>Introduction to EIGRP EIGRP Characteristics, Implement EIGRP for IPv4, EIGRP Operation, Implement EIGRP for IPv6, Tune EIGRP, Troubleshoot EIGRP Hands- On:</p>	9	NHOP 12.6

	Configure EIGRP for IPv4 in a small routed network. Verify EIGRP for IPv4 operation in a small routed network. Configure EIGRP for IPv6 in a small routed network. Verify EIGRP for IPv6 implementation in a small routed network. Configure EIGRP auto summarization. Configure a router to propagate a default route in an EIGRP network. Configure EIGRP interface settings to improve network performance. Troubleshoot neighbor adjacency issues in an EIGRP network. Troubleshoot missing route entries in an EIGRP routing table.		
--	---	--	--

Text Book:

1. CCNA Routing and Switching – Todd Lammle, 2nd Edition, Sybex Publisher.

Reference Books:

1. CCNA v2.0 R&S Lab Workbook 200-120.
2. CISCO CCNA Routing and Switching , CISCO Press ,ICND2 200-101
3. Computer Networks, Andrew S. Tanenbaum, Fourth Edition Pearson Education
4. Data Communications and Networking, Behrouz A.Forouzan, Tata McGraw Hill, 4th Edition

Assessment Pattern

CIE- Continuous Internal Evaluation (50 Marks)

Bloom's Taxonomy	%
Remember	0
Understand	5
Apply	30
Analyze	5
Evaluate	5
Create	5

SEE – Semester End Examination (50 Marks)

Bloom's Taxonomy	%
Remember	0
Understand	5
Apply	30
Analyze	5
Evaluate	5
Create	5

Figure 2.2.4.2 Routing and Switching 2

NEW HORIZON COLLEGE OF ENGINEERING			
DEPARTMENT OF ELECTRONICS AND COMMUNICATION			
Routing and Switching-03			
Course Code	: NHOP16	Credits	: 04
L:P:T:5	: 3:0:0:1	CIE Marks	: 50

Exam Hours : 03+03

SEE Marks : 50

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

NHOP16.1	Configure and troubleshoot advanced operations of routers and implement OSPF routing protocols for IPv4 and IPv6.
NHOP16.2	Understand and describe the operations and benefits of WAN, WAN Authentication Protocols, virtual private networks (VPNs) and tunnelling.
NHOP16.3	Configure and troubleshoot BGP routing protocols, serial connections, broadband connections, IPsec tunnelling operations.
NHOP16.4	Configure and troubleshoot advanced operation of ACL and implement standard ACL, Extended ACL for IPv4 and IPv6.
NHOP16.5	Configuration of all the switching concept on Switch Physical Device such as SVI, Switchport security, VLAN, VTP and DTP.
NHOP16.6	Configuration of all the Routing concept on Router Physical Device such as DHCP,ACL,RIP,EIGRP,OSPF, Static Route.

Mapping of Course Outcomes to Program Outcomes:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO 10	PO 11	PO 12
NHOP16.1	3	3	-	3	3	1	1	-	3	3	-	3
NHOP16.2	3	3	3	3	3	-	-	-	3	3	-	3
NHOP16.3	3	3	3	3	3	-	-	-	3	3	-	3
NHOP16.4	3	3	-	3	3	1	1	-	3	3	-	3
NHOP16.5	3	3	3	3	3	-	-	-	3	3	-	3
NHOP16.6	3	3	3	3	3	-	-	-	3	3	-	3

SYLLABUS

COURSE SYLLABUS			
Module No	Contents of Module	Hrs	COs
1	OSPF Configuration :Single-Area OSPF & Multiarea OSPF	09	

	<p>Single-Area OSPF : OSPF Operation, Varieties of Spanning Tree Protocols, Implement single-area OSPFv3, Multiarea OSPF : Multiarea OSPF Operation, Implement Multiarea OSPF, OSPF Tuning and Troubleshooting: Advanced Single-Area OSPF Configurations, Troubleshooting Single-Area OSPF Implementations</p> <p>Hands On : Configure single-area OSPFv3 and Verify single-area OSPFv3. Configure and verify multiarea OSPFv2 and OSPFv3 in a routed network. Configure OSPF to propagate a default route. Troubleshoot missing route entries in the single-area OSPFv2 and OSPFv3 routing table. Troubleshoot missing route entries in multiarea OSPFv2 and OSPFv3 routing tables.</p>		NHOP16.1
2	<p>WAN Concepts ,Point to Point Connection & Branch Connections</p> <p>WAN : WAN Technologies Overview , Selecting a WAN Technology, Serial Point-to-Point Overview, PPP Operation, PPP Implementation Remote Access Connections, PPPoE, VPNs, GRE tunnel., eBGP in a single-homed remote access network.</p> <p>Hands On : Configure PPP encapsulation. Troubleshoot PPP using show and debug commands. Configure PPP authentication. Configure a Cisco router with PPPoE Configure an eBGP branch connection. Troubleshoot a site-to-site GRE tunnel</p>	09	NHOP16.3NHOP16.2
3	<p>Access Control List</p> <p>Standard ACL Operation and Configuration, Extended IPv4 ACLs, IPv6 ACLs, Troubleshoot ACLs</p> <p>Hands On: Configure standard IPv4 ACLs to filter traffic in a small to medium-sized business network. Configure extended IPv4 ACLs to filter traffic according to networking requirements. Configure IPv6 ACLs to filter traffic according to networking requirements. Troubleshoot common ACL errors using CLI commands.</p>	09	NHOP16.4
4	<p>Switch Physical Device</p> <p>Procedure to work on Switch Physical Device, Procedure to install and use Putty software.</p> <p>Hands- On: Basic Configuration on Switch Physical Device SVI Configuration on Switch and verify the connectivity Telnet and SSH Configuration on Switch Physical Device Switchport Security Configuration on Physical Device VTP, DTP and VLAN Configuration on Physical Device</p>	09	NHOP16.5
	<p>Router Physical Device</p> <p>Procedure to work on Router Physical Device, Procedure to use crimping tool to make straight through and Crossover cable. Procedure to Assign IPv4 and IPv6 Address manually to PC.</p>	09	NHOP16.6

5	<p>Hands- On: Basic Configuration on Router Physical Device Assign IPv4 address to router interface and verify the connectivity Telnet and SSH Configuration on router Physical Device DHCP Configuration on Router Physical Device Static Routing Configuration on Physical Device Dynamic Routing Configuration (RIP/EGIRP/OSPF) on Physical Device Named ACL and Numbered ACL Configuration</p>		
---	--	--	--

TEXT BOOKS:

1. CCNA Routing and Switching – Todd Lammle, 2nd Edition, Sybex Publisher.

REFERENCE BOOKS:

1. CCNA v2.0 R&S Lab Workbook 200-120.
2. CISCO CCNA Routing and Switching , CISCO Press ,ICND2 200-101
3. Computer Networks, Andrew S. Tanenbaum, Fourth Edition Pearson Education
4. Data Communications and Networking, Behrouz A.Forouzan, Tata McGraw Hill, 4th Edition

Assessment pattern:

1. CIE- (50 Marks Theory)

Bloom's Category	Tests	Assignments	Quizzes	Self Study
Marks (out of 50)	25	10	5	10
Remember	4	2	1	
Understand	8	2	2	
Apply	8	6	2	4
Analyze	5			6
Evaluate				
Create				

2. SEE - (50 Marks)

Bloom's Category	Tests(theory)
Remember	05
Understand	10
Apply	30
Analyze	05
Evaluate	
Create	

Figure 2.2.4.3 Routing and Switching 3

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

(3)

Table 2.2.4.6, 2.2.4.7, 2.2.4.8 shows expert/guest lectures by various industry experts

Academic Year 2017-18

Table 2.2.4.6 Visiting Faculty Session Details for the Academic Year 2017-2018

Sl. No	Name of the Industrial Expert	Company/ Organization	Designation	Topic/ Subject	Contribution to Curriculum	Sem	Hours engaged	Date
1	Mr. Sunder Murthy	LS Control Systems	Proprietor	ARM Cortex M4	Delivered Theoretical session for the subject microcontrollers	VI	3	13-04-2018
2	Ms Dhana Selvi D	Ada, Bangalore	Project Engineer	555 Timer and its applications, ELD 1502 & ICL8038	Delivered Theoretical session for the subject Linear Integrated Circuits	IV	2	20-04-2018
3	Mr. Shashikanth Patil	Wipro Technology	Senior Project Engineer	FPGA Implementation	Delivered Theoretical session for the subject system design using HDL	IV	2	16-04-2018
4	Mr. Shivananda Koteswar	Media Tek	General Manager	Digital Signal Processing	Delivered Theoretical session for the subject Digital signal Processing	IV	1	09-04-2018
5	Mr. Nageswara rao P, Mr. Arijit Das	BEL, Bangalore	Deputy manager & Deputy Engineer	Micro wave active devices	Delivered Theoretical session for the subject Microwave active devices	VII	2	17-04-2018
6	Dr. Vishwas Lakkndi	Smarten Spaces	Principal architect	Building the internet of things; core protocols and standards	Delivered a technical talk followed by hands on session on project guidance using IoT	VI	2	21-04-2018

Criterion-2 Self-Assessment Report (SAR)

7	Mr. Srinivasan Pitchai	MOS IC Solutions	Managing Director	Current Mirrors and differential amplifiers	Delivered Theoretical session for the subject Micro Electronic Circuits	VI	2	12-04-2018
8	Mr. Akshara Murali	Freneustech Pvt Ltd	Design Engineer	Oscillator and Feedback	Delivered Theoretical session for the subject Electronic Devices and Circuits	III	2	17-11-2017
9	Ms. Shanthi N	Live Wire-A division of CADD Centre, CHENNAI	Senior Engineer	Digital Electronics Circuits	Delivered Theoretical session for the subject Digital Electronics	III	2	30-10-2017
10	Mr. Akshara Murali	Freneustech Pvt Ltd	Design Engineer	Waveform Synthesis and transient response	Delivered Theoretical session for the subject System Design using HDL	III	2	17-11-2017
11	Mr. Arun	Harman India	System Design Engineer	Signals and Systems	Delivered Theoretical session for the subject Signals & Systems	III	2	28-10-2017
12	D Suresh	Renesas Electronics	System Analyst	Analog Communication	Delivered Theoretical session for the subject Analog Communication	V	2	31-10-2017
13	Mr. Bharat Gebise	Tata ELXI	Software Developer	Microcontrollers	Delivered a session for project guidance in embedded systems and microcontrollers	V	2	28-10-2017
14	Mr. Harish Kumar Villuri	Intel Technologies	Component Design Engineer	VLSI design	Delivered Theoretical session for the subject CMOS VLSI Design	V	2	31-10-2017
15	Mr. Praveen Kumar	Harman International Pvt Ltd	Software Engineer	Information Theory and Coding	Delivered Theoretical session for the subject Information Theory and Coding	V	2	02-11-2017

Criterion-2 Self-Assessment Report (SAR)

16	Mr. Kulbhushan Bhaji Patariya	Ada, Bangalore	Scientist	Application of embedded system in air borne application	Guidance for hackathon and projects with real time case studies	VI	2	11-04-2018
17	Dr. Prithviraj	Govt of Puducherry	Corporate social responsibility	Smart City	Guidance for hackathon and projects with real time case studies	VI	1.5	14-03-2018
18	Mr. Niranjan HS	Complus systems	Director-Engineering	Electromagnetic interference and Compatibility	Industrial oriented talk- Research Trends	VIII	1.5	15-03-2018
19	Mr. Raveendranath KR	Lekha Wireless Technologies	Director-FPGA & RF Hardware Group	Trends in Communication System Design	Industrial oriented talk- Research Trends	VIII	1.5	22-02-2018
20	Mr. Ravindra	NTTF, Bangalore	Retired Trainer	Introduction to Mobile Communication	Delivered Theoretical session for the subject Analog communication	IV	1.5	10-02-2018
21	Mr. Damodara MS	Entuple Technologies	Business Manager	Electronic System Design and IoT	Mini project Guidance and prototype development	V	2	24-08-2017
22	Mr. Lakshmi Narasimhan	Product Manager	Schemazen Tek Pvt Ltd	Product Development Cycle; from concepts to commercialization	Industrial product development- created a general awareness	V	2	17-08-2017

23	Mr. Damodara M S	Entuple Technologies	Business Manager	Electronic System Design Manufacturing Road map and Opportunities for young graduates	Hands on session and workshop in system design	III	2	24-08-2017
24	Dr. Prithviraj	Pondicherry Engineering College	Former Principal (Retd)	Satellite Communication	Delivered Theoretical session for the subject Satellite Communication	VII	2	07-09-2017
26	Mr. Vinoth P	Cisco System	Senior Software Engineer	Introduction to IoT- The Cognitive Era	Project guidance and Implementation of UoT based prototypes	VII	2	12-09-2017
27	Ms. Bhavana Chandraskhar	Robert Bosch, India	Associate Software Engineer	Campus to Corporate Transition	General Talk-Create a bridge in the gap between campus and Industry	III	2	10-11-2017

Academic Year 2018-19

Table 2.2.4.7 Visiting Faculty Session Details for the Academic Year 2018-2019

Sl. No	Name of the Industrial Expert	Company/ Organization	Designation	Topic /Subject	Contribution to Curriculum	Sem	Hours engaged	Date
1	Mr. Harish Kumar Villuri	Intel Technologies	Component Design Engineer	CMOS VLSI Design (Timing Analysis)	Delivered Theoretical session for the subject CMOS VLSI Design	V	3	20-09-2018
2	Mr. A Athif Shan	ABE Semi-Conductor Designs	Chairman/ Managing Director	Multi core architecture and	Delivered Theoretical session for the subject Microprocessor	V	3	13-10-2018

Criterion-2 Self-Assessment Report (SAR)

				communi- cation	& Microcontrollers			
3	Mr. Arun Krishnan	Harman India	Senior Product Development Engineer	Network Analysis (Module 5: Waveform Synthesis)	Delivered Theoretical session for the subject Network Analysis	III	3	25-10- 2018
4	Mr. Prafulla ShyamKant Galphade	Invecas Technologies	Principal Member technical staff	Digital Electronic Circuits (Module 5)	Delivered Theoretical session for the subject Digital Electronic Circuits	III	3	17-10- 2018
5	Mr. Sunder Murthy	LS Control Systems	Proprietor	Microcontrol ler (Module 5, Interfacing)	Delivered Theoretical session for the subject Microcontrollers	V	3	13-10- 2018
6	Mr. Arun Krishnan	Harman India	Senior Product Development Engineer	Signals and Systems (Module 5)	Delivered Theoretical session for the subject Signals & Systems	III	3	14-11- 2018
7	Ms Jayachandran Aradhya	Silicon Microsystem, Bangalore	Chief Executive	Antenna Design	Delivered Theoretical session for the subject Antenna & Wave Propagation	VII	3	14-11- 2018
8	Ms. Poornima Mohanachand ran	Ekalakshya	CEO	Analog Electronics Product Develop- ment	Delivered Theoretical session for the subject Electronic Devices and Circuits	III	3	07-11- 2018
9	D Suresh	Renesas Electronics	System Analyst	Wireless and mobile communi- cation	Delivered Theoretical session for the subject Wireless	VII	3	03-11- 2018

Criterion-2 Self-Assessment Report (SAR)

					Mobile Communication			
10	Mr. Sarang Suresh Akotkar, Mr. Kumaran Sethu Raman	Intel Technology	R & D Engineer	DSP Processor & Digital Filters	Delivered Theoretical session for the subject Digital Signal Processing	IV	3	16-04-2019
11	Mr. Shashikanth Patil	Wipro Technology	Senior Project Engineer	Synthesis on FPGA	Delivered Theoretical session for the subject System design using HDL	IV	3	13-04-2019
12	Mr. Muralitharan	Emids technologies	IOS Developer	Exception Handling	Delivered Theoretical session for the subject Object Oriented Programming	VI	3	04-04-2019
13	Mr. Shriram S	Intel Technologies	Hardware Design Engineer	VLSI-transistor to transformation	General talk in recent advancements in VLSI	IV	3	09-02-2019
14	Mr. Bipin Malhan	Invecas Technologies	Managing Director	Career growth in electronics Industry	General talk about recent innovations and developments in electronics Industry	VII	3	24-10-2018
15	Mr. Akshatha Pai	Sirena Technologies	Project Manager	Robotics; History, Current trends, future	General talk on current trends in robotics	V	3	22-09-2018
16	Ms. Neha Bharti	Altran Technologies	ASIC Design Engineer	Pathway to semi-conductor Industry	General talk on career opportunities in	VII	2	18-08-2018

					semiconductor industry			
17	Mr. Shiriram S	Intel Technologies	Hardware Design Engineer	Hardware Design flow for Chip Design	Delivered Theoretical session for the subject CMOS VLSI Design	V	2	11-08-2018
18	Mr. Shiriram S	Intel Technologies	Hardware Design Engineer	Art of Electronics	General talk about product development in electronics- steps and process flow	III	2	11-08-2018

Academic Year 2019-20

Table 2.2.4.8 Visiting Faculty Session Details for the Academic Year 2019-2020

Sl. No	Name of the Industrial Expert	Company/ Organization	Designation	Topic /Subject	Contribution to Curriculum	Sem	Hours engaged	Date
1	Ms. Tabassun V Mulla	Invecas Technologies	Hardware Design Engineer	Timing Analysis in MOS circuits	Delivered Theoretical session for the subject CMOS VLSI Design	V	3	23-08-2019
2	Mr. Prafulla Shyam Kant Galphade	Cadence Design Systems	Senior Member of Technical staff	Sequential Circuits	Delivered Theoretical session for the subject Microprocessor & Microcontrollers	III	3	23-08-2019
3	Mr. Vaishak Sundaresh	Freelance Corporate trainer	Senior Principal Program Manager	Programming with data structures using C	Delivered Theoretical session for the subject Network Analysis	V	3	23-10-2019
4	Mr. Gobala Kichenan Ganeshan	IBM India Pvt. Ltd	NA	Microcontroller and its	Delivered Theoretical session for the	V	3	11-11-2019

Criterion-2 Self-Assessment Report (SAR)

				significance in real world	subject Digital Electronic Circuits			
5	Mr. Prafulla Shyam Kant Galphade	Cadence design systems	Program Manager	FPGA	Delivered Theoretical session for the subject Microcontrollers	IV	3	25-01-2020
6	Mr. Praveen Kumar	Ekagga technology and services pvt Ltd	Senior Principal Program Manager	ARM programming (assembly c programming on android devices)	Delivered Theoretical session for the subject Signals & Systems	VI	3	10-02-2020
7	Mr. Galphade Prafulla	Cadence Design Systems, Bangalore	Founder and CEO	FPGA	Delivered Theoretical session for the subject Antenna & Wave Propagation	IV	2	03-02-2020
8	Mr. Praveen Kumar	Ekagga Technology & Services Pvt Ltd.	Senior Principal Program Manager	Arm Programming on Android Devices	Delivered Theoretical session for the subject Electronic Devices and Circuits	VI	3	15-02-2020
9	Mr. Jyotirmoy Koner	Bharat Electronics Ltd, Bangalore	Founder & CEO	Microwave Active & Passive Devices	Delivered Theoretical session for the subject Wireless Mobile Communication	VI	3	20-02-2020
10	Mr. Harish Kumar Villuri	Intel Technologies	Component Design Engineer	CMOS VLSI Design (Timing Analysis)	Delivered Theoretical session for the subject CMOS VLSI Design	V	3	20-09-2019
11	Mr. A Athif Shan	ABE Semi-Conductor Designs	Chairman/ Managing Director	Multi core architecture and	Delivered Theoretical session for the subject	V	3	13-10-2019

				communication	Microprocessor & Microcontrollers			
12	Mr. Arun Krishnan	Harman India	Senior Product Development Engineer	Network Analysis (Module 5: Waveform Synthesis)	Delivered Theoretical session for the subject Network Analysis	III	3	25-10-2019
13	Mr. Prafulla Shyam Kant Galphade	Invecas Technologies	Principal Member technical staff	Digital Electronic Circuits (Module 5)	Delivered Theoretical session for the subject Digital Electronic Circuits	III	3	17-10-2019
14	Mr. Sunder Murthy	LS Control Systems	Proprietor	Micro controller (Module 5, Interfacing)	Delivered Theoretical session for the subject Microcontrollers	V	3	13-10-2019
15	Mr. Arun Krishnan	Harman India	Senior Product Development Engineer	Signals and Systems (Module 5)	Delivered Theoretical session for the subject Signals & Systems	III	3	14-11-2019
16	Ms Jayachandran Aradhya	Silicon Microsystem, Bangalore	Chief Executive	Antenna Design	Delivered Theoretical session for the subject Antenna & Wave Propagation	VII	3	14-11-2019
17	Ms. Poornima Mohanachandran	Ekalakshya	CEO	Analog Electronics Product Development	Delivered Theoretical session for the subject Electronic Devices and Circuits	III	3	07-11-2019

2.2.4.D Impact analysis of industry institute interaction and actions taken thereof (2)

The students of the department have shown keen interest to undertake courses offered by the Centre of Excellences. Students have successfully completed the enrolled courses.

There is an enhancement in the employability of students and also it is observed that POs and PSOs attainment has increased. Table 2.2.4.d shows Impact Analysis of Industry Institute Interaction (Cisco COE)

Table 2.2.4.d Impact Analysis of Industry Institute Interaction (Cisco COE)

Month Year	Total number of students enrolled	Number of students from ECE	Number of students Certified	Number of students Placed
Jan 2018 – Jun 2018	345	235	210	-
Aug 2018 - Dec 2018	295	215	208	-
Jan 2019 - May 2019	335	313	196	-
July 2019 – Dec 2019	186	113	90	4
Jan 2020- July 2020	225	210	86	Yet to be conducted

OTHER ACTIVITIES CONDUCTED IN CISCO LAB

❖ **Cisco IDEA'THON**, an Internship cum Placement program, was conducted during Sept'19 to Nov'19, as shown in Figure 2.2.4.3a, 2.2.4.3b, 2.2.4.3c and 2.2.4.4 shows CISCO IDEATHON, and Figure 2.2.4.5 shows CISCO certificate. There were 5 rounds of screening. 45 students who had completed CCNA module-1 certification in Cisco lab had registered for the event. 4 students received the letter of Intent from Cisco HR team, results are as shown in Table 2.2.4.3.

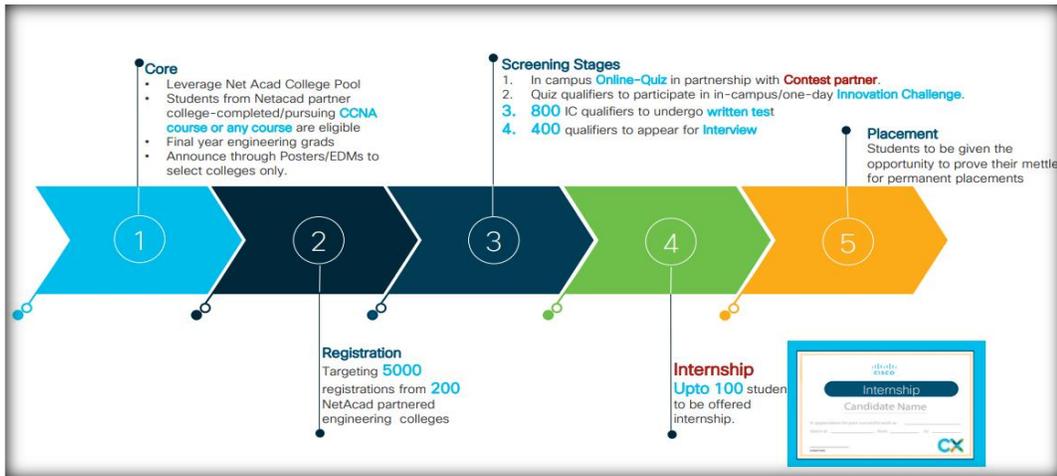


Figure 2.2.4.3a CISCO IDEATHON Image1



Figure 2.2.4.3b CISCO IDEATHON Image 2



Figure 2.2.4.3c Cisco IDEA'THON conducted in CISCO LAB



Figure 2.2.4.4 Cisco IDEA'THON

Table 2.2.4.3 shows the results of CISCO IDEATHON 2019 and table 2.2.4.3a shows Final results

Table 2.2.4.3 CISCO IDEATHON RESULTS

Sl. No	Event/Venue	Date	Results
1	Registration	9 th -13 th Sept' 19	45 students had registered for IDEA'THON. 41 were shortlisted for round-1.
2	Quiz / NHCE Campus	3 rd Sept'19	41 students participated and 24 qualified for Round-2.
3.	Video Submission / Online at NHCE Campus	28 th Sept'19	24 students had submitted a 2 mins' video on the link provided.
	Quiz/ NHCE Campus	30 th Sept'19	24 shortlisted students from round 2 appeared for the online quiz. 15 students qualified for Round -3
4	Written Test / NHCE Campus	22 nd Oct'19	15 students appeared for the online comprehensive test. 5 students qualified for the Interview round.
5	Interview/ Cisco, Cessna Business Park	7 th Nov'19	4 out of 5 students received the letter of intent from Cisco.

FINAL RESULTS:

Table 2.2.4.3a CISCO IDEATHON RESULTS

Student's Name	Email-ID	Mobile No.	CGPA
Shashank B	bshashank4998@gmail.com	9611480129	8.1
T E Habishek	habishek2199@gmail.com	7204279970	9.27
Roshini M	roshini.mbgl@gmail.com	8867475422	9.39
Parithosh Vema	vparithosh@gmail.com	8547161973	9.24

2.2.5 Initiatives Related to Industry Internship /Summer Training (10)

2.2.5. A Industrial Training/Tours For Students (2)

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. Figure 2.2.5.1 and 2.2.5.2 shows Visit to ISRO and NAL. Table 2.2.5.1, 2.2.5.2 and 2.2.5.3 shows industrial visits for 3 academic years



Figure 2.2.5.1 Visit to ISRO Feb 2020



Figure 2.2.5.2 Visit to NAL 2018

Table 2.2.5.1 ACADEMIC YEAR 2019-2020

S. No	Date of Visit	Organization Visited	Sem	No. of Students Visited	Outcome
1	24.1.2020	Karnataka Hybrid Micro Devices Ltd, Bangalore	VI	50	Understood how microelectronic circuits were manufactured using high speed component placer
2	20.2.2020	Master Control Facility Hassan	VI, VII	35	Understood how the Geostationary and Geosynchronous satellites are launched in the orbit and are controlled from ground station located at Hassan
3	29.2.2020	Indian Institute of Science, Bangalore	IV	50	Understood working of scientific devices, project models and prototypes
4	04.3.2020	U R Rao Satellite Centre, Bangalore	IV	55	Understood the complete working and launching of satellites

Table 2.2.5.2a ACADEMIC YEAR 2019-2020

Sl. No	Planned Date of Visit	Actual Date of Visit	Organization Visited	No. Of Students Visited	Sem	Outcome
1	6.9.19	1.8.19	Kaynes Technology India Pvt Ltd, Bangalore	38	V	PO3, PO4, PO6, PO7, PO8, PO12
2	23.8.19	23.8.19	National Aerospace Laboratory, Bangalore	55	III	PO3, PO4, PO6, PO7, PO8, PO12, PSO1
3	30.8.19 23.8.19 4.10.19 23.8.19		Raman Research Institute, Bangalore	35	VII III	PO4, PO5, PO6, PO7, PO8, PO12, PSO1
4	25.10.19	4.10.19	Semiconductor Technology and Applied Research Centre –A unit of SITAR	15	VII	PO3, PO4, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
5	18.10.19	25.10.19	Advanced Robotics Lab-Credence Robotics LLP	30	V	PO4, PO5, PO6, PO7, PO8, PSO1, PSO2

Table 2.2.5.2b ACADEMIC YEAR 2018-2019

Sl. No	Planned Date of Visit	Actual Date of visit	Organization Visited	No. of Students Visited	Sem	Program Outcome
1	27-09-18	26/09/18	ISRO, Bangalore	60	III	PO3, PO4, PO5, PO6, PO7, PO8, PO11, PSO1, PSO2
2	05-10-18	05/10/18	TDPS, Bangalore	60	V	PO3, PO4, PO5, PO6, PO7, PO8, PO12
3	12-10-18	22/10/18	NAL, Bangalore	60	VII	PO3, PO4, PO5, PO6, PO7, PO8, PO12, PSO1, PSO2
4	22-02-19	12/02/19	Bharat Sanchar Nigam Limited (BSNL)	59	IV	PO3, PO4, PO6, PO7, PO8, PO12, PSO1, PSO2
5	01-03-19	20/02/19	Karnataka Hybrid Micro Devices Ltd (KHMD)	38	VI	PO3, PO4, PO6, PO7, PO8, PO12, PSO1, PSO2
6	08-03-19	19/03/19	Centre of Development of Advanced Computing (C-DAC)	64	IV	PO5, PO6, PO7, PO8, PO12,
7	22-03-19	22/03/19	El measure India Private Limited	55	VI	PO3, PO6, PO7, PO8, PO12,

Table 2.2.5.3 ACADEMIC YEAR 2017-2018

Sl. No	Date of Visit	Organization Visited	No. of Students Visit	Semester
1	26/10/2017	CSIR- NAL Bangalore	42	VII
2	27/10/2017	IISc SERC Bangalore	38	V
3	16/10/2017	ISRO Bangalore	70	III

Industrial visit to ISRO 3rd Sem. 2017						
	USN No.	Name	Date	Time	Sign.	Attendance
1	1NH16EC007	Akshay Rao	5/10/17	15:17	[Signature]	P
2	1NH16EC055	Raveen S	5/10/17	15:17	[Signature]	P
3	1NH16EC057	Mithun	5/10/17	15:17	[Signature]	P
4	1NH16EC009	Anoop-A	5/10/17	15:17	[Signature]	P
5	1NH16EC011	Arun P	5/10/17	15:17	[Signature]	P
6	1NH16EC030	G. AVINASH	5/10/17	15:17	[Signature]	P
7	1NH16EC019	C. Leharika	5/10/17	15:17	[Signature]	P
8	1NH16EC012	ATHIRA A.K	5/10/17	15:17	[Signature]	P
9	1NH16EC049	Manjula S	5/10/17	15:17	[Signature]	P
10	1NH16EC053	Megha Shree H.M	5/10/17	15:18	[Signature]	P
11	1NH16EC085	JANANI.BR	5/10/17	15:21	[Signature]	P
12	1NH16EC111	Veda M. Kulkarni	5/10/17	15:22	[Signature]	P
13	1NH16EC085	RUCHI M	5/10/17	15:22	[Signature]	P
14	1NH16EC076	PRAJNAL.T.J	5/10/17	15:22	[Signature]	P
15	1NH16EC082	R. Pavan Rao	5/10/17	15:22	[Signature]	P
16	1NH16EC106	T.E.Habibek	5/10/17	15:23	[Signature]	P
17	1NH16EC743	K. Raghavendra	5/10/17	15:23	[Signature]	P
18	1NH16EC718	Nid-Zeehan Ali	5/10/17	15:23	[Signature]	P
19	1NH16EC072	Parthosh V	5/10/17	15:24	[Signature]	P
20	1NH16EC759	Shashank. Rao M	5/10/17	15:24	[Signature]	P
21	1NH16EC070	P.MAHALAKSHMI	5/10/17	15:30	[Signature]	P
22	1NH16EC752	SWATHI.K	5/10/17	15:30	[Signature]	P
23	1NH16EC756	YESHASWINI.N.N	5/10/17	15:30	[Signature]	P
24	1NH16EE002	A. Anil Bhanth	5/10/17	15:30	[Signature]	P
25	1NH16EC093	Shaik Noorulla Basta	5/10/17	15:30	[Signature]	P
26	1NH16EC748	S.S.Kyau	5/10/17	15:30	[Signature]	P
27	1NH16EC705	Akshay V	5/10/17	15:30	[Signature]	P
28	1NH16EC077	T. Sai Dheethi	5/10/17	15:30	[Signature]	P
29	1NH16EC006	Akhilesh Vazirani	5/10/17	15:32	[Signature]	P

Criterion-2 Self-Assessment Report (SAR)

X 30	INH16EC741	Pravenshuma P 'c'	5/10/17	15:34	Pravenshuma P	A
X 31	INH16EC727	Kansara Elabhi 'c'	5/10/17	15:36	Kansara Elabhi	A
X 32	INH16EC720	Kiran Sagar 'c'	5/10/17	15:36	Kiran Sagar	A
X 33	INH16EC060	Jaljit R 'A'	5/10/17	15:34	Jaljit R	A
34	INH16EC084	Rakshitha N 'B'	5/10/17	15:35	Rakshitha N	P
X 35	INH16EC112	Veena 'B'	5/10/17	15:35	Veena	A
36	INH16EC025	Dennis 'A'	5/10/17	15:35	Dennis	P
X 37	INH16EC090	Sagar 'B'	5/10/17	15:36	Sagar	A
38	INH16EC749	Shriya G 'c'	5/10/17	15:45	Shriya G	P
39	INH16EC081	PRITHIPA A 'B'	5/10/17	15:50	Prithipa A	P
40	INH16EC080	PRESHIKA J M 'B'	5/10/17	15:50	Preshika J M	P
X 41	INH16EC092	S.Pavani - B	5/10/17	15:50	S.Pavani	P
42	INH16ME048	Bharath M.V.K - 'B'	6/10/17	8:40	Bharath M.V.K	P
43	INH16E0028	ASHISH KUMAR - S-A'	6/10/17	8:40	Ashish Kumar	P
44	INH16EC717	HARSHITA P - 'c'	6-10-17	8:55	Harshita P	P
45	INH16EC735	Niveditha N - 'c'	6-10-17	8:55	Niveditha N	P
46	INH16EC733	Pavithra N 'c'	6-10-17	8:55	Pavithra N	P
47	INH16ME015	ASHOK CHUGHARY 'B'	6-10-17	9:00	Ashok Chughary	P
48	INH16EC731	THILAK PRASAD 'c'	6-10-17	9:00	Thilak Prasad	P
49	INH16EC724	H.PRIYADARSHINI 'c'	6/10/17	9:15	H.Priyadarshini	P
50	INH16EC736	Niveditha P 'c'	6/10/17	9:15	Niveditha P	P
51	INH16EC730	Mounika S 'c'	6/10/17	9:15	Mounika S	P

Waiting List							
61	INH16EC033	HARSH SRIVASTAVA 'A'	06/10/10	10:20	Hansh	P	
62	INH16EC076	BIPIN DIXIT 'H (A)	06/10	10:20	Bipin	P	
63	INH16EC053	THOMAS KRISHNA 'A'	06/10	10:20	Thomas	P	
64	INH16EC015	Bhaskar Choudhary 'A'	06/10	10:21	Bhaskar	A	
65	INH16EC036	K GIRWARDHAN 'A'	6/10	10:22	K Girwardhan	P	
66	INH16EC003	Aditya 'C' 'A'	6/10	10:22	Aditya	A	
67	INH16EC001	A.M. Amarjith 'A'	6/10	10:22	A.M. Amarjith	P	
68	INH16EC002	Athistek 'A'	6/10	10:22	Athistek	P	
69	INH16EC113	Vidya.V. Jadhav (B)	6/10	12:20	Vidya.V. Jadhav	P	
70	INH16EC105	Sushma.V. Chikkur (B)	6/10	12:20	Sushma.V. Chikkur	P	

Figure 2.2.5.3 Industrial Visit 2017-ODD SEMESTER

2.2.5. B Industrial /internship /summer training of more than two weeks and post training assessment

The department of ECE motivates students to undertake internship programs in various well known firms both public and private sector. Students take up the industry internship training programs for their professional growth. Students are encouraged to undergo **industry internship/summer** training of their areas of interest / specialization for a duration of 45 days during the course of study. 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 Trainings 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

- The Joining Report, providing the following information sent to the industrial internship coordinator/ HoD by the student immediately after joining the organization:
- During training, the student keeps a daily record of his/her activities, which is countersigned by the industry supervisor.
- The faculty mentor visits / remains in touch with the industry supervisor to monitor the progress of the intern
- On completion of training an internship report and student feedback are submitted to the industrial internship coordinator /HoD
- A Presentation is made by every student on his/her internship report before a panel constituted by the Department. This is followed by a viva to gauge the course outcome / program outcome achieved.

Table 2.2.5.3 and 2.2.5.4 lists the details of students who have attended various internship programs during the mentioned years. Table 2.2.5.5. gives the list of value added courses.

Table 2.2.5.3 INDUSTRY INTERNSHIP DETAILS (2019-2020)

Sl. No	USN	Name of the Student	Area of Internship	Place	Duration
1	1NH15EC024	Harsha E	Pharmaceutical Store	JMR INFOTECH	45 days
2	1NH16EC001	A M Amarjith	Ber Tuning in Optical Fiber Communication	IEEE Photonics	45 days
3	1NH16EC002	Abhishek Kumar Deshetti	Training On Enova 3ds	Capgemini	45 days

4	1NH16EC003	Aditya C	Overview of Metro	BEML	45 days
5	1NH16EC004	Afzal Hussain	Prototype of A Flight Gear	HAL	45 days
6	1NH16EC005	Akhil Josef	Application Development	HEXAWARE	45 days
7	1NH16EC006	Akhilesh Varma Kalidindi	Training On Enovia 3d Experience	Capgemini	45 days
8	1NH16EC007	Akshay Rao	Verification Methodology	Compute Silicon	45 days
9	1NH16EC008	Anmol Kumar	VLSI-FPGA	NAL	45 days
10	1NH16EC009	Anoop.A	Software Development	HEXAWARE	45 days
11	1NH16EC010	Anusha H N	Embedded System	Relentless systems	45 days
12	1NH16EC011	Arun.P	Verification Methodology	Compute silicon	45 days
13	1NH16EC012	Athira Ajayakumar Kullully	Experimentation and Development of Neural Networks for Ocr	Quest Global	45 days

14	1NH16EC014	B Srikanth Reddy	Machine Learning and Artificial Intelligence	Inventeron	45 days
15	1NH16EC015	Bhaskar Choudhury	Bank Management System	JMR INFOTECH	45 days
16	1NH16EC016	Bipin Dixit.H	Ber Tuning in Optical Fiber Communication	IEEE Photonics	45 days
17	1NH16EC017	Kiran C A	Embedded C	Uniq technology	45 days
18	1NH16EC018	Aruna C	Embedded Systems	Relentless Systems	45 days
19	1NH16EC019	C.Leharika	Design and Development of Smart Power Systems For Buildings	Quest Global	45 days
20	1NH16EC020	Chethan S	Digital Marketing	Oreo Technologies Pvt Ltd	45 days
21	1NH16EC023	Deepak Ku. Pradhan	Bi Tool & Python (Data Analytics)	Covance India Pharmaceutic	45 days

				al Service Limited	
22	1NH16EC024	Deepthi R	Embedded Systems	Inventeron	45 days
23	1NH16EC025	Dennis Vincent Paulraj	Verification Methodology	Compute Silicon	45 days
24	1NH16EC028	Ellinki Jahnavi	Hybrid App Development	Easy Step In	45 days
25	1NH16EC030	G Avinash	It Administration	Knowledge Lens	45 days
26	1NH16EC031	Girish Jattu Gouda	Pcb Manufacturing Process	Southern chips and circuits Ltd	45 days
27	1NH16EC032	Hari Prasad.R	Pcb Manufacturing Process	Southern chips and circuits Ltd	45 days
28	1NH16EC033	Harsh Srivastava	Design and Development of Advanced Driver Machine Interface for Locomotives	QuEST Global	45 days
29	1NH16EC034	Jagadeesh.D	Software Development	Hexaware	45 days

30	1NH16EC035	Janani. B. R	Project Management	VMware Software India	45 days
31	1NH16EC036	K Girivardhan	Verification Methodology	Compute Silicon	45 days
32	1NH16EC037	Kalamadi Sreelekha	Embedded Systems	Uniq Technologies	45 days
33	1NH16EC040	Kishore N	Helicopter Mro Division	HAL	45 days
34	1NH16EC041	K. Venkata Mounish Reddy	Software Development	Easy Step In/	45 days
35	1NH16EC042	Korvi Chandra Kiran Reddy	Machine Learning and Artificial Intelligence	Uniq techologies	45 days
36	1NH16EC043	Kushi Ponnamma. K. P	Vlsi – Fpga	NAL	45 days
37	1NH16EC044	Lalithambha S M	Hybrid App Development	Inventeron	45 days
38	1NH16EC046	Sachit M	Digital Marketing	Oreo Technologies Pvt Ltd	45 days
39	1NH16EC047	Madan Gowda.M	Embedded Systems	India InfoTech	45 days

40	1NH16EC048	Madhu M Devamane	Verification Methodology	Compute Silicon	45 days
41	1NH16EC049	Manjula.S	Study of Combat Aircrafts and Their Electronic Systems	HAL	45 days
42	1NH16EC050	Manjunath N	Embedded Systems	India InfoTech	45 days
43	1NH16EC052	Maurya Reddy Y	Eagle On Mindsphere	Quest Global	45 days
44	1NH16EC053	Meghashree H M	Study of Combat Aircrafts and Their Electronic Systems	HAL	45 days
45	1NH16EC054	Meghana V	Study Abroad Programs	Esigelec(Stud y abroad program)	45 days
46	1NH16EC055	Meghashree R	Digital Marketing	Oreo Technologies Pvt Ltd	45 days
47	1NH16EC056	Misbah Tabassum Aejaz	Embedded Systems	Relentless Systems	45 days
48	1NH16EC057	Mithun.V	Iot Engineer	knowledge lens	45 days

49	1NH16EC058	Mohammed Anas	Digital Marketing	Oreo technologies Pvt Ltd	45 days
50	1NH16EC059	Mohammed Farooqh Pasha	Training On Enovia 3d Experience	Oreo technologies Pvt Ltd	45 days
51	1NH16EC060	Mohit R	Embedded Systems	TechnoFly Solutions/	45 days
52	1NH16EC062	Mujeer Pasha	Digital Marketing	Oreo Technologies Pvt Ltd	45 days
53	1NH16EC063	Maheshwari N	Student Management System	Jmr Infotech	45 days
54	1NH16EC135	Akula Anil Bharath	Machine Learning and Artificial Intelligence	Inventeron	45 days
55	1NH16EC137	Anupoju Sai Venkat Thrimurthy	Hybrid App Development	Easy Step In	45 days
56	1NH16EC138	Ashish Kumar. S	Virtual Radar	HAL	45 days
57	1NH16EC139	Karthik. K. S	Embedded Systems	India InfoTech	45 days

58	1NH17EC402	Arathi. V	Embedded System	Relentless systems	45 days
59	1NH17EC403	Bhavani. V	Embedded System	Relentless systems	45 days
60	1NH17EC412	Kiran. R	Overview of Metro	BEML	45 days
61	1NH17EC423	Rajesha. T. A	Embedded System and Developer	Telavarge communication private limited	45 days
62	1NH17EC429	Supritha H. D	Embedded System	Relentless systems	45 days
63	1NH15EC063	Nishant S	Masters in Embedded Systems	ESIGELEC	45 days
64	1NH15EC093	Sare Saisandeep	Overview of Esd	PROLOTECH LIT	45 days
65	1NH16EC064	Neha Mahesh	Solar Power System Design, Operation and Installation	Trident power Solutions	45 days
66	1NH16EC066	Nishu Dubey	Matlab	India InfoTech	45 days

67	1NH16EC067	Nitesh K	Overview of Metro Assembling	BEML	45 days
68	1NH16EC068	Nithin.E	Pcb Manufacturing Process	Southern chips and circuits Ltd	45 days
69	1NH16EC070	Mahalakshmi P	Library Management System	JMR INFOTECH	45 days
70	1NH16EC071	Deepak P S	Embedded C	Unit Technologies	45 days
71	1NH16EC072	Parithosh Vema	Networking Trainings & Project (Client Roaming Visualizer)	Cisco	45 days
72	1NH16EC075	Pooja Shantaram Nayak	Matlab	India InfoTech	45 days
73	1NH16EC076	Prajwal. T. J	Overview of Metro Train Assembling	BEML	45 days
74	1NH16EC077	Pranay Reddy S	Overview of Metro Train Assembling	BEML	45 days

75	1NH16EC078	Prashanth Gowda. R. S	Verification Methodology	Compute Silicon	45 days
76	1NH16EC079	Praveen Kumar S	Verification Methodology	Compute Silicon	45 days
77	1NH16EC080	Preshika J M	Overview of Metro Train Assembling	BEML	45 days
78	1NH16EC081	Prithipa A	Overview of Metro Train Assembling	BEML	45 days
79	1NH16EC082	R. Pavan Raj	Overview of Metro Train Assembling	BEML	45 days
80	1NH16EC083	Rajvardhan	Airport System	Chennai International Airport	45 days
81	1NH16EC084	Rakshitha N	Overview of Metro Train Assembling	BEML	45 days
82	1NH16EC085	Roshini. M	Networking Trainings & Project Based On L2, L3 Multicast Troubleshooting Boot	CISCO	45 days

Criterion-2 Self-Assessment Report (SAR)

83	1NH16EC086	Rushab. S. G	Bch Encoder and Decoder	ADA	45 days
84	1NH16EC087	Sai Kiran	Study of Combat Aircrafts and Their Electronic Systems	HAL	45 days
85	1NH16EC088	Sai Prashanth	Maintained of Car Brake Systems	QUEST GLOBAL	45 days
86	1NH16EC089	S P Saaju	IIOT& Project (Smart Garbage Collection System)	QUEST GLOBAL	45 days
87	1NH16EC090	Sagar	Embedded C	India InfoTech	45 days
88	1NH16EC092	Sannapaneni Pavani	Wban Inter-Body	Konigrantics Private Limited	45 days
89	1NH16EC093	Shaik Noorulla Basha	Airport System	Chennai International Airport	45 days
90	1NH16EC094	Shaikh Asif	Mat Lab	India InfoTech	45 days

91	1NH16EC095	Shashank B	Networking Trainings & Project Based On L2, L3 Multicast Troubleshooting Bot	CISCO Systems	45 days
92	1NH16EC096	Shravin. R. Sekhar	Big Data and Cloud Computing.	Knowledge Lens	45 days
93	1NH16EC097	Shripad Aithal	Energy Auditing	Shreyas Engineers	45 days
94	1NH16EC098	Siddesh Jalageri	Solar Power System Design, Operation and Installation	Trident Power Solution	45 days
95	1NH16EC099	Jagan Mohan Reddy	Embedded C	Uniq Technologies	45 days
96	1NH16EC100	Sidramappa	Embedded C	India Infotech	45 days
97	1NH16EC101	Sindhu C R	Embedded System	Relentless Systems	45 days
98	1NH16EC102	Siva Challa	Matlab	India Infotech	45 days

99	1NH16EC103	Spoorthy.G	Software Application Development	Hexaware Technologies	45 days
100	1NH16EC105	Sushma Chikkur	4 Port Gsm	Digiadd	45 days
101	1NH16EC106	T.E. Habishek	Networking Training and Project (One Click Configuration)	Cisco systems India	45 days
102	1NH16EC107	T. Sai Deepthi	Embedded Systems	Relentless Systems	45 days
103	1NH16EC109	Udit Bahuguna	Airport System	Chennai International Airport	45 days
104	1NH16EC110	Varun Mishra	Airport System	Chennai International Airport	45 days
105	1NH16EC112	Veena K	Embedded System	Relentless systems	45 days
106	1NH16EC113	Vidya Vishnu	Embedded System	unique system	45 days
107	1NH16EC114	Vijay C	Embedded Systems	TechnoFly Solutions	45 days

108	1NH16EC115	Vijay Kumar C	Matlab	India Infotech	45 days
109	1NH16EC116	Vijay S	Master's (Embedded Systems)	Study Abroad Program	45 days
110	1NH16EC118	Vishwanath Veeranna	4 Port GSM	Digiadd	45 days
111	1NH16EC119	W M Magdoom Fuaad	Overview of Metro Train Assembling	BEML	45 days
112	1NH16EC120	Yathin S	ESIGELEC, France	Study aboard program	45 days
113	1NH16EC122	Yeshwanth J M	Embedded C	India Infotech	45 days
114	1NH16EC124	Yeshwanth.M	PCB Manufacturing Process	Southern chips and circuits Ltd	45 days
115	1NH16EC125	Yeshwanth. M.L	PCB Manufacturing Process	Southern chips and circuits Ltd	45 days
116	1NH16EC128	Simon Chauhan	PCB Manufacturing Process	Southern chips and circuits Ltd	45 days

117	1NH16EC129	Ashok Choudhary	Embedded C	Uniq Technologies	45 days
118	1NH16EC130	M.V.K Bharath	Virtual Radar	HAL	45 days
119	1NH16EC131	Namratha Praksah	Overview of Metro Train Assembling	BEML	45 days
120	1NH16EC133	Sridhar. P	Overview of Metro Train Assembling	BEML	45 days
121	1NH16EC430	Vijay Kumar Y Valmiki	IoT	Tech Fortune Technologies	45 days
122	1NH17EC401	Akshay Gambhir Sadalagi	Bch Encoder and Decoder	ADA (aeronautical development agency)	45 days
123	1NH17EC407	Gururaj Shivashankar Natikar	IoT	Tech Fortune Technologies	45 days
124	1NH17EC410	Jyothi Chandrashekar	Embedded Systems	Relentless systems	45 days
125	1NH17EC426	Sachin. M	Overview of Metro Train Assembling	BEML	45 days

126	1NH17EC427	Shambuling. Patil	Embedded Systems	Indian Infotech	45 days
127	1NH17EC430	Sushmitha	Banking Management System	JMR INFOTECH	45 days
128	1NH14EC001	Abhijith S Raj	Overview of Metro Train Assembling	BEML	45 days
129	1NH14EC744	Gourav K	Overview of Metro Train Assembling	BEML	45 days
131	1NH15EC434	Sudhanya S	Device Drivers	Vayavya Labs	45 days
132	1NH15EC701	Abhishek Vp	Backend Sql Development	Comportement Software Pvt. Ltd.	45 days
133	1NH15EC707	Deepak Tomslee	Iot Based Home Automation Control Systems	Digiadd technologies	45 days
134	1NH15EC715	Manoj Chandrashekar Mali	IoT Based Home Automation Control Systems	Digiadd technologies	45 days
135	1NH15EC717	Nallam Venkata Sai Balakrishna	Overview of Esd	prolotech LIT	45 days

136	1NH15EC720	Pavan Kumar S	Iot Based Home Automation Control System	Digiadd Technologies	45 days
137	1NH15EC759	Vishnu N U			45 days
138	1NH16EC702	Abhishek Khot	Embedded Systems	Indian Infotech	45 days
139	1NH16EC703	Abhishek Pattajoshi	Prototype of A Flightgear	HAL	45 days
140	1NH16EC704	Abu Bakar Siddiq	Training On Enovia 3d Experience	Capgemini	45 days
141	1NH16EC705	Akshay.V	Embedded Systems	Hydoline Products	45 days
142	1NH16EC706	Ammidal Vishnu Vikas	Embedded Sysytems	Relentless systems	45 days
143	1NH16EC707	Anita Chauhan	Web Development	Hexaware Technologies	45 days
144	1NH16EC708	Anju Gopinath	Web Development	Hexaware technologies	45 days
145	1NH16EC710	B Vamshi Krishna Reddy	Embedded Systems	India Infotech	45 days
146	1NH16EC711	Balaji L	Embedded Sysytems	India Infotech	45 days

147	1NH16EC713	Chirag S	Embedded System	Relentless systems	45 days
148	1NH16EC714	Gagana M R	Programmable Logic Controller	BHEL Ltd.	45 days
149	1NH16EC715	Gowri Sneha Priya S	Big Data Analytics and Machine Learning	BEL	45 days
150	1NH16EC716	Gurram Venkata Nikesh	Hybrid App Development	Easy Step In	45 days
151	1NH16EC717	Harshita. P	Programmable Logic Controller	BHEL Ltd.	45 days
152	1NH16EC718	Jeevan.K	Sales Force Dot Com (SFDC)	Capgemini Technology Services	45 days
153	1NH16EC719	Mithun Kumar	Embedded Systems	India Infotech	45 days
154	1NH16EC720	Kiran Sagar N P	Data Analytics and Machine Learning	Konigtronics Pvt Ltd	45 days
155	1NH16EC722	Lingraj Jamkhandi	Cubesat	TSC technologies Pvt Ltd	45 days

156	1NH16EC723	M Anisha	Bde	Extramarks education Pvt Ltd	45 days
157	1NH16EC724	M Priyadarshini	The Aircraft Division	HAL	45 days
158	1NH16EC725	Msvv Ritvik	Manufacturing of Transformers	Sri Shanthaveera Transformers	45 days
159	1NH16EC726	Manjunath T	Embedded Systems	India Infotech	45 days
160	1NH16EC727	Mansoor Elahi	Networking and Data	KonIGTRON ICS PVT LTD	45 days
161	1NH16EC728	Mohammed Zeeshan Ali	Prototype of a Flightgear	HAL	45 days
162	1NH16EC729	Siva Nagamuni Reddy	Cloud Solution Framework	Easy Step In	45 days
163	1NH16EC730	Mounika E	Embedded Systems	Uniq technologies	45 days
164	1NH16EC731	N Thilak Prasad	Embedded Systems	India Infotech	45 days
165	1NH16EC733	Nawaz Khan	Matlab	India Infotech	45 days

Criterion-2 Self-Assessment Report (SAR)

166	1NH16EC734	Nisha Anandu Naik	Matlab	India InfoTech	45 days
167	1NH16EC735	Niveditha N	The Aircraft Division	HAL	45 days
168	1NH16EC736	Niveditha R	The Aircraft Division	HAL	45 days
169	1NH16EC738	Pavithra.N	The Aircraft Division	HAL	45 days
170	1NH16EC739	Pawan Kumar Srivastava	Predictive Maintenance (Pdm) For Wind Turbine Rotor	Quest Global	45 days
171	1NH16EC740	Pooja P Chouhan	Web Development	Hexaware Technologies	45 days
172	1NH16EC741	Praveen Kumar. R	Bde	Extramarks Education Pvt Ltd	45 days
173	1NH16EC742	Rachana.S	Overview of Metro Train Assembling	BEML	45 days
174	1NH16EC743	K Raghavendra	Digital Twin for Water Domain	Quest Global	45 days

175	1NH16EC744	Ramya.R	Big Data Analytics and Machine Learning	BEL	45 days
176	1NH16EC745	Reddy Shekar. B. S	Embedded Systems	Uniq technologies	45 days
177	1NH16EC746	Ruchika Pradeep	Matlab	India Infotech	45 days
178	1NH16EC747	S.Saravana	Embedded System	India InfoTech	45 days
179	1NH16EC748	S Shyam	Fmcd	NAL	45 days
180	1NH16EC749	Shriya. G	Embedded System	Netapp	45 days
181	1NH16EC750	Sindhu A	Verification Methodology	Compute Silicon	45 days
182	1NH16EC751	Smitha B S	Big Data Analytics and Machine Learning	BEL	45 days
183	1NH16EC752	Swathi K	I lens	Knowledge Lens	45 days
184	1NH16EC753	T.R. Bhoomika	Data Analytics and Machine Learning	Real Time Signals Technologies Pvt.Ltd	45 days

185	1NH16EC754	Tarun Sai Reddy	Cubesat	TSC technologies Pvt Ltd	45 days
186	1NH16EC755	Ulthi Kedarnath	Ui Page	Settlin	45 days
187	1NH16EC756	Yeshaswini K M	Study Abroad Program	ESIGELEC (Study abroad program)	45 days
188	1NH16EC757	Yuvashree R	Cloud Solution Framework	Easy step in	45 days
189	1NH16EC758	Praveen.S	Study Abroad Programs	ESIGELEC (Study abroad program)	45 days
190	1NH16EC759	Shashank Rao. M	Machine Analysis and Data Compilation	Bosch	45 days
191	1NH17EC404	Chiranjeevi. K	IOT	Tech Fortune Technologies	45 days
192	1NH17EC405	B. N Chithrasree	Embedded System	Relentless systems	45 days
193	1NH17EC408	Janardhana. T	Embedded System	Relentless systems	45 days

194	1NH17EC409	Jayanth. V	Overview of Metro Train Assembling	BEML	45 days
195	1NH17EC411	B. J Kowsalya	Spdu	NAL	45 days
196	1NH17EC415	Manasa. C	Custom Layout	Socdv Technology	45 days
197	1NH17EC416	Manoj. R	Embedded System	India Infotech	45 days
198	1NH17EC418	Naveen Kumar K J	Embedded Systems	Uniq technologies	45 days
199	1NH17EC421	Raghu. R	Safe Ride	Quest Global	45 days
200	1NH17EC422	Rahul Jain	IoT	Tech Fortune Technologies	45 days
201	1NH17EC424	Rakesh Kumar. T	Embedded Systems	Uniq technologies	45 days

Table 2.2.5.4 INDUSTRY INTERNSHIP DETAILS (2018-2019)

Sl. No	USN	Name of the Student	Area of Internship	Place	Duration
1	1NH13EC022	C Akshay Reddy	Embedded Systems	eTronics Technologies Pvt. Ltd.	45 Days
2	1NH14EC061	K S Divya Teja	Embedded Systems	eTronics Technologies Pvt. Ltd.	45 Days
3	1NH14EC737	Abhishek Reddy V	Networking	VVDN Technology	45 Days
4	1NH15EC001	Vinay Kumar Reddy	Embedded Systems	Digital Circuits Pvt. Ltd./ eTronics Technologies Pvt. Ltd.	45 Days
5	1NH15EC018	Deexith S	Networking	Konigtronics (OPC) Pvt. Ltd.	45 Days
6	1NH15EC019	Denzel Abraham George	Student exchange program	University of ESIGELEC, France	45 Days
7	1NH15EC022	Greeshma. R	Networking	Konigtronics (OPC) Pvt. Ltd.	45 Days

8	1NH15EC030	Janardhan. S. P	Networking	VVDN Technology	45 Days
9	1NH15EC031	Jayanth M K	Mobile Computing	data bytes/ Reliance Jio	45 Days
10	1NH15EC036	Karthik. R	Networking	VVDN Technology	45 Days
11	1NH15EC040	Kesav. S	Embedded Systems	eTronics Technologies Pvt. Ltd.	45 Days
12	1NH15EC045	Manikanta. K	Communicatio n systems	Cambium Networks	45 Days
13	1NH15EC047	Mari Setti Venkata Ramakrishna	VLSI Design	Compute Silicon	45 Days
14	1NH15EC048	Megha. D.R	VLSI Design	Compute Silicon	45 Days
15	1NH15EC062	Nikhil Riyaz	Student exchange program	University of ESIGELEC, France	45 Days
16	1NH15EC065	Obili Srinidhi	Networking	VVDN Technology	45 Days
17	1NH15EC066	Pamisetty Udayabhanu	VLSI Design	Compute Silicon	45 Days
18	1NH15EC076	Rachitha. M.R	VLSI Design	skill adder	45 Days
19	1NH15EC078	Radhika.B	VLSI Design	Compute Silicon	45 Days

Criterion-2 Self-Assessment Report (SAR)

20	1NH15EC079	Riya Dey	VLSI Design	Compute Silicon	45 Days
21	1NH15EC083	S P Rahul Kumar	Tele communication	ITC Infotech	45 Days
22	1NH15EC088	Saleh Junaid Ahmed	Embedded Systems	eTronics Technologies Pvt. Ltd.	45 Days
23	1NH15EC100	Shruthi Rajamani	Embedded Systems	eTronics Technologies Pvt. Ltd.	45 Days
24	1NH15EC105	Shyla Shree.R	Tele communication	BEL	45 Days
25	1NH15EC106	Siddharth P	Defence Avionics	DRDO	45 Days
26	1NH15EC112	Sree Renukaakshitha	VLSI Design	skill adder	45 Days
27	1NH15EC114	Sumanth.R	Biomedical signal processing	NIMHANS	45 Days
28	1NH15EC116	Surendra Kumar	Networking	Konigtronics (OPC) Pvt. Ltd.	45 Days
29	1NH15EC120	Thribhuvan L	Networking	Konigtronics (OPC) Pvt. Ltd.	45 Days
30	1NH15EC125	Veda.J	VLSI Design	skill adder	45 Days

31	1NH15EC126	Vidhut Sharma	Embedded Systems	eTronics Technologies Pvt. Ltd.	45 Days
32	1NH15EC127	Virender Singh	Embedded Systems	eTronics Technologies Pvt. Ltd.	45 Days
33	1NH15EC129	Yakshika.A	VLSI Design	Compute Silicon	45 Days
34	1NH15EC131	S Reshma	Tele communication	ITC Infotech	45 Days
35	1NH15EC406	Gayathri V	Networking	Konigtronics (OPC) Pvt. Ltd.	45 Days
36	1NH15EC413	Pavana M	Power electronics	ITI	45 Days
37	1NH15EC423	Vinay M Sudhakar	Mission and combat Centre	HAL	45 Days
38	1NH15EC430	Niveditha V	Power electronics	ITI	45 Days
39	1NH15EC705	Chandana M	Networking	Konigtronics (OPC) Pvt. Ltd.	45 Days
40	1NH15EC709	Goutham R	Telecommunication	ITC Infotech	45 Days

41	1NH15EC719	Nirmal Anand	Embedded Systems	eTronics Technologies Pvt. Ltd.	45 Days
42	1NH15EC727	R. Hari Raj	Defence Avionics	DRDO	45 Days
43	1NH15EC728	Raahul John Alex	Tele communication	ITC	45 Days
44	1NH15EC732	Ramya G	Networking	VVDN Technology	45 Days
45	1NH15EC734	Rashmi.S	Mission and combat Centre	HAL	45 Days
46	1NH15EC738	Rushika Ujjwal	Mission and combat centre	HAL	45 Days
47	1NH15EC741	Sanjana Ranjan	Student exchange program	University of ESIGELEC, France	45 Days
48	1NH15EC748	Shuvam Pal	Python Programming	Evolet Technologies	45 Days
49	1NH15EC752	Suraj Kumar Sharma	Telecommunication	TelaVerge	45 Days
50	1NH15EC754	Syed Saqlain Ahmed	Python Programming	Evolet Technologies	45 Days

51	1NH15EC756	Venkatesh T	Python Programming	Evolet Technologies	45 Days
52	1NH16EC400	Chethan B R	Embedded Systems	Digital Circuits Pvt. Ltd./ eTronics Technologies Pvt. Ltd.	45 Days
53	1NH16EC402	Harsha Vardhan R	Embedded Systems	Antern Technologies	45 Days
54	1NH16EC404	Hemavathi S	Power electronics	BEML	45 Days
55	1NH16EC405	Kavyashree M	VLSI Design	Compute Silicon	45 Days
56	1NH16EC406	Kushal D Pravarda	VLSI Design	skill adder	45 Days
57	1NH16EC407	Lavanya C Y	Power electronics	ITI	45 Days
58	1NH16EC409	Loksha Rao V	Embedded Systems	Digital Circuits Pvt. Ltd.	45 Days
59	1NH16EC410	M. Mrinal	Home Automation	Camtech Solutions	45 Days
60	1NH16EC414	Muralidharan E	Defence Avionics	DRDO	45 Days
61	1NH16EC416	Naresh Babu	Networking	VVDN Technology	45 Days

62	1NH16EC421	Rakshitha N	Networking	VVDN Technology	45 Days
63	1NH16EC424	Rohit R	Power electronics	BEML	45 Days
64	1NH16EC429	Ullas M S	Communication systems	Cambium Networks	45 Days
65	1NH16EC431	Aravind K	Embedded Systems	Digital Circuits Pvt. Ltd./ eTronics Technologies Pvt. Ltd.	45 Days
66	1NH13EC138	D Ramya	Embedded Systems	Etronics Technologies Pvt. Ltd.	45 Days
67	1NH13EC729	Mohammed Sabah. M	Mobile Computing	Reliance Jio Infocom Ltd	45 Days
68	1NH14EC037	Geetha M	Mission and combat Centre	HAL	45 Days
69	1NH14EC132	Srustik Subhash	Mission and combat Centre	HAL	45 Days
70	1NH14EC147	Yerrabapu Rohit Reddy	Wireless communication	Sctia	45 Days
71	1NH14EC722	Nishanth Reddy K	Networking	VVDN Technology	45 Days

72	1NH14EC723	Nithya V	Embedded Systems	Inventron	45 Days
73	1NH15EC002	Abhuri Greeshma	Embedded Systems	Etronics Technologies Pvt. Ltd.	45 Days
74	1NH15EC003	B Achal	Embedded Systems	Prolotech Solutions (LPD)	45 Days
75	1NH15EC004	Akash Mallappa Mantur	Telecommunication	SkyfiLab	45 Days
76	1NH15EC005	Akhil Chowdary. M	Embedded Systems	PraLoTech Solutions LLP	45 Days
77	1NH15EC006	Akshitha.KS	Network Security	Velocis	45 Days
78	1NH15EC009	Anusha M	Mission and combat Centre	HAL	45 Days
79	1NH15EC010	Aparna. M	VLSI Design	Peninsula Electronics	45 Days
80	1NH15EC011	Bhavana Savanth	Student exchange program	University of ESIGELEC, France	45 Days
81	1NH15EC012	Bujja Ajay	Embedded Systems	PraLoTech Solutions LLP	45 Days

82	1NH15EC013	Chandini C	Mission and combat centre	HAL	45 Days
83	1NH15EC014	Chandra Shekhar. K. R	VLSI Design	Compute Silicon	45 Days
84	1NH15EC016	Deepak S	Embedded Systems	Inventron	45 Days
85	1NH15EC017	Deepika.S	Mobile Computing	Reliance Jio Infocom Ltd	45 Days
86	1NH15EC023	Gurushree Bhat U	Embedded Systems	PraLoTech Solutions LLP	45 Days
87	1NH15EC025	Harshitha J R	Embedded Systems	DISEGN Complex	45 Days
88	1NH15EC026	Harshitha N	Embedded Systems	DISEGN Complex	45 Days
89	1NH15EC027	Hemanth Kathick R	Mobile Computing	Reliance Jio Infocom Ltd	45 Days
90	1NH15EC028	Hemanth Kumar.R	Mobile Computing	Reliance Jio Infocom Ltd/ SkyfiLab	45 Days
91	1NH15EC029	Irfan	Wireless communication	Sctia	45 Days
92	1NH15EC032	Jayanth S	VLSI Design	Compute Silicon	45 Days

Criterion-2 Self-Assessment Report (SAR)

93	1NH15EC033	Jitin Jain Mathew	Networking	HackerEarth	45 Days
94	1NH15EC034	K B Hithesh	Embedded Systems	Inventron	45 Days
95	1NH15EC035	K.R. Amrutha	VLSI Design	Compute Silicon	45 Days
96	1NH15EC037	Karthik.V	Mobile Computing	Reliance Jio Infocom Ltd/ SkyfiLab	45 Days
97	1NH15EC038	Kavya. D.R	Mobile Computing	Reliance JIO	45 Days
98	1NH15EC039	Keerthi. U.M	VLSI Design	Compute Silicon	45 Days
99	1NH15EC043	Laxmi Sah	Training	Placement office	45 Days
100	1NH15EC046	Manamohan	Mobile Computing	Reliance Jio Infocom	45 Days
101	1NH15EC049	Mithun. V	Tele communication	TelaVerge/ France	45 Days
102	1NH15EC050	Mohammed Musaveer	Tele communication	ITC Infotech	45 Days
103	1NH15EC051	Mohammed Shabaz	Mobile Computing	Reliance Jio	45 Days
104	1NH15EC052	Monika Reddy	Mobile Computing	Reliance Jio	45 Days

105	1NH15EC053	Monisha. M	VLSI Design	Compute Silicon	45 Days
106	1NH15EC054	Mukesh	Tele communication	SkyfiLab/Compute Silicon	45 Days
107	1NH15EC056	Nagarjun K S	Home Automation	Lowe's	45 Days
108	1NH15EC057	Nalini.K	Tele communication	ITC Infotech	45 Days
109	1NH15EC058	Priyanka Nallagouni	Embedded Systems	Etronics Technologies Pvt. Ltd.	45 Days
110	1NH15EC060	Naveen. K. R	VLSI Design	Compute Silicon	45 Days
111	1NH15EC061	Naveen.P	Embedded Systems	OMGVH Electronics Pvt. Ltd.	45 Days
112	1NH15EC070	Venkata Sai Ganesh	Embedded Systems	PraLoTech Solutions LLP	45 Days
113	1NH15EC071	Preeti. K. Mehtry	Embedded Systems	Etronics Technologies Pvt. Ltd.	45 Days
114	1NH15EC073	Punarva. A	Software Engineering	Surya software	45 Days
115	1NH15EC077	Radhakrishna. C	Networking	Konigtronics (OPC) Pvt. Ltd.	45 Days

Criterion-2 Self-Assessment Report (SAR)

116	1NH15EC081	Rukmini. N	VLSI Design	Compute Silicon	45 Days
117	1NH15EC085	Saahil Rai	Networking	Real time signal technologies	45 Days
118	1NH15EC086	Sachin Yadav	Training	Placement office	45 Days
119	1NH15EC089	Samarpan Chakraborty	Embedded Systems	Etronics Technologies Pvt. Ltd.	45 Days
120	1NH15EC102	Shubha.A	Student exchange program	University of ESIGELEC, France	45 Days
121	1NH15EC113	Subramanaya Ganesh	VLSI Design	Compute Silicon	45 Days
122	1NH15EC117	Swathi. R	VLSI Design	Compute Silicon	45 Days
123	1NH15EC121	Tirumala Satheesh Himakeerthi	Software Engineering	Surya software	45 Days
124	1NH15EC132	Deepti S	Wireless communication	Sctia	45 Days
125	1NH15EC135	Archana M	Mobile Computing	Reliance Jio	45 Days
126	1NH15EC435	Thyagaraj M	Mission and combat Centre	HAL	45 Days

127	1NH15EC703	Ashwin S	Student exchange program	University of ESIGELEC, France	45 Days
128	1NH15EC714	Jishma Asmi. V	Student exchange program	University of ESIGELEC, France	45 Days
129	1NH15EC724	Prasanna Kumar. D	Embedded Systems	OMGVH Electronics Pvt. Ltd.	45 Days
130	1NH15EC755	Syed Zahid Ulla	Embedded Systems	Inventron	45 Days
131	1NH16EC401	Dilip Kumar R	Embedded Systems	Digital Circuits Pvt. Ltd	45 Days
132	1NH16EC411	Madhavi Iranna Sajjan	VLSI Design	Compute Silicon	45 Days
133	1NH16EC412	Mohammed Faizulla D K	Telecommunication	ITC Infotech	45 Days
134	1NH16EC413	Mohan Kumar V	Embedded Systems	Digital Circuits Pvt. Ltd	45 Days
135	1NH16EC415	Namitha Reddy V	Embedded Systems	Inventron	45 Days
136	1NH16EC417	Padmini M E	Embedded Systems	Inventron	45 Days

137	1NH16EC419	Praveenkumar R Jadhav	VLSI Design	Compute Silicon	45 Days
138	1NH16EC420	Priyanka P	Networking	Yokogawa IA Technologies India	45 Days
139	1NH16EC423	Ramitha B	Embedded Systems	Inventron	45 Days
140	1NH16EC426	Sachin K B	Telecommunication	TelaVerge	45 Days
141	1NH16EC427	Shashikumar M R	Network Security	Velocis	45 Days
142	1NH16EC428	Sowmya P	Embedded Systems	Inventron	45 Days
143	1NH14EC026	D Vedavathi Kiranmai	Network Security	Velocis (Placement)	45 Days
144	1NH14EC052	Priyanka Milton	Embedded Systems	Inventron	45 Days
145	1NH15EC059	Nanditha S	Power electronics	BEML	45 Days
146	1NH15EC080	Roopa D Almeida	Biomedical signal processing	Nimhans	45 Days

147	1NH15EC082	Rushali Raina	Embedded Systems	Etronics Technologies Pvt. Ltd.	45 Days
148	1NH15EC092	Sanjeev Jayasurya.S	Networking	NINELEAPS Technology Solutions Pvt. Ltd.	45 Days
149	1NH15EC098	Shilpa.V	Defence Avionics	DARF/DRDO	45 Days
150	1NH15EC107	Sneha. P	Defence Avionics	GTR DRDO	45 Days
151	1NH15EC108	Sneha. S	VLSI Design	Skill adder	45 Days
152	1NH15EC110	Soundarya. B K	VLSI Design	Peninsula Electronics	45 Days
153	1NH15EC111	Sowmya. S	Embedded Systems	DISEGN Complex	45 Days
154	1NH15EC115	Suraj R	Power electronics	BEML	45 Days
155	1NH15EC119	Thanuja A	VLSI Design	Skill adder	45 Days
156	1NH15EC133	Namratha B R	Embedded Systems	Etronics Technologies Pvt. Ltd.	45 Days

157	1NH15EC711	Hakesh Kolukonu	Embedded Systems	Mbed technologies	45 Days
158	1NH15EC712	Hari Chandana Veldanda	Embedded Systems	Mbed technologies	45 Days
159	1NH15EC729	Radhika R	Defence Avionics	GTR DRDO	45 Days
160	1NH15EC733	Ramya R	Embedded Systems	DISEGN Complex	45 Days
161	1NH15EC753	Surya V	Defence Avionics	DRDO	45 Days
162	1NH16EC422	Ramesh Birgi	Networking	Konigtronics (OPC) Private Limited	45 Days
163	1NH16EC425	Sachin B S	Tele communication	TelaVerge	45 Days
164	1NH15EC041	Kolli Srinivasa Reddy	Hardware design	Celsius HVAC Systems	45 Days
165	1NH15EC042	Konuru Gopi	Hardware design	Celsius HVAC Systems	45 Days
166	1NH15EC044	Madala Kalyan Kumar	Hardware design	Celsius HVAC Systems	45 Days

167	1NH15EC055	Nagabhyru Kushvanth Chowdary	Hardware design	Celsius HVAC Systems	45 Days
168	1NH15EC064	Noti Dinesh Kumar Reddy	Embedded Systems	Pralo Tech Solutions Ltd	45 Days
169	1NH15EC087	Sakkirala Satwik Yadav	Mobile Computing	42 Gears mobility systems Pvt. Ltd	45 Days
170	1NH15EC091	Sanjay Kumar. A	VLSI Design	Skill adder	45 Days
171	1NH15EC094	Satish. J	VLSI Design	Skill adder	45 Days
172	1NH15EC095	Shaik Sohail	Hardware design	Celsius HVAC Systems	45 Days
173	1NH15EC096	Sharath.N	Embedded Systems	Etronics Technologies Pvt. Ltd.	45 Days
174	1NH15EC101	Shruti Jana	VLSI Design	Compute Silicon	45 Days
175	1NH15EC104	Shwetha.R	Embedded Systems	Inventron	45 Days
176	1NH15EC118	Tarun Gowda.S.M	Networking	Konigtronics (OPC) Private Limited	45 Days
177	1NH15EC122	V.Bharat Raj	Embedded Systems	Biodesign Innovation Labs	45 Days

178	1NH15EC123	V Megha	Embedded Systems	DISEGN Complex	45 Days
179	1NH15EC128	Virupaksha	Embedded Systems	Etronics Technologies Pvt. Ltd.	45 Days
180	1NH15EC130	Kaliki Poojasri	Aeronautics	CSIR-Fourth	45 Days
181	1NH15EC134	Manoj Kumar K	Embedded Systems	Etronics Technologies Pvt. Ltd.	45 Days
182	1NH15EC700	Abhishek Gowda.K.M	Tele communication	ITC Infotech	45 Days
183	1NH15EC702	Anusha. R	VLSI Design	Skill adder	45 Days
184	1NH15EC706	Vijay Krishna	Embedded Systems	Pralo Tech Solutions Ltd	45 Days
185	1NH15EC708	Ekta Shukla	Embedded Systems	Electronics Technologies Pvt. Ltd.	45 Days
186	1NH15EC713	I G Kevin Christopher Morris	Telecommunic ation	ITC Infotech	45 Days
187	1NH15EC716	Megha N	VLSI Design	Skill adder	45 Days
188	1NH15EC718	Namrata Sudhir Katrale	Embedded Systems	Etronics Technologies Pvt. Ltd.	45 Days

189	1NH15EC722	Pavithra. R	Embedded Systems	Etronics Technologies Pvt. Ltd.	45 Days
190	1NH15EC020	Gadipudi Asrith	Embedded Systems	Mbed technologies/ BuziBr Ains	45 Days
191	1NH15EC021	Gattu Raghunadham	Software Engineering	Surya Software	45 Days
192	1NH15EC069	Pavan Kumar s	Embedded Systems	Etronics Technologies Pvt. Ltd.	45 Days
193	1NH15EC074	Putti Reddy Akhil Reddy	Hardware design	Celsius HVAC Systems	45 Days
194	1NH15EC084	S. Suhas	Mission and combat centre	HAL	45 Days
195	1NH15EC090	Sandhya B	Telecommunication	TelaVerge	45 Days
196	1NH15EC099	Shreyas S	Embedded Systems	DISEGN Complex	45 Days
197	1NH15EC124	Varikuti Harsha Vardhan Reddy	Embedded Systems	Etronics Technologies Pvt. Ltd.	45 Days

198	1NH15EC704	Basanagouda Patil	Networking	Konigtronics (OPC) Private Limited	45 Days
199	1NH15EC723	Pradeep.K	Networking	Konigtronics (OPC) Private Limited	45 Days
200	1NH15EC725	Prathap R	VLSI Design	Skill adder	45 Days
201	1NH15EC726	Praveen P Nair	Mission and combat Centre	HAL	45 Days
202	1NH15EC730	Rahul S	Defence Avionics	CARE/DRDO	45 Days
203	1NH15EC731	Rakshitha.L	Embedded Systems	Etronics Technologies Pvt. Ltd.	45 Days
204	1NH15EC739	S K Mohammad Akhleem Nawaz	Embedded Systems	Pralo Tech Solutions Ltd	45 Days
205	1NH15EC740	S Krithika	Telecommunication	ITC Infotech	45 Days
206	1NH15EC742	Savita Shivanand Patil	Embedded Systems	Etronics Technologies Pvt. Ltd.	45 Days
207	1NH15EC743	Sharath C R	Networking	Konigtronics (OPC) Private Limited	45 Days

208	1NH15EC744	Shiva Prasad. H. S	Networking	Konigtronics (OPC) Private Limited	45 Days
209	1NH15EC745	Shivani Kumari	Software Engineering	Surya Software	45 Days
210	1NH15EC746	Shivani.V	Mission and combat Centre	HAL	45 Days
211	1NH15EC749	Shwetha. P. S	VLSI Design	Skill adder	45 Days
212	1NH15EC750	Snehith.V. Gowda	Defence Avionics	DRDO/ France	45 Days
213	1NH15EC751	Suraj Davis	Embedded Systems	Etronics Technologies Pvt. Ltd.	45 Days
214	1NH15EC757	Manoj V	Embedded Systems	Mbed technologies	45 Days
215	1NH16EC408	Lokesh	Embedded Systems	Pralo Tech Solutions Ltd	45 Days

2.2.5.4.a STUDY ABROAD

STUDY ABROAD STUDENTS ECE 2019 PROGRAMME

Table 2.2.5.4a and 2.2.5.4b shows the list of student’s study abroad for 2019 and 2020

Table 2.2.5.4a Study Abroad students 2019

Sl.No.	USN	Name	University	Duration
1	1NH15EC063	Nishant S	ESIGELEC, France	Sep-Nov 2019
2	1NH16EC054	Meghana V	ESIGELEC, France	Sep-Nov 2019
3	1NH16EC116	Vijay S	ESIGELEC, France	Sep-Nov 2019
4	1NH16EC120	Yathin S	ESIGELEC, France	Sep-Nov 2019
5	1NH16EC756	Yeshaswini K M	ESIGELEC, France	Sep-Nov 2019
6	1NH16EC758	Praveen.S	ESIGELEC, France	Sep-Nov 2019

STUDY ABROAD STUDENTS ECE 2018

Table 2.2.5.4b Study Abroad students 2020

Sl.No.	USN	Name	University	Duration
1	1NH15EC011	Bhavana Savanth	ESIGELEC, France	Sep-Nov 2018
2	1NH15EC019	Denzel Abraham George	ESIGELEC, France	Sep-Nov 2018
3	1NH15EC049	Mithun V	ESIGELEC, France	Sep-Nov 2018
4	1NH15EC062	Nikhil Riyaz	ESIGELEC, France	Sep-Nov 2018
5	1NH15EC741	Sanjana	ESIGELEC, France	Sep-Nov 2018
6	1NH15EC102	Shubha	ESIGELEC, France	Sep-Nov 2018
7	1NH15EC703	Ashwin S	University of Le Havre	Sep-Nov 2018
8	1NH15EC714	Jishma Asmi	University of Le Havre	Sep-Nov 2018
9	1NH15EC750	Snehith V Gowda	University of Le Havre	Sep-Nov 2018



Knowledge Lens Pvt. Ltd
74/A, Keonics, Hosur road,
Electronic City Phase 1 - Bengaluru - 560100
CIN No: U72200KA2013PTC072670

20th April 2020

TO WHOM IT MAY CONCERN

This is to certify that Ms. Swathi K student of B.E, New Horizon College of Engineering, Bangalore has completed the training on basics of “iLens Product Development” from 2nd January 2020 to 14th February 2020 at **Knowledge Lens Pvt Ltd**. During the period of her training with us she was found punctual, hardworking and inquisitive.

We wish her all the success in future endeavors.

Yours Truly,

For **Knowledge Lens Pvt Ltd**.



Sudheesh Narayanan
Chief Executive Officer

74/A, Keonics, Hosur road, Electronic City - Phase 1, Bangalore 560100
Ph: + 91 9113283347 | sales@knowledgeLens.com | <http://www.knowledgeLens.com>



June 1, 2020

To Whom It May Concern

This is to certify that **Janani B R**, B.E. student of Electronics and Communications Engineering branch, New Horizon College of Engineering, Bengaluru has been working on the project work titled "Project Management using Jira Software" under Mr. Stephen Sheen (sheens@vmware.com) with the IT Infrastructure Program Management Office (PMO) at **VMware Software India Pvt. Ltd., Bengaluru** as an **INTERN** from **10th Jan 2020**.

Yours sincerely,

For **VMware Software India Private Limited.**



Vignesh K
Centralised HR Services Specialist
Email: Apachrss@vmware.com

VMware Software India Private Limited
Kalyani Vista, Sy. No. 165/1 & 165/17, Doraisanipalya, 4th Phase, JP Nagar, Bengaluru - 560076, India
Phone : +91-80-4044 0000 fax : +91-80-4044 0096
www.vmware.com

मिशन एवं युद्धक प्रणाली अनुसंधान एवं अभिकल्प केंद्र
हिन्दुस्तान एरोनाटिक्स लिमिटेड
एयरपोर्ट रोड, विमानपुरा पोस्ट, बेंगलूरु - 560 017, भारत
Fax (फैक्स) : 91 - 80 - 2231 3185



MISSION & COMBAT SYSTEM RESEARCH & DESIGN CENTRE
HINDUSTAN AERONAUTICS LIMITED
Airport Road, Vimanapura Post, Bengaluru - 560 017, India
Ph. (दूरभाष) : 91 - 80 - 2231 1490, 2232 2169

No. D/MCSRDC/HR/Proj.Cert/326/2020 Date: 06.06.2020

CERTIFICATE

This is to certify that the following student of **BE(ECE)**,
VIII SEMESTER from **NEW HORIZON COLLEGE OF ENGINEERING,**
BANGALORE has completed her **"INTERNSHIP"** at MCSRDC, Design
Complex, HAL, Bangalore from **15.02.2020** to **23.03.2020** on "no-pay-
no-fee-basis".

Ms. MEGHA SHREE H M (1NH16EC053)

The punctuality, conduct and behavior of the student was **VERY**
GOOD during the training. The overall progress during the training was
GOOD.



Ramesh K
(RAMESH K)
Senior Manager (HR)
ರಮೇಶ್ ಕೆ / ರಮೇಶ್ ಕೆ / RAMESH K
ಸಿ.ಎ.ಎಸ್.ಆರ್.ಡಿ.ಸಿ. ವಿನ್ಯಾಸ ಸಂಕೀರ್ಣ
ಮಿಷನ್ ಮತ್ತು ಯುದ್ಧಕೇಂದ್ರ (ಮಿ.ಸಂ.) / ವಿನ್ಯಾಸ ಸಂಕೀರ್ಣ (ಸಿ.ಎ.ಎಸ್.ಆರ್.ಡಿ.ಸಿ.)
Senior Manager (HR)
ಎಂ.ಪಿ.ಎಸ್.ಆರ್.ಡಿ.ಸಿ. ವಿನ್ಯಾಸ ಸಂಕೀರ್ಣ
ಎನ್ ಸಿ ಟಿ ಆರ್ ಡಿ ಸಿ, (ಅಭಿವೃದ್ಧಿ ಕಾರ್ಯಾಲಯ)
MCSRDC, (Design Complex)
ಹೆಚ್.ಎ.ಎಸ್. ರೋಡ್-560017 / ಆರ್.ಆರ್. ಬೆಂಗಳೂರು-560017
HAL, BANGALORE - 560017

पंजीकृत कार्यालय : 15/1, कब्बन रोड़, बेंगलूरु - 560 001, भारत
Registered Office : 15 /1, Cubbon Road, Bengaluru - 560 001, India
CIN: L35301KA1963GOI001622

www.hal-india.co.in



Date – June 1st, 2020

TO WHOMSOEVER IT MAY CONCERN

Sub: Technical Trainee

This is to certify that Mr Akhil Josef, has successfully completed his Foundation Training in our organization as a Technical trainee.

The details of the training are as follows:

Training : Full Stack Training
Start Date : January 21st, 2020
End Date : May 29th, 2020
Department Head : Muruganantham A

During the above-mentioned period we found him to be sincere, hardworking and obedient.

Yours faithfully,
For **HEXAWARE TECHNOLOGIES LIMITED**

Monica Mathur

Monica Mathur
Associate Vice President, Recruitment



HEXAWARE TECHNOLOGIES LTD.

Regd. office: Bldg No. 152, Millennium Business Park, Sector - III, 'A' Block, TTC Industrial Area, Mahape,
Navi Mumbai, 400710, Tel. : +91 22 6791 9595, Fax : +91 22 6791 9500
(CIN) : L72900MH1992PLC069662 URL: www.hexaware.com

2.2.5.C. Impact analysis of industrial training:

1. Student confined that this program was helpful to enhance their knowledge.
2. Students realize the practical importance of the subjects
3. Students had seen live project site and from this they have gained practical knowledge.
4. Students could use the knowledge of the training for campus interviews.
5. The industry standards and workplace culture is exposed to students, and they also understand the importance of being punctual and meeting the deadlines
6. Communication skills of the students improved.
7. Students are inspired to work hard and get placed in such industries
8. The moral and confidence of the students get boosted, which in long run helps them for self-employment.
9. Student employability is increased.

2.2.5.D. Student feedback on initiative:

1. For feedback from training, faculty take viva examination of students.
2. 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.
3. Department in association with professional bodies conduct distinguished lectures, technical seminars, workshops and conferences to enhance the knowledge of students in program specific domains

The Value added short term training is also executed in the department which aims 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.

The Table 2.2.5.5 below shows value added training program offered in the department by the industry expert.

The students are given opportunity to take up value added courses related to industry to enhance their competency skills

Table 2.2.5.5 Value Added Courses

Academic year	Topic	From date	To date	No of students attended
2017-18				
II yr. (2016 batch)	Certificate in VLSI Design	03-11-18	14-04-2018	32
III yr. (2015 batch)	Certificate in VLSI Design	03-11-18	14-04-2018	54
IV yr. (2014 batch)	Certificate in VLSI Design (ASIC Verification)	06-10-17	21-11-2017	31
2018-19				
II yr. (2017 batch)	Introduction to Verilog & FPGA	22-09-2018	13-04-2019	74
III yr. (2016 batch)	Certificate in VLSI Design	31-08-2018	02-09-19	57
IV yr. (2015 batch)	Certificate in VLSI Design (ASIC Verification)	13-01-2019	27-01-2019	52
2019-2020				
III yr. (2017 batch)	Certificate in VLSI Design	07-09-19	19-07-2019	34
IV yr. (2016 batch)	Certificate in VLSI Design (ASIC Verification)	31-08-2019	02-10-20	44

The feedback received from the students show that there is an overall high satisfaction on the initiative of the institute and the department of Electronics & Communication Engineering on organizing internship training, industrial visits, value added training and exchange programme. Students Testimonial on Industry initiative and a sample of the feedback form on internship taken is shown in Figure2.5.5.5.

Student Testimonials on various industry institute activities

Bhavana Savanth



Selected to ESIGELEC which is a part of the Grand Ecole, the ‘Study abroad Student Exchange Program’ not only widened our horizons to technology but it also paved way to the apotheosis of learning. With an international exposure to scientific advancements and a cosmopolitan culture, the program was a resonant journey of self-dependence and inter-dependence. Apart from participating in the IBM Open Power Summit and its #AI4GOOD hackathon, I also had the sheer privilege of representing India at the 6th UNISEC Global Conference. In all, it had opened doors to unprecedented opportunities. And when opportunity knocks, you must go grab it all. NHCE has established a platform for enhanced growth in its pioneering efforts and I am immensely grateful for having been a part of this venture.

Nikhil Riyaz



I'm thankful to New Horizon college of engineering for giving me the opportunity to attend the student exchange program in France. The university I attended during this period was ESIGELEC, Rouen, France. The study abroad program was an experience like none other because I learned to adapt to a foreign culture which may be very hard for many. The program was a great way to gain international exposure and meet people from different parts of the world hailing from varying cultures. The learning experience in and out of class was very different compared to India and is something I will cherish for the rest of my life. I also got an opportunity to interact with a lot of new people and expand my professional network. Overall the experience was worthwhile.

Shubha A



The France student exchange program has given me the International exposure. I gained a lot of insight about the French culture. The activities of the cross cultural class helped me to improve my Leadership skills and the way to interact with the people from different countries and different background. I was also given an opportunity to learn French. The overall experiences of the exchange program will help me in shaping my career. I am very

much thankful to the home (NHCE) and host (ESIGELEC) universities for providing me such an opportunity.

Sanjana Rajan



The Student exchange program was primarily initiated to give an international exposure and help students understand the French education system, people and their culture. The best part of the program is that I got an opportunity to study 1st semester MS in Embedded Systems in English and also study in a multicultural environment with people from different parts of the world. I also got an opportunity to attend and win 2nd prize in AI4Good Hackathon which was held in Amsterdam.

Below Figures 2.2.5.a- 2.2.5.d are few sample letters of internships taken up by our students.

NEW HORIZON COLLEGE OF ENGINEERING
Department of Electronics and Communication Engineering

Student Professional Internship Evaluation

Name of the Student: Bharath MVK
 Company: Hindustan Aeronautics Limited (HAL)
 Supervisor: Mr. Rupesh Chahal
 Internship Beginning: 08-01-20 Internship End: 06-03-20

Evaluation Scale: (5) Strongly Agree (4) Agree (3) Neutral (2) Disagree (1) Strongly Disagree

I had a good assimilation/orientation to my company at the start of the internship

5 4 3 2 1

I received thorough information on the job duties and expectations at the start of my internship

5 4 3 2 1

A mentor/supervisor was assigned to me to oversee my work and was always available to answer questions

5 4 3 2 1

The overall quality of supervision was sufficient

5 4 3 2 1

The internship was challenging and practical

5 4 3 2 1

Aspects of the internship helped bridge the gap between theory and application

5 4 3 2 1

The work climate was positive and productive

5 4 3 2 1

I made good networking contacts with other interns or employees

5 4 3 2 1

I would recommend this internship to another student

5 4 3 2 1

Internship Evaluation- p. 2

1. How did your internship experience help you grow personally and/or professionally?

Interning at HAL helped me in many ways, but I would like to highlight two points which I feel like was important to me. The first is that the internship really instilled confidence in me and helped me believe in my abilities. The second is really important as well since I'm placed, it gave me an overview on how a company works and how we need to behave. More like the workplace etiquette was the most important lesson I learnt there.

2. What previous classes or classroom experiences were most useful in preparing you for your internship?

Microwave and Radars was the subject which really benefited me as the project/work that was given to me at my internship was based on it. Luckily because of the subject, It was helpful for me as I already had an insight of the working and functioning of a radar.

3. What advice would you give future interns? (May we use this in promoting internships to other students? Yes / No)

Stay active and believe in yourself because that was what helped me finish the work given to me at the internship as well as help me overcome all the obstacles I faced there. Also, communication is the key. If you need help or if you are stuck, there are people who can help you out. Never stay silent and speak yourself so you can overcome it.

4. Would you consider doing an internship at this company again? Why or why not?

Doing an internship at HAL, a highly reputed company, I would say, anyone would love to do their internship there. That includes me too. There's so much an intern can learn and there's also too much to learn at HAL that it cannot be possible in a few months. It's more like a research center for an intern because there are so many things that can fascinate them. This includes me too. I would definitely intern there again because there were so many things I could not learn while interning there. If given another opportunity, I wouldn't think twice before accepting it.

5. Please include any other comments or information you feel would be helpful.

PERFORMANCE

Using the scale provided, respond honestly to the following statement about your internship performance.

- 1= Strongly disagree
- 2= Somewhat disagree
- 3= Neither agree nor disagree
- 4= Somewhat agree
- 5= Strongly agree
- NA= Not applicable

Item	The student	Score
1	Achieved my internship learning objectives PO5 ,PO11	5
2	Demonstrated necessary writing and speaking skills PO10	4
3	Was able to apply classroom knowledge to the internship setting effectively PO1,PO2	4
4	Demonstrated critical thinking and problem-solving skills PO4	5
5	Demonstrated initiative and the ability to learn PO9,PO12	5
6	Responded well to supervision and constructive criticism PO8	5
7	Showed the capacity to be a self-sufficient, independent worker PO9,PO6	5
8	Worked effectively with others on team projects PO9	5
9	Exhibited a sense of responsibility and dependability PO9	5
10	Exhibited a positive attitude toward work and co-workers PO9,PO11	5
11	Showed creativity and originality PO6	4
12	Exhibited a professional attitude PO8,PO6	5
13	Behaved ethically PO8	5
14	Sensitive to diversity in the workplace PO9	5
15	Adapted well to changing circumstances PO11,PO9	4
16	Presented an appropriate professional appearance PO6	4
17	Made progress throughout the internship PO12	5
18	Completed a sufficient quantity of work	5
19	Produced quality work PO6	5
20	Demonstrated awareness of strengths/weaknesses PO9	5

Figure 2.2.5.5: A sample feedback of student Internship

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

CRITERION 3

COURSE OUTCOMES AND PROGRAM OUTCOMES

CRITERION 3	COURSE OUTCOMES AND PROGRAM OUTCOMES	175
--------------------	---	------------

3. COURSE OUTCOMES AND PROGRAM OUTCOMES (175)

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

Introduction about the Courses in the Program

Electronics and Communication Engineering programme encourages the students to use their critical thinking skills and creativity with the principles of scientific engineering and computer programming. The syllabus emphasizes in-depth technical knowledge and practical application skills in all disciplines of Electronics and Communication Engineering. The students acquire the ability to understand and solve industrial problems in real time.

The programme provides the core courses which gives the information for the improvement of computational solutions to complex engineering problems in the society. It focuses on application programming and system software development. This programme provides the core courses such as Analog Electronics circuits, Logic Design, Signals and systems, Digital Signal processing, System design using HDL, Analog Communication, Microcontroller, Electromagnetic fields, VLSI Design, Embedded systems, Digital Communication, Microelectronics Circuits etc. This programme also offers courses from other disciplines like Electrical, Mechanical, Information Technology, Computer Science and Engineering programme. In order to enhance the analytical thinking of the students, applied mathematics courses are offered from first to fourth semester. Apart from these courses the applied science courses like Physics, Chemistry, Professional Ethics and Human values have been included in the curriculum.

Program Outcomes (POs) & Program Specific Outcomes (PSOs)

The Program Outcomes (POs) & Program Specific Outcomes (PSOs) for the graduates of Electronics and Communication Engineering are listed below.

List of Program Specific Outcomes

Graduates of Electronics and Communication Engineering will be able to:

PSO 1: To demonstrate the ability to design and develop complex systems in the areas of next generation Communication Systems, IoT based Embedded Systems, Advanced Signal and Image Processing, latest Semiconductor technologies, RF and Power Systems.

PSO 2: To demonstrate the ability to solve complex Electronics and Communication Engineering problems using latest hardware and software tools along with analytical skills to contribute to useful, frugal and eco-friendly solutions.

List of Program Outcomes

Graduates of Electronics and Communication Engineering can able to:

PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems in Electronics and Communication Engineering.

PO2: Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems in Electronics and Communication Engineering reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3: Design/development of solutions: Design solutions for complex engineering problems and design system components or processes of Electronics and Communication Engineering that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments in Electronics and Communication Engineering, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities in Electronics and Communication Engineering with an understanding of the limitations.

PO6: 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 in Electronics and Communication Engineering.

PO7: Environment and sustainability: Understand the impact of the professional engineering solutions of Electronics and Communication Engineering in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

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 reports and design documentation, make effective presentations, and give and receive clear instructions.

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.

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.

Course Outcomes (COs)

Course Outcomes are the statements that declare what students should be able to do at the end of a course. The course outcomes are defined by the course coordinator along with course instructors. By using action verbs and learning statements, COs have defined. For each courses, course outcomes may vary from 5 to 6 nos. These course outcomes are then mapped with the POs. Then, it is submitted for the approval of the Department Advisory Board and the Board of Studies. Figure 3.1 shows Hierarchy of faculty involvement in CO Statement and mapping of CO-POs.

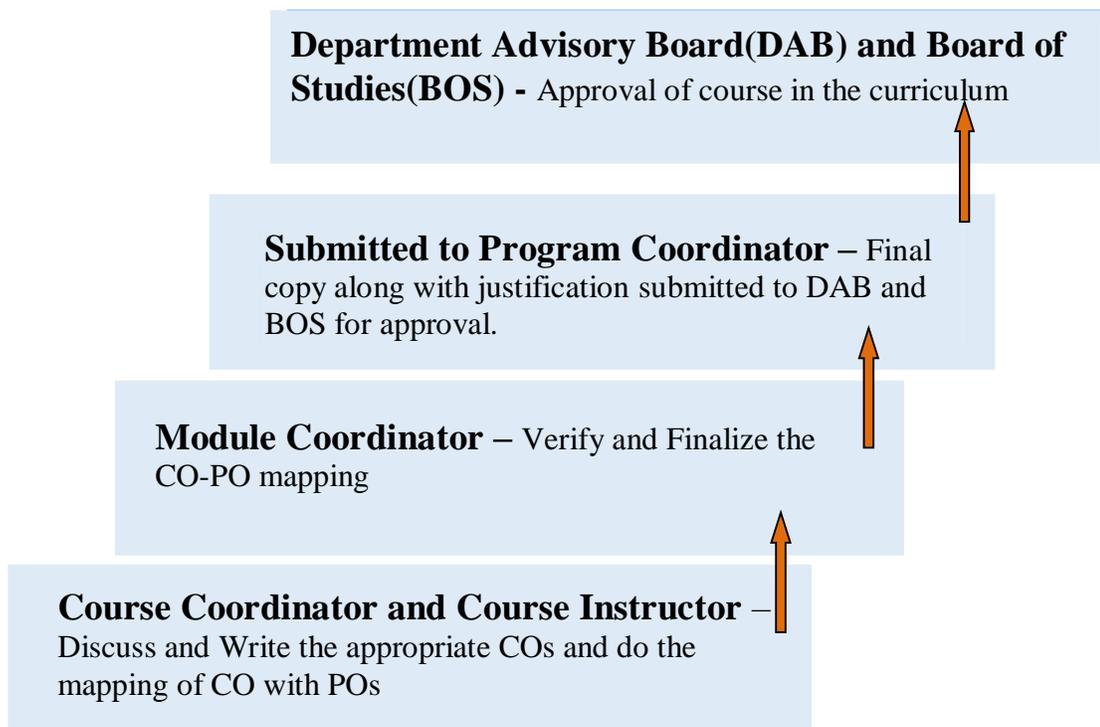


Figure 3.1 Hierarchy of faculty involvement in CO statement

The following section describes how COs are defined for a course namely, 16ECE34 Electronic circuits -1 are derived. The contents of the Electronic circuits -1 course are: Application of Diode, BJT biasing circuits, BJT amplifier circuit, cascode Configuration, Field effect transistor and other BJT circuits. Based on the course content of Electronics circuit -1, Six COs (CO1 to CO6) are defined as below: On completion of the course the students can able to:

CO1: Interpret the applications of diode circuits

CO2: Design of BJT biasing circuits and performs load line analysis

CO3: Analyze the BJT amplifier circuits and their high frequency response

CO4: Analyze the FET circuits using DC and AC analysis, along with their high frequency response

CO5: Examine the working of constant current source and current mirror for BJT

CO6: Model the application circuits of diode, BJT and FET circuits using discrete components and simulation tool

Mapping of CO with POs & PSOs

For all the courses mentioned in the programme, the Course outcomes are mapped by the course coordinator and course instructors 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 3.1.b shows the Program Articulation Matrix for all the courses for the regulation 2015-2019 batch students. CO-POs and CO-PSOs matrices of all courses are framed. However matrices for one course per semester are selected and presented in Table 3.1.a1. It shows the Course Articulation Matrix for 6 core courses. To explain the mapping of CO with POs & PSOs, one core course 16ECE34 Electronic circuits -1 is taken into consideration.

C204.1 represents the CO1 i.e., at the end of the course, student will be able to interpret the applications of diode circuits. CO1 is mapped with the POs 1,2,3,9. The corresponding

ratings are 3,3,2,3 respectively. It indicates that CO1 has highly correlated over POs 1,2 and 9.

Similarly, C204.2 represents the CO2 i.e., at the end of the course, student will be able to design of BJT biasing circuits and performs load line analysis. CO2 is mapped with the POs 1, 2, 5, 9 and PSO 1. The corresponding ratings are 3,3,3,3,3 respectively. It indicates that CO2 has substantial correlation over POs 1,2,5,9 and PSO 1. Likewise, all other COs of Electronics Circuits-1, C204.3, C204.4, C204.5 and C204.6 are defined and mapped with POs and PSOs.

Mapping		Justification
CO	PO	
CO1	PO1, PO2, PO3, PO9	Knowledge of Diodes (PO1) helps in problem identification and solving design issues (PO2, PO3). This can either be an individual or a team exercise (PO9).
CO2	PO1, PO2, PO5, PO9, PSO1	Understanding BJT biasing schemes and load lines (PO1) helps in problem identification and solving design issues (PO2). PO5 (Modern tool usage) lends more perspective on understanding the designs. This can either be an individual or a team exercise (PO9). The concept of bias circuits is used in every available electronic circuits and can be useful in designing complex systems (PSO1)
CO3	PO1, PO2, PO5, PO9, PO12, PSO1	BJT amplifiers and their frequency response (PO1) help in problem identification, analysis and solving design issues (PO2). PO5 (Modern tool usage) lends more perspective on understanding the designs. This can either be an individual or a team exercise (PO9). BJT amplifiers are practically used in every available electronic circuits and can be useful in designing complex systems (PSO1)
CO4	PO1, PO2, PO5, PO9, PO12, PSO1	Knowledge of FETs and their characteristics (PO1) helps in problem identification, analysis and solving design issues (PO2). PO5 (Modern tool usage) lends more perspective on understanding the designs. This can either be an individual or a team exercise (in the form of projects) (PO9, PSO1).
CO5	PO1, PO2	Usage of BJTs as current sources and mirrors helps in problem identification and solving design issues (PO1, PO2).
CO6	PO1, PO2, PO3, PO4, PO5, PO9, PO12	Leveraging the contextual knowledge (PO1, PO2, and PO3) of BJT and FET circuits is useful in solving complex problems (PO4). PO5 (Modern tool usage) lends more perspective on understanding the designs and can be very useful in life-long electronics engineering practices (PO12).

Table 3.1.a1 Course Articulation Matrix of Electronic Circuits -1

Course Code: 16ECE34		Course Name: ELECTRONIC CIRCUITS – I													
Course Code	Course Statement	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C204.1	Interpret the applications of diode circuits	3	3	2	-	-	-	-	-	3	-	-	-	-	-
C204.2	Design of BJT biasing circuits and performs load line analysis	3	3	-	-	3	-	-	-	3	-	-	-	3	-
C204.3	Analyze the BJT amplifier circuits and their high frequency response	3	3	-	-	3	-	-	-	3	-	-	3	3	-
C204.4	Analyze the FET circuits using DC and AC analysis, along with their high frequency response	3	3	-	-	3	-	-	-	3	-	-	3	3	-
C204.5	Examine the working of constant current source and current mirror for BJT	3	3	-	-	-	-	-	-	-	-	-	-	-	-
C204.6	Model the application circuits of diode, BJT and FET circuits using discrete components and simulation tool	3	3	2	1	3	-	-	-	3	-	-	3	-	-
Average		3	3	2	1	3	-	-	-	3	-	-	3	3	-

Table 3.1. a2 Course Articulation Matrix of Control Systems

Course Code: 16ECE45		Course Name: CONTROL SYSTEMS													
Course Code	Course Statement	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C212.1	Illustrate the basic concepts of control systems with various examples	3	-	-	-	-	-	-	-	-	-	-	-	3	-
C212.2	Apply the transfer function concepts to develop the Mathematical Models for electrical and mechanical systems	3	-	-	-	-	-	-	-	-	-	-	-	3	-
C212.3	Examine the system response in Time domain for first order and second order systems	3	3	3	-	-	-	-	-	-	-	-	3	3	-
C212.4	Differentiate the stability of the system in S-Domain and frequency domain	3	3	3	2	-	-	-	-	-	-	-	3	3	-
C212.5	Infer the stability of the open and closed loop system from the frequency domain specifications	3	3	3	2	-	-	-	-	-	-	-	-	3	-
C212.6	Model the system using state space analysis	3	3	-	-	-	-	-	-	-	-	-	3	3	-
Average		3	3	3	2	-	3	3	-						

Table 3.1.a3 Course Articulation Matrix of Microcontrollers

Course Code: ECE52		Course Name: MICROCONTROLLERS													
Course Code	Course Statement	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C302.1	Describe the architectural features of 8086 Microprocessor	3	-	-	-	3	-	-	-	-	-	-	-	3	-
C302.2	Describe the architecture of 8051 Microcontroller and to aspire design aspects of I/O and Memory interfacing circuits	3	3	-	-	3	-	-	-	-	-	-	-	3	-
C302.3	Apply the basic knowledge of addressing modes to write assembly language program in 8051 Microcontroller	3	3	-	-	3	-	-	-	3	-	-	-	3	-
C302.4	Analyze the code in assembly level for application of 8051 Timers, Interrupts and Serial Communication interface	3	3	-	-	3	-	-	-	3	-	-	-	3	2
C302.5	Use modern tools and engage in self-learning to carry out real world projects	3	3	2	2	3	-	-	-	3	-	-	1	3	2
C302.6	Design an 8051 system by interfacing to external memory and I/O Peripherals	3	3	2	2	3	-	-	-	3	-	-	-	3	-
Average		3	3	2	2	3	-	-	-	3	-	-	1	3	2

Table 3.1.a4 Course Articulation Matrix of Microwaves and Radar

Course Code: ECE64		Course Name: MICROWAVES AND RADAR													
Course Code	Course Statement	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C310.1	Solve the transmission line problems using analytical and graphical approach	3	3	3	3	-	-	-	-	-	-	-	-	3	-
C310.2	Apply the knowledge of low frequency network to express Scattering parameter for impedance matching	3	3	-	-	-	-	-	-	-	-	-	-	3	-
C310.3	Analyze the working principle of microwave multiport junctions	3	3	3	3	-	-	-	-	-	-	-	-	3	-
C310.4	Categorize the radiation effects associated with RF sources	3	-	-	3	-	2	1	-	1	-	-	2	3	2
C310.5	Analyze the behavior and characteristics of microwave active components	3	3	-	-	-	-	-	-	-	-	-	-	3	-
C310.6	Select RADAR systems for the prediction of stationary and non-stationary targets	3	3	3	3	-	2	-	-	-	-	-	2	3	2
Average		3	3	3	3	-	2	1	-	1	-	-	2	3	2

Table 3.1.a5 Course Articulation Matrix of Wireless and Mobile communications

Course Code: ECE71		Course Name: WIRELESS AND MOBILE COMMUNICATIONS													
Course Code	Course Statement	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C401.1	Utilize the basics of wireless communication to deal the technical challenges in cellular system design	3	-	-	-	-	-	-	-	-	-	-	-	3	-
C401.2	Examine the appropriate model of wireless fading channel based on the system parameters and the property of the wireless medium	3	3	-	-	-	-	-	-	-	-	-	-	3	-
C401.3	Determine the appropriate wireless technology to build smart society applications	3	3	3	3	-	-	-	-	-	-	-	-	3	-
C401.4	Appraise the concept of smart multi antenna systems for advanced wireless communication	3	3	3	3	3	1	-	-	-	-	-	-	3	-
C401.5	Examine the concepts of wireless communication using Simulation tools	3	3	3	3	3	-	-	-	-	-	-	-	3	-
C401.6	Analyze the transmitter and receiver diversity techniques to support real-time applications over wireless networks	3	3	3	-	3	-	-	-	1	1	-	1	3	-
Average		3	3	3	3	3	1	-	-	1	1	-	1	3	-

Table 3.1.a6 Course Articulation Matrix of Routing and Switching-03

Course Code: ECE81		Course Name: ROUTING AND SWITCHING-03													
Course Code	Course Statement	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C408.1	Configure and troubleshoot advanced operations of routers and Implement OSPF routing protocols for IPv4 and IPv6	3	3	3	3	3	-	-	-	-	-	-	3	3	3
C408.2	Configure the operations and benefits of WAN, WAN Authentication Protocol, virtual private networks (VPNs) and tunnelling, BGP routing protocol	3	3	3	3	3	-	-	-	-	-	-	3	3	3
C408.3	Adapt the networking concept on home network for lifelong learning, ethical and environmental sustainability	3	3	3	3	3	3	-	-	3	3	-	3	3	3
C408.4	Configure and troubleshoot advanced operation of ACL and implement standard ACL, Extended ACL for IPv4 and IPv6	3	3	3	3	3	3	-	-	-	-	-	3	3	3
C408.5	Adapt the switching concept on Cisco Switch 2960 and routing concept on Cisco Router 1941	3	3	3	-	3	3	-	-	3	3	-	3	3	3
C408.6	Create real LAN networking scenario with Cisco router 1941 and Cisco Switch 2960	3	3	3	-	3	3	-	-	3	3	-	3	3	3
Average		3	3	3	3	3	3	-	-	3	3	-	3	3	3

Programme Articulation Matrix: Batch (2015-2019)

Table 3.1.b Program Articulation Matrix

Course	Course Code	Course Title	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C101	15MA11	Engineering Mathematics I	3	3	3	3	3	-	-	-	1	3	-	3	-	-
C102	15CH12	Engineering Chemistry	3	3	-	-	-	-	3	-	-	-	-	3	-	-
C103	15CS13	Introduction to Programming with C	3	3	3	1	3	-	-	-	3	1	-	1	-	-
C104	15ME14	Computer Aided Engineering Drawing	2	-	2	2	1	-	-	-	-	2	-	2	-	-
C105	15EC15	Basic Electronics	3	2	2	-	-	-	-	-	-	-	-	-	-	-
C106	15HP16	Personality Development and Soft skills	-	-	-	-	-	2	-	3	2	3	-	3	-	-
C107	15MA21	Engineering Mathematics II	3	3	3	2	2	-	-	-	-	1	-	3	-	-
C108	15PH22	Engineering Physics	3	2	2	-	-	-	-	-	3	2	-	1	-	-
C109	15ME23	Elements of Mechanical Engineering	3	1	3	-	3	2	1	-	-	3	-	1	-	-
C110	15CV24	Elements of Civil Engineering	3	3	3	-	-	-	-	-	-	-	-	-	-	-
C111	15EE25	Basic Electrical Engineering	3	3	2	1	-	-	-	-	-	2	2	-	-	-
C112	15HB26	Business Communication	-	-	-	-	-	-	-	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	16ECE33	Programming with Data structures	3	3	2	1	-	1	1	-	2	2	2	1	2	3

Criterion-3 Self-Assessment Report (SAR)



Course	Course Code	Course Title	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C204	16ECE34	Electronic Circuits-1	3	3	2	1	3	-	-	-	3	-	-	3	3	-
C205	16ECE35	Network Analysis	3	3	-	-	3	-	-	-	-	-	-	3	3	3
C206	16ECE36	Signals and Systems	3	3	3	3	3	-	-	-	3	-	-	3	3	3
C207	16ECE37	Logic Design	3	3	3	3	3	-	-	-	3	-	-	-	2	1
C208	16MAT41	Engineering Mathematics- IV	3	3	3	3	3	3	2	-	2	1	3	3	-	-
C209	16HSS421	Introduction to Economics	1	2	3	3	1	3	2	2	1	1	3	2	1	1
C210	16ECE43	Electronic Circuits-II	3	3	3	3	3	3	-	-	1	1	-	1	3	1
C211	16ECE44	Digital Signal Processing	3	3	3	-	3	-	-	-	3	-	-	3	3	3
C212	16ECE45	Control Systems	3	3	3	2	-	-	-	-	-	-	-	3	3	-
C213	16ECE46	System design using HDL	3	3	3	2	1	1	--	-	-	--	-	1	3	-
C301	ECE51	Analog Communication	3	3	3	2	2	1	-	-	2	2	-	2	3	3
C302	ECE52	Microcontroller	3	3	2	2	3	-	-	-	3	-	-	1	3	2
C303	ECE53	CMOS VLSI Design	3	3	3	3	3	1	1	1	3	-	2	3	3	1
C304	ECE54	Information Theory and Coding	3	3	-	-	-	2	-	-	-	-	-	3	3	-
C305	ECE55	Engineering Electromagnetics	3	3	-	-	-	3	3	-	-	-	-	3	3	-
C306	ECE564	Optical Fiber Communication	3	3	3	1	-	-	-	-	-	-	-	-	3	3

Criterion-3 Self-Assessment Report (SAR)



C307	ECE61	Digital Communication	3	3	3	2	2	1	-	-	2	2	-	2	3	2
C308	ECE62	Embedded System Design	3	3	3	2	3	-	-	-	3	1	-	3	3	3
C309	ECE63	Microelectronics circuits	3	3	3	2	-	3	3	-	-	-	-	3	3	1
C310	ECE64	Microwaves and Radar	3	3	3	3	-	2	1	-	1	-	-	2	3	2
C311	ECE651	Routing and Switching	3	3	3	3	3	-	-	3	3	-	-	3	3	3
C401	ECE71	Wireless and mobile Communications	3	3	3	3	3	1	-	-	1	1	-	1	3	-
C402	ECE72	Antennas and Wave Propagation	3	3	3	3	1	3	2	1	1	1	1	2	3	3
C403	ECE733	Satellite Communications	3	3	3	3	-	1	-	-	1	1	-	1	2	-
C404	ECE734	Biomedical Signal and Image Processing	3	3	3	3	3	3	-	-	1	1	-	3	3	3
C405	ECE742	Low power VLSI Design	3	3	3	3	2	2	3	-	2	2	-	2	3	2
C406	ECE746	Renewable Energy	3	3	3	2	-	3	3	-	3	3	1	3	3	3
C407	ECE755	Routing and switching – 2	3	3	3	3	3	3	-	-	2	2	-	2	3	3
C408	ECE81	Routing and switching-3	3	3	3	3	3	3	-	-	3	3	-	3	3	3
C409	ECE82	Internship	0	0	3	3	3	0	0	3	3	3	3	3	0	0
C410	ECE83	Project Phase-I	3	3	3	3	3	3	3	3	3	3	3	3	3	3
C411	ECE84	Project Phase-II	3	3	3	3	3	3	3	3	3	3	3	3	3	3
C412	ECE85	Project Phase- III	3	3	3	3	3	3	3	3	3	3	3	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 institution to identify, collect, analyze and evaluate the data towards the achievement of course outcomes. The course outcomes are assessed based on direct assessment tools. The direct method of assessment includes internal test, assignments, quizzes, self-study, laboratory practical examination, internship, project work done etc. Course outcomes are evaluated based on the performance of students in Continuous Internal Evaluation (CIE) and Semester End Examination (SEE). CIE contributes 50% and SEE contributes 50% to the total attainment of a course outcome.

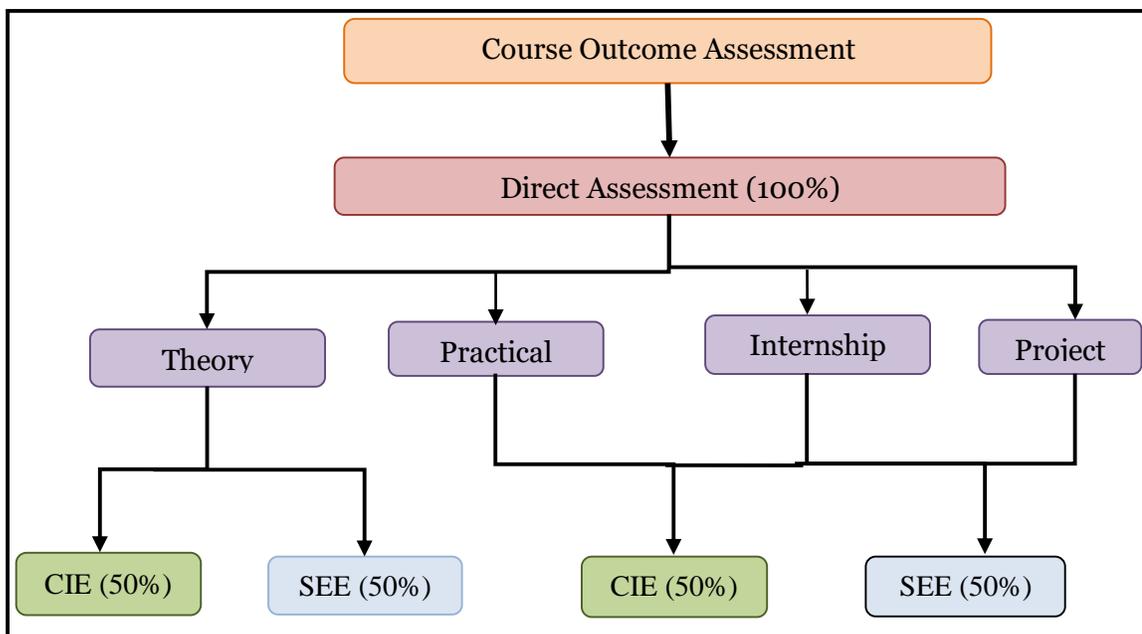


Figure 3.2.1 CO Assessment Tools

Figure 3.2.1 shows the assessment tools for CO assessment for the theory, practicals, internship and project courses in the programme. For the Theory courses, CIE consists of 2 quizzes, 2 assignments and three internal tests per semester. For the laboratory courses, assessments are done based on the continuous internal evaluation of students in every laboratory, internal test, and Semester End Lab Exams. For internship and Project courses, performance assessment is carried out based on reviews given by the students on the

corresponding work done. Each and every review is focused in attaining the program outcomes. The direct assessment based on marks obtained by the individual student is then mapped with POs & PSOs through COs. For Semester End Examination, Controller of Examination will conduct the exam for 100 marks. The questions in SEE paper evenly cover all the COs of a course. The Semester End Exam marks are scaled down to 50 and then summed up with the Continuous Internal Evaluation marks for a total of 100 marks for attainment level calculations of COs.

Process of course data Collection:

Course coordinators are assigned to the courses with respect to their choices and specialization. The module and course coordinator define target set for each course outcome. This target setting is based on COs distribution on assessment tools and performances of students in previous exams and also the quality of student in the respective batches. Internal questions are prepared and mapped with COs. Upon completion of every Internal Assessment (IA) Test, the course instructors enter the marks secured by the student in each IA in the student assessment software through faculty login allotted. Using the similar online portal, marks entry for other direct assessment tools are carried out. They can choose the batch/semester/course and enter the marks question wise for evaluation of the respective course outcomes. The entered marks are maintained in a common server through which COs evaluation is calculated and attainment is measured. The various assessment tools used to evaluate COs and the frequency with which the assessment processes are carried out are listed in Table 3.2.1

Table 3.2.1 Direct Assessment Tools

Description	Assessment Tools	Frequency
Theory Courses	Internal Assessment (IA) Test (1, 2 and 3)	Once in a semester
	Assignment/Quiz	Twice in a semester
	Semester End Examination	Once in a semester
Lab Courses	Continuous Internal Assessment (Conduction of Experiment, Lab observation and Record)	During every laboratory class
	Internal Test (1 and 2)	Once in a semester
	Semester End Lab Examination	Once in a semester
	CIE	Once in a semester

Internship	Semester End Examination	
Project	CIE	Three reviews in respective semester
	Semester End Examination	Once in a semester

3.2.1.1 Theory Courses Assessment:

Internal Assessment (IA) Test:

- This tool is used to evaluate attainment of COs through direct and critical questions related to the specific topics covered during the class.
- Three internal assessment tests are conducted for all the courses and their averages are considered.
- The frequency of CO assessment is once per semester.
- The questions in the test are mapped against COs of respective courses.
- All three IA test questions are framed in such a way to ensure the coverage of all CO's.
- Upon the completion of every test, course instructor enters the marks secured by the students.
- The status of mapping and marks entry are reviewed by Program Coordinator.
- Entered marks are taken for measuring the CO Attainment.

Assignments:

- Two assignments per semester are given by course instructor.
- Assignment questions include complex analytical problems and real time.
- Course instructor prepares three sets of assignment paper, ensuring same RBT levels and COs in all the sets.
- Questions in all the sets are verified by Program Academic coordinator. Any mismatch in sets is informed to course instructor for correction.
- Attainment of COs is measured through questions prepared by the faculty to test the student's problem solving skills.

Quiz:

- Two Quizzes per semester are given by course instructor.
- The questions are prepared for each of the courses and conducted to assess the Lower order skills (LOTs) and reasoning power of the students.
- After the completion of quiz, correct answers are discussed in the class.
- Quiz marks are assessed towards the attainment of COs.

Self-Study:

- This tools helps to test students analyzing level rather than understanding level.
- Few topics from the syllabus are given to set of students for self-study.
- Students will present the assigned topics to the faulty in-charge. Marks are assessed towards the attainment of COs.

Semester End Examinations:

- Semester end examination is conducted for all the courses through descriptive mode as per the calendar of events.
- The questions for this exam covers entire syllabus of the courses and questions are framed in such a way to cover all COs.
- Each question is mapped with appropriate course outcomes.
- Final marks are taken for assessing CO attainment.

Assignments, quiz, continuous internal assessment test, Semester end examinations are conducted and evaluated. The distribution of marks for theory courses is given in table 3.2.1.a below.

Table 3.2.1.a Distribution of marks for theory courses evaluation

Assessment Tool	Maximum Marks	Marks Scaled to	Weightage
Internal Assessment -1	25	25	50%
Internal Assessment -2	25		
Internal Assessment -3	25		
Assignments/Quizzes/Self study	25	25	
Semester End Examination	100	50	50%

3.2.1.2 Laboratory Course Assessment:

The broad objectives of all laboratory classes are to reinforce concepts learned in lectures, provide hands-on experience in collecting data and operating engineering systems. Also helping the students to work as a team, and improve technical skills to become professional. CIE contributes 50% of the total marks of a lab courses. The weightage for the SEE is 50% of the total marks of a lab course.

Continuous Internal Assessment

- This assessment is carried out in the day to day evaluation of student performance in the laboratories with respect to conduction of experiments.
- The Students are grouped into batches and each batch is allocated a slot of 3 hours a week.
- As per the syllabus, Experiments are planned for each laboratory course and each experiment is mapped with any one of the defined COs.
- Two lab internals are conducted for all the lab courses and their averages are considered.
- The performance of students in laboratory is evaluated through appropriate rubrics for the attainment of COs.

Semester End Examination

- Final exam of 3 hours' duration is conducted for lab courses.
- This tool assesses the ability of a student to perform a given task by integrating the knowledge gained from related theory course and regular lab sessions.
- The exam is evaluated with appropriate rubrics that include conduction of experiments and viva voce of the experiment performed.

Table 3.2.1.b Distribution of marks for laboratory courses evaluation

Examination	Components of evaluation	Marks	Marks Scaled to	Weightage
CIE	Lab daily Performance (Conduction, Execution, and Record writing, Result)	30	25	50%
	Lab Internal Test (Conduction, Results and Viva Voce)	20		
SEE	Procedure & write up	10	25	50%
	Conducting the practical's, results, Graph etc.	30		
	Viva Voce by External Examiner	10		

The assessment details for laboratory courses are given in below Table 3.2.1.b. Laboratory integrated courses are followed as per curriculum. These courses are combination of theory and lab integrated courses. The mark distributions of these courses are internal marks of 75 and external marks of 75.

3.2.1.3 Internship

- The student undergoes an internship for the duration of 4 to 6 weeks.
- Students are encouraged to carry out internship in reputed industries/ public sector to get the practical exposure from industries.
- Internship coordinators assigned by Head of the department will allot the mentors for students to guide them in internship guidance.
- Students shall report the progress of the internship to the mentor in regular intervals.
- CIE marks of 50 and SEE marks of 50 are allotted for internship.
- After successful completion of internship, internal and SEE reviews will be conducted as per the rubrics given in the Table 3.2.1.c

Table 3.2.1.c Assessment Rubrics of Internship

Examination	Rubrics Parameter	Marks allotted	Rubrics	Total Marks	Reviewed by
CIE	Topic Selection	10	Outstanding [$>70\%$] Average [40% - 70%] Inadequate [$<40\%$]	50	Internal Examiner
	Presentation	15			
	Level of Understanding	15			
	Report	10			
SEE	Presentation	30	Outstanding [$>70\%$] Average [40% - 70%] Inadequate [$<40\%$]	50	Internal and External Examiner
	Evaluation of Report	10			
	Viva Voce	10			

3.2.1.4 Project

- Project batches are formed as per the instruction given by project Coordinators.
- Each faculty gives few topics in their domain for the students.
- Students can select the topics based on their interest and carry out the project under their guidance.
- Synopsis will be submitted to the project coordinator for scrutinizing.
- Each internal guide monitors the students on a weekly basis to observe the progress in their work.
- Project guide along with project Coordinator conducts three project reviews as per the guidelines, then submit the internal assessment to the Head of the Department.
- The Department also encourages the students to participate in project exhibition and also identifies the best 3 projects and the winners are awarded.
- The performance of students in project work is evaluated through appropriate rubrics for the attainment of COs and shown in Table 3.2.1.d

Table 3.2.1.d Assessment rubrics of Project

Review #	Agenda	Evaluation Parameter	Marks	Rubrics
Review 1	Project Synopsis Evaluation	Literature Survey	25	Rubric- Review1 Annexure
		Contribution to society		
		Technologies Implied		
		Expected Results and application		
Review 2	Project Methodology Evaluation	Methodology	25	Rubric - Review 2 Annexure
		Block diagram Explanation		
		Technologies Explanation		
		Intermediate Results		
		Individual Contribution		
Review 3	Project Final Evaluation	Presentation of project work	50	Rubric- Review 3 Annexure
		Demonstrate of Final results		
		Quality of Project Report		
		Paper Publication		
		Conclusion and future scopes		
		Performance in the team		

Process on CO Attainment: Attainment of CO is directly measured from the performance of students in Continuous Internal Evaluation (CIE) and Semester End Examination (SEE).

Final CO Attainment= 50% of CIE + 50% of SEE.

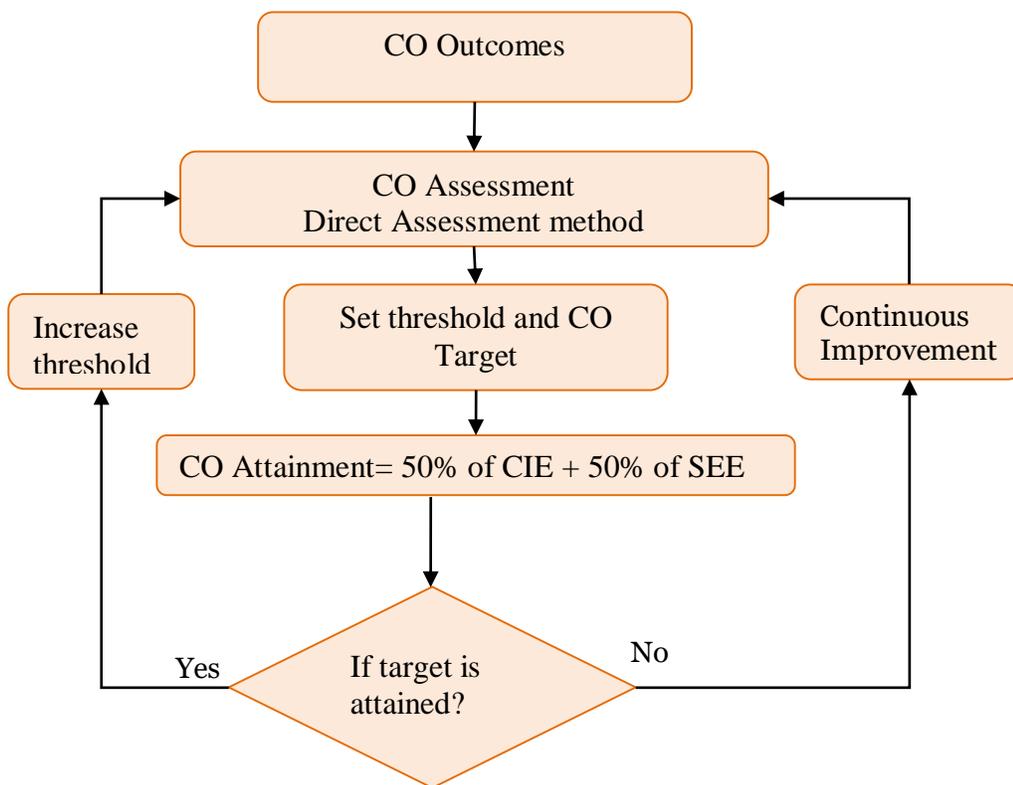


Figure 3.2.1.1 Process on CO Assessment

For assessing the attainment of COs in CIE and SEE, each CO of the course is mapped to individual questions and threshold is fixed for each CO. The process of CO assessment is shown in Figure 3.2.1.1. The individual COs of the courses is mapped with Correlation level and is being evaluated by prescribed assessment tools. Initially, Threshold and CO target is set for the courses. After the internal and external assessment, CO attainment is calculated. The attainment of COs is compared with the threshold. If it is met, threshold is revised for the subsequent years. If it is not met, course and module coordinator will plan for further actions to attain the COs. Action may include co-curricular activities and also tutorial classes/extra classes for all students and remedial classes for slow learners of that particular course.

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

Attainment of COs is directly measured from the performance of students in Continuous Internal Evaluation (CIE) and Semester End Examination (SEE). For assessing the attainment of COs in CIE and SEE, the course outcomes are mapped to respective questions and target is set for each CO of the courses. The courses are grouped into several streams of Electronics and Communication Engineering and are listed in Table 3.2.2.a

Table 3.2.2.a Grouping of Courses

Course Category	Course Code
Basic Engineering, Engineering Science and Humanities	15MAT11, 15CH12, 15CS13, 15ME14, 15EC15, 15HP16, 15HE17, 15MA21, 15PH22, 15ME23, 15CV24, 15EEE25, 15HB26, 15HC27, 16MAT41, 16HSS421, 16MAT31, 16HSS322
Fundamentals of Electronics	16ECE34, 16ECE35, 16ECE37, 16ECE43, 16ECE45, ECE55
Signal Processing	16ECE36, 16ECE44, ECE734
Communication	ECE51, ECE54, ECE564, ECE61, ECE64, ECE71, ECE72, ECE733
Embedded Systems	ECE52, ECE62, ECE746
VLSI	16ECE46, ECE53, ECE63, ECE742
IT	16ECE33, ECE651, ECE755, ECE81
Internship	ECE82
Project work	ECE83,84,85

The process for calculating CO attainment through Continuous Internal Evaluation and Semester End Examination are described as below.

Step 1: CO distributions in assessment tools are identified. Table 3.2.2.b shows the CO distribution of a course: Microwaves and Radar (Course Code ECE64).

Table 3.2.2.b CO Distributions in Assessment Tools

Course Outcomes	Assessment Tools
CO1	Internal Test 1, Assignment 1, Quiz 1, SEE
CO2	Internal Test 1, Internal Test 2, Assignment 1, Quiz 1, SEE
CO3	Internal Test 2, Assignment 1, Quiz 1, SEE
CO4	Internal Test 3, Assignment 2, Quiz 2, SEE
CO5	Internal Test 3, Assignment 2, Quiz 2, SEE
CO6	Internal Test 2, Internal Test 3, Assignment 2, Quiz 2, SEE

Step 2: Setting of CO Target for the measurement of course outcomes is decided from the assessment tools. From the Table 3.2.2.b, CO1 and CO2 to be assessed in Internal Test 1 while CO2, CO3, CO6 to be assessed in internal Test 2. Also CO4, CO5, CO6 to be assessed in Internal Test 3. The entire COs is uniformly distributed and assessed among SEE, Assignments and Quiz.

Step 3: CO target is defined based on the assessment tools shown and also the overall performance of that course in the previous years.

Step 4: Set the threshold for the course. Threshold is the minimum percentage of marks that needs to be obtained by the students. This threshold is considered as benchmark for calculating the attainment levels.

Step 5: After setting the benchmarks, percentage attainment is calculated by counting the number of students scoring above the benchmark divided by total number of students attempted for the COs. Table 3.2.2.c-d shows CO attainment calculation.

$$\text{Attainment Percentage} = \frac{\text{Number of students scoring above the threshold value}}{\text{Total Number of students appearing for that particular CO}}$$

Table 3.2.2.c CO Attainment Results

ATTAINMENT RESULTS FOR A COURSE						
COURSE: MICROWAVES and RADAR COURSE CODE: ECE64						
CO Attainment=50% of CIE+50% of SEE						
Continuous Internal Evaluation						
Course Outcomes	Threshold Value (marks)	CO Target	Number of Students Scored Above Threshold value	Total number of Students appearing for that particular CO	Attainment Percentage	Attainment Level
CO1	60%	65%	207	234	88.46	3
CO2		65%	215	234	91.88	3
CO3		65%	190	234	81.2	3
CO4		65%	222	234	94.87	3
CO5		65%	221	234	94.44	3
CO6		65%	209	234	89.32	3
Semester End Examination						
CO1	60%	65%	155	211	73.46	3
CO2		65%	125	204	61.27	2
CO3		65%	95	185	51.35	1
CO4		65%	145	200	72.5	3
CO5		65%	120	177	67.8	3
CO6		65%	152	213	71.36	3

Step 6: The percentage of students in the class who scored more than threshold percentage of marks in the respective CO is the attainment. Based on the attainment percentage obtained, the attainment level for each of the CO is identified.

Attainment Levels:

- If 65% of students scoring more than 60% of marks, then it is considered as **LEVEL 3**
- If 55% of students scoring more than 60% of marks, then it is considered as **LEVEL 2**
- If 45% of students scoring more than 60% of marks, then it is considered as **LEVEL 1**

Step 7:

Final CO attainment is calculated as

$$\text{CO Attainment} = \text{CIE} * 0.5 + \text{SEE} * 0.5$$

Table 3.2.2.d Sample calculation

Course outcome Target (% of students)	CIE (Benchmarks:60%)			SEE (Benchmarks:60%)		
	Number of students scoring above benchmarks	Total number of students attempted	Attainment %	Number of students scoring above benchmarks	Total number of students attempted	Attainment %
CO1:65%	207	234	(207/234) *100 =88.46 Level 3	155	211	(155/211) *100 =73.4 Level 3
CO2:65%	215	234	(215/234) *100 =91.8 Level 3	125	204	(125/204) *100 =61.2% Level 2
CO4:65%	222	234	(222/234) *100 =94.8 Level 3	145	200	(145/200) *100 =72.5% Level 3

CO Attainment calculation:

$$\text{For CO1_att} = \text{CIE attainment level} * 0.5 + \text{SEE attainment level} * 0.5 = 3 * 0.5 + 3 * 0.5 = 3$$

$$\text{For CO2_att} = \text{CIE attainment level} * 0.5 + \text{SEE attainment level} * 0.5 = 3 * 0.5 + 2 * 0.5 = 2.5$$

$$\text{For CO4_att} = \text{CIE attainment level} * 0.5 + \text{SEE attainment level} * 0.5 = 3 * 0.5 + 3 * 0.5 = 3$$

Table 3.2.2.e-f gives the details of target percentage Vs Attainment percentage in CIE and SEE for the batch 2015-2019

CO Attainment- (For 2015-2019 Batch)

Table 3.2.2.e Target and Attainment percentage of COs using CIE

Course Code	Continuous Internal Evaluation (CIE)											
	Targeted Percentage of COs						Attainment Percentage of COs					
	CO1	CO2	CO3	CO4	CO5	CO6	CO1	CO2	CO3	CO4	CO5	CO6
I SEMESTER												
15MA11	55	55	55	55	55	55	87.33	87.33	87.33	86.85	86.85	86.85
15CH12	60	60	60	60	60	60	99.6	99.6	99.6	99.6	99.6	99.7

Criterion-3 Self-Assessment Report (SAR)



15CS13	60	60	60	60	60	60	91.1	91.2	92.8	92.7	93.2	89.7
15ME14	60	60	60	60	60	60	92.0	92.0	92.0	91.5	91.5	91.5
15EC15	60	60	60	60	60	60	70.1	70.8	73.6	71.0	70.8	78.3
15HP16	65	65	65	65	-	-	81.1	81.1	80.6	81.1	-	-
II SEMESTER												
15MA21	55	55	55	55	55	55	93.16	93.16	93.16	92.9	92.9	92.9
15PH22	60	60	60	60	60	60	99.7	99.7	99.7	99.7	99.7	99.9
15ME23	60	60	60	60	60	60	96.3	96.6	99.7	99.5	99.5	99.5
15CV24	60	60	60	60	60	60	99.9	99.9	99.9	99.4	99.4	99.4
15EE25	50	50	50	50	-	-	95.6	95.6	95.6	97.1	-	-
15HB26	50	50	50	50	-	-	92.8	92.8	92.8	92.8	-	-
III SEMESTER												
16MAT31	57	57	57	57	57	57	94.25	97.68	97.7	98.07	91.95	87.21
16HSS322	50	50	50	50	50	50	97.6	88.55	87.8	74.5	84.41	90.38
16ECE33	60	60	60	60	60	60	86.97	75.48	80.84	96.18	96.92	93.51
16ECE34	55	55	55	55	55	55	93.49	96.92	92.31	93.85	97.69	90
16ECE35	55	55	55	55	55	55	89.96	84.58	100	68.2	91.12	90.7
16ECE36	50	50	50	50	50	50	93.49	96.93	80.6	98.46	96.14	83.01
16ECE37	65	65	65	65	65	65	89.58	88.03	95.75	91.12	94.59	93.82
IV SEMESTER												
16MAT41	57	57	57	57	57	57	71.48	62.99	87.01	85.04	85.33	90.55
16HSS421	50	50	50	45	45	50	60.83	89.73	91.54	85.71	78.85	70
16ECE43	55	55	55	55	55	55	90.27	96.11	98.41	87.06	80	80.39
16ECE44	50	50	50	50	50	50	82.66	90.55	83.72	82.49	75.98	56.9
16ECE45	55	55	55	55	55	55	71.43	81.42	85.66	85.32	64.85	14.29
16ECE46	60	60	60	60	60	60	92.61	96.9	83.72	95.74	86.82	82.49
V SEMESTER												
ECE51	60	60	60	60	60	60	96.6	90.64	91.45	99.57	94.44	93.59
ECE52	65	65	65	65	65	65	81.28	88.09	84.68	91.45	89.32	92.74
ECE53	55	55	55	55	55	55	89.36	88.94	79.15	83.83	84.62	82.05
ECE54	60	60	60	60	60	60	68.09	76.6	86.81	82.05	87.18	84.19
ECE55	55	55	55	55	55	55	94.87	97.44	98.71	97.42	97.85	97.85
ECE564	60	60	60	60	60	60	92	82.61	88.1	96.55	86.54	94.74
VI SEMESTER												
ECE61	60	60	60	60	60	60	90.17	89.74	94.87	87.18	87.61	91.03
ECE62	65	65	65	65	65	65	94.44	93.59	96.15	93.16	98.29	96.58
ECE63	55	55	55	55	55	55	75.98	82.05	82.05	67.38	89.32	80.52
ECE64	65	65	65	65	65	65	88.46	91.88	81.2	94.87	94.44	89.32
ECE651	65	65	65	65	65	65	80.95	82.05	93.19	88.46	89.47	87.67
VII SEMESTER												
ECE71	60	60	60	60	60	60	93.95	96.74	93.95	86.98	91.16	87.44

ECE72	60	60	60	60	60	60	99.07	88.26	100	98.12	97.2	100
ECE733	65	65	65	65	65	65	95.65	97.06	98.55	99.28	97.1	98.84
ECE734	55	55	55	55	55	55	77.92	94.81	100	100	96.1	100
ECE742	55	55	55	55	55	55	81.67	76.67	100	86.67	100	100
ECE746	55	55	55	55	55	55	89.03	100	94.04	100	100	100
ECE755	55	55	55	55	55	55	96.17	59.71	94.73	100	100	100
VIII SEMESTER												
ECE81	65	65	65	65	65	65	99.07	94.42	97.67	94.88	100	100
ECE82	70	70	70	70	70	70	77.67	77.67	77.67	97.21	100	100
ECE83	65	65	65	65	65	65	99.53	94.88	100	97.67	99.53	99.53
ECE84	65	65	65	65	65	65	92.09	94.88	97.21	94.88	94.88	95.35
ECE85	70	70	70	70	70	70	100	99.53	99.53	99.07	100	100

Table 3.2.2.f Target and Attainment percentage of COs using SEE

Course Code	Semester End Examination(SEE)											
	Targeted Percentage of COs						Attainment Percentage of COs					
	CO1	CO2	CO3	CO4	CO5	CO6	CO1	CO2	CO3	CO4	CO5	CO6
I SEMESTER												
15MA11	55	55	55	55	55	55	90.11	90.11	90.11	90.11	90.11	90.11
15CH12	60	60	60	60	60	60	94.7	94.7	94.7	94.7	94.7	94.7
15CS13	60	60	60	60	60	60	94.8	94.8	94.8	94.8	94.8	94.8
15ME14	60	60	60	60	60	60	95.0	95.0	95.0	95.0	95.0	95.0
15EC15	60	60	60	60	60	60	62.1	62.1	62.1	62.1	62.1	62.1
15HP16	65	65	65	65	-	-	99.4	99.4	99.4	99.4	-	-
II SEMESTER												
15MA21	55	55	55	55	55	55	90.07	90.07	90.07	90.07	90.07	90.07
15PH22	60	60	60	60	60	60	98.3	98.3	98.3	98.3	98.3	98.3
15ME23	60	60	60	60	60	60	97.9	97.9	97.9	97.9	97.9	97.9
15CV24	60	60	60	60	60	60	94.5	94.5	94.5	94.5	94.5	94.5
15EE25	50	50	50	50	-	-	95.2	95.2	95.2	95.2	-	-
15HB26	50	50	50	50	-	-	98.3	98.3	98.3	98.3	-	-
III SEMESTER												
16MAT31	57	57	57	57	57	57	63.96	77.6	81.31	85.05	76.39	72.95
16HSS322	50	50	50	50	50	50	40.64	64.35	91.39	58.33	58.37	43.58
16ECE33	60	60	60	60	60	60	49.04	55.61	55.34	82.16	64.59	44.64
16ECE34	55	55	55	55	55	55	42.05	42.05	42.05	42.05	42.05	42.05
16ECE35	55	55	55	55	55	55	36.53	52.6	53.72	80.57	59.42	71.63
16ECE36	50	50	50	50	50	50	57.98	47.72	31.96	45.64	34.02	15.92
16ECE37	65	65	65	65	65	65	29.95	82.95	95.85	75.93	79.17	67.13

IV SEMESTER												
16MAT41	57	57	57	57	57	57	86.79	71.95	72.59	79.65	70.09	70.09
16HSS421	50	50	50	45	45	50	35.15	71.24	51.02	58.68	39.91	72.43
16ECE43	55	55	55	55	55	55	87.67	36.71	47.59	47	63.81	67.48
16ECE44	50	50	50	50	50	50	67.63	67.63	80.38	45.51	45.65	87.62
16ECE45	55	55	55	55	55	55	89.76	43.48	69.46	41.08	55.61	48.26
16ECE46	60	60	60	60	60	60	68.49	49.77	50.93	55.91	64.84	33.51
V SEMESTER												
ECE51	60	60	60	60	60	60	76.06	74.19	67.72	81.82	62.3	44.71
ECE52	65	65	65	65	65	65	85.71	84.29	57.62	59.42	81.73	49.23
ECE53	55	55	55	55	55	55	91.9	77.51	56.94	56.94	56.65	34.98
ECE54	60	60	60	60	60	60	80.86	84.69	75	51.26	47.26	31.69
ECE55	55	55	55	55	55	55	76.96	89.01	73.96	45.41	44.92	41.8
ECE564	60	60	60	60	60	60	62.22	73.17	54.55	34.88	62.16	88.89
VI SEMESTER												
ECE61	60	60	60	60	60	60	56.15	53.13	45.21	46.41	77.95	84.46
ECE62	65	65	65	65	65	65	89.5	64.95	78.54	69.16	57.56	60.47
ECE63	55	55	55	55	55	55	50.31	74.66	49.67	42.95	39.62	53.33
ECE64	65	65	65	65	65	65	73.46	61.27	51.35	72.5	67.8	71.36
ECE651	65	65	65	65	65	65	78.26	76.52	83.04	85.15	78.26	74.78
VII SEMESTER												
ECE71	60	60	60	60	60	60	71.79	69	64.77	54.33	59.22	52.3
ECE72	60	60	60	60	60	60	60.1	43.78	59.14	41.97	52.48	61.76
ECE733	65	65	65	65	65	65	94.12	87.5	93.43	58.76	94.89	94.03
ECE734	55	55	55	55	55	55	57.75	70.77	78.67	56.16	46.67	79.17
ECE742	55	55	55	55	55	55	46.55	54.55	44.44	69.09	57.69	36.73
ECE746	55	55	55	55	55	55	83.44	44.97	35.66	54.17	48.59	50
ECE755	55	55	55	55	55	55	56.6	56.6	56.6	98.11	56.6	98.11
VIII SEMESTER												
ECE81	65	65	65	65	65	65	96.74	99.07	99.53	99.04	94.88	95.81
ECE82	70	70	70	70	70	70	71.63	74.88	79.07	74.88	74.88	77.67
ECE83	65	65	65	65	65	65	-	-	-	-	-	-
ECE84	65	65	65	65	65	65	-	-	-	-	-	-
ECE85	70	70	70	70	70	70	73.95	84.65	86.98	91.63	92.09	93.02

Attainment levels Vs Targets for CIE and SEE

Attainment level 3: 65% of students scoring more than the Threshold

Attainment level 2: 55% of students scoring more than the Threshold

Attainment level 1: 45% of students scoring more than the Threshold

Based on subject category and performance of students, targets are set for each CO of a course.

This provides considerable details which can lead to specific plans for improvement. Table 3.2.2.g-h gives the details of target levels Vs Attainment Levels in CIE and SEE for the batch 2015-2019

Table 3.2.2.g Target and Attainment Levels of COs using CIE

Course Code	Continuous Internal Evaluation(CIE)											
	Targeted levels of Cos						Attainment levels of COs					
	CO1	CO2	CO3	CO4	CO5	CO6	CO1	CO2	CO3	CO4	CO5	CO6
I SEMESTER												
15MA11	55	55	55	55	55	55	3	3	3	3	3	3
15CH12	60	60	60	60	60	60	3	3	3	3	3	3
15CS13	60	60	60	60	60	60	3	3	3	3	3	3
15ME14	60	60	60	60	60	60	3	3	3	3	3	3
15EC15	60	60	60	60	60	60	3	3	3	3	3	3
15HP16	65	65	65	65	-	-	3	3	3	3	-	-
II SEMESTER												
15MA21	55	55	55	55	55	55	3	3	3	3	3	3
15PH22	60	60	60	60	60	60	3	3	3	3	3	3
15ME23	60	60	60	60	60	60	3	3	3	3	3	3
15CV24	60	60	60	60	60	60	3	3	3	3	3	3
15EE25	50	50	50	50	-	-	3	3	3	3	-	-
15HB26	50	50	50	50	-	-	3	3	3	3	-	-
III SEMESTER												
16MAT31	57	57	57	57	57	57	3	3	3	3	3	3
16HSS322	50	50	50	50	50	50	3	3	3	3	3	3
16ECE33	60	60	60	60	60	60	3	3	3	3	3	3
16ECE34	55	55	55	55	55	55	3	3	3	3	3	3
16ECE35	55	55	55	55	55	55	3	3	3	3	3	3
16ECE36	50	50	50	50	50	50	3	3	3	3	3	3
16ECE37	65	65	65	65	65	65	3	3	3	3	3	3
IV SEMESTER												
16MAT41	57	57	57	57	57	57	3	3	3	3	3	3
16HSS421	50	50	50	45	45	50	3	3	3	3	3	3
16ECE43	55	55	55	55	55	55	3	3	3	3	3	3
16ECE44	50	50	50	50	50	50	3	3	3	3	3	3
16ECE45	55	55	55	55	55	55	3	3	3	3	3	0
16ECE46	60	60	60	60	60	60	3	3	3	3	3	3
V SEMESTER												

ECE51	60	60	60	60	60	60	3	3	3	3	3	3
ECE52	65	65	65	65	65	65	3	3	3	3	3	3
ECE53	55	55	55	55	55	55	3	3	3	3	3	3
ECE54	60	60	60	60	60	60	3	3	3	3	3	3
ECE55	55	55	55	55	55	55	3	3	3	3	3	3
ECE564	60	60	60	60	60	60	3	3	3	3	3	3
VI SEMESTER												
ECE61	60	60	60	60	60	60	3	3	3	3	3	3
ECE62	65	65	65	65	65	65	3	3	3	3	3	3
ECE63	55	55	55	55	55	55	3	3	3	3	3	3
ECE64	65	65	65	65	65	65	3	3	3	3	3	3
ECE651	65	65	65	65	65	65	3	3	3	3	3	3
VII SEMESTER												
ECE71	60	60	60	60	60	60	3	3	3	3	3	3
ECE72	60	60	60	60	60	60	3	3	3	3	3	3
ECE733	65	65	65	65	65	65	3	3	3	3	3	3
ECE734	55	55	55	55	55	55	3	3	3	3	3	3
ECE742	55	55	55	55	55	55	3	3	3	3	3	3
ECE746	55	55	55	55	55	55	3	3	3	3	3	3
ECE755	55	55	55	55	55	55	3	3	3	3	3	3
VIII SEMESTER												
ECE81	65	65	65	65	65	65	3	3	3	3	3	3
ECE82	70	70	70	70	70	70	3	3	3	3	3	3
ECE83	65	65	65	65	65	65	3	3	3	3	3	3
ECE84	65	65	65	65	65	65	3	3	3	3	3	3
ECE85	70	70	70	70	70	70	3	3	3	3	3	3

Table 3.2.2.h Target and Attainment Levels of COs using SEE

Course Code	Semester End Examination (SEE)											
	Targeted levels of COs						Attainment levels of COs					
	CO1	CO2	CO3	CO4	CO5	CO6	CO1	CO2	CO3	CO4	CO5	CO6
I SEMESTER												
15MA11	55	55	55	55	55	55	3	3	3	3	3	3
15CH12	60	60	60	60	60	60	3	3	3	3	3	3
15CS13	60	60	60	60	60	60	3	3	3	3	3	3
15ME14	60	60	60	60	60	60	3	3	3	3	3	3
15EC15	60	60	60	60	60	60	3	3	3	3	3	3
15HP16	65	65	65	65	-	-	3	3	3	3	-	-
II SEMESTER												
15MA21	55	55	55	55	55	55	3	3	3	3	3	3
15PH22	60	60	60	60	60	60	3	3	3	3	3	3

15ME23	60	60	60	60	60	60	3	3	3	3	3	3
15CV24	60	60	60	60	60	60	3	3	3	3	3	3
15EE25	50	50	50	50	-	-	3	3	3	3	-	-
15HB26	50	50	50	50	-	-	3	3	3	3	-	-
III SEMESTER												
16MAT31	57	57	57	57	57	57	3	3	3	3	3	3
16HSS322	50	50	50	50	50	50	2	3	3	3	3	2
16ECE33	60	60	60	60	60	60	1	2	2	3	3	1
16ECE34	55	55	55	55	55	55	1	3	3	1	2	2
16ECE35	55	55	55	55	55	55	1	2	2	3	3	3
16ECE36	50	50	50	50	50	50	3	2	1	2	1	0
16ECE37	65	65	65	65	65	65	0	3	3	3	3	3
IV SEMESTER												
16MAT41	57	57	57	57	57	57	3	3	3	3	3	3
16HSS421	50	50	50	45	45	50	1	3	3	3	2	3
16ECE43	55	55	55	55	55	55	3	1	2	2	3	3
16ECE44	50	50	50	50	50	50	3	3	3	2	2	3
16ECE45	55	55	55	55	55	55	3	1	3	1	3	2
16ECE46	60	60	60	60	60	60	3	2	3	3	3	0
V SEMESTER												
ECE51	60	60	60	60	60	60	3	3	3	3	3	1
ECE52	65	65	65	65	65	65	3	3	2	3	3	1
ECE53	55	55	55	55	55	55	3	3	3	3	3	0
ECE54	60	60	60	60	60	60	3	3	3	2	1	1
ECE55	55	55	55	55	55	55	3	3	3	2	1	1
ECE564	60	60	60	60	60	60	3	3	3	3	3	3
VI SEMESTER												
ECE61	60	60	60	60	60	60	2	2	1	1	3	3
ECE62	65	65	65	65	65	65	3	3	3	3	2	3
ECE63	55	55	55	55	55	55	2	3	2	1	1	2
ECE64	65	65	65	65	65	65	3	2	1	3	3	3
ECE651	65	65	65	65	65	65	3	3	3	3	3	3
VII SEMESTER												
ECE71	60	60	60	60	60	60	3	3	2	2	2	2
ECE72	60	60	60	60	60	60	3	1	2	1	2	3
ECE733	65	65	65	65	65	65	3	3	3	2	3	3
ECE734	55	55	55	55	55	55	3	3	3	3	2	3
ECE742	55	55	55	55	55	55	2	2	1	3	3	1
ECE746	55	55	55	55	55	55	3	1	1	2	2	2
ECE755	55	55	55	55	55	55	3	3	3	3	3	3
VIII SEMESTER												

ECE81	65	65	65	65	65	65	3	3	3	3	3	3
ECE82	70	70	70	70	70	70	3	3	3	3	3	3
ECE83	65	65	65	65	65	65	-	-	-	-	-	-
ECE84	65	65	65	65	65	65	-	-	-	-	-	-
ECE85	70	70	70	70	70	70	3	3	3	3	3	3

Table 3.2.2.i shows Course Outcomes Attainment levels. Final CO attainment is calculated as

CO Attainment = 50% percentage of CIE + 50% percentage of SEE

Table 3.2.2.i Course Outcomes Attainment Levels

Course	Course Code	Course Name	Direct Attainment		Overall Direct Attainment	Overall CO Attainment
			CIE	SEE		
C101	15MA11	Engineering Mathematics I	3	3	3	3
C102	15CH12	Engineering Chemistry	3	3	3	3
C103	15CS13	Introduction to Programming with C	3	3	3	3
C104	15ME14	Computer Aided Engineering Drawing	3	3	3	3
C105	15EC15	Basic Electronics	3	3	3	3
C106	15HP16	Personality Development and Soft skills	3	3	3	3
C107	15MA21	Engineering Mathematics II	3	3	3	3
C108	15PH22	Engineering Physics	3	3	3	3
C109	15ME23	Elements of Mechanical Engineering	3	3	3	3
C110	15CV24	Elements of Civil Engineering	3	3	3	3
C111	15EE25	Basic Electrical Engineering	3	3	3	3
C112	15HB26	Business Communication	3	3	3	3
C201	16MAT31	Engineering Mathematics - III	3	3	3	3
C202	16HSS322	Life Skills for Engineers	3	2.6	2.8	2.8
C203	16ECE33	Programming with Data Structures	3	2.07	2.54	2.54
C204	16ECE34	Electronic circuits-1	3	1.89	2.45	2.45

C205	16ECE35	Network Analysis	3	2.62	2.81	2.81
C206	16ECE36	Signals and Systems	3	1.45	2.23	2.23
C207	16ECE37	Logic Design	3	2.4	2.7	2.7
C208	16MAT41	Engineering Mathematics-IV	3	3	3	3
C209	16HSS421	Introduction to Economics	3	2.43	2.72	2.72
C210	16ECE43	Electronic circuits-II	3	2.27	2.64	2.64
C211	16ECE44	Digital Signal Processing	3	2.69	2.85	2.85
C212	16ECE45	Control Systems	2.99	2.33	2.66	2.66
C213	16ECE46	System design using HDL	3	1.81	2.41	2.41
C301	ECE51	Analog Communication	3	2.77	2.89	2.89
C302	ECE52	Microcontroller	3	2.39	2.7	2.7
C303	ECE53	CMOS VLSI Design	3	2.53	2.77	2.77
C304	ECE54	Information Theory and Coding	3	2.29	2.65	2.65
C305	ECE55	Engineering Electromagnetics	3	2.28	2.64	2.64
C306	ECE564	Optical Fiber	3	2.77	2.89	2.89
C307	ECE61	Digital Communication	3	1.88	2.44	2.44
C308	ECE62	Embedded System Design	3	2.49	2.75	2.75
C309	ECE63	Microelectronics circuits	3	1.72	2.36	2.36
C310	ECE64	Microwaves and Radar	3	2.48	2.74	2.74
C311	ECE651	Routing and Switching	3	3	3	3
C401	ECE71	Wireless and mobile Communications	3	2.52	2.76	2.76
C402	ECE72	Antennas and Wave Propagation	3	1.99	2.5	2.5
C407	ECE733	Satellite Communication	3	2.92	2.96	2.96
C408	ECE734	Biomedical signal and image Processing	3	2.84	2.92	2.92
C409	ECE742	Low power VLSI Design	3	2	2.5	2.5
C410	ECE746	Renewable Energy	3	1.8	2.4	2.4
C403	ECE755	Routing and switching – 2	3	3	3	3
C404	ECE81	Routing and switching-3	3	3	3	3
C405	ECE82	Internship	3	3	3	3
C406	ECE83	Project Phase-I	3	-	3	3
C407	ECE84	Project Phase-II	3	-	3	3
C408	ECE85	Project Phase- III	3	3	3	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)

Program Outcomes and Program Specific Outcome are assessed by giving 80% weightage to direct assessment and 20% weightage to indirect assessment. Direct assessment is to evaluate all POs in Continuous Internal Evaluation (CIE) and Semester End Examination, where 50% weightage is given for SEE exam and 50% weightage is given for CIE assessment. Indirect assessment is done through Graduate survey, Alumni survey and Employer Survey. Figure 3.3.1.1 represents the evaluation process of PO attainment through course outcome attainment.

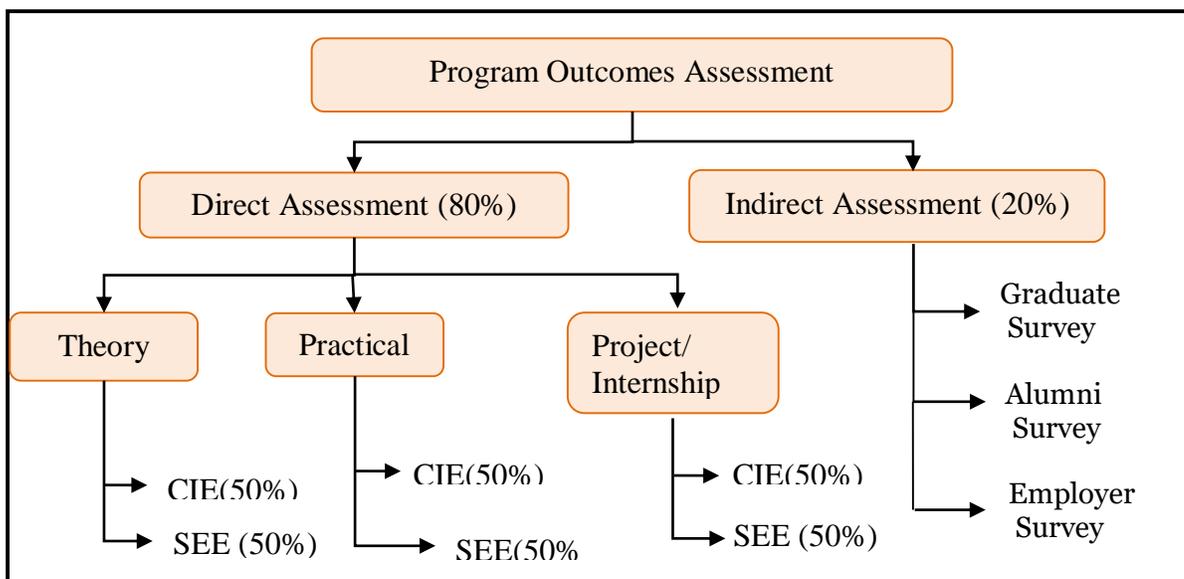


Figure 3.3.1.1 PO attainment process

3.3.1.1 PO and PSO Assessment Tools

At the end of programme, the PO and PSO assessment is done from the CO attainment of all curriculum components. The various direct and indirect assessment tools used to evaluate POs & PSOs and frequency with which the assessment processes are carried out are listed in Table 3.3.1.a and 3.3.1.b

Table 3.3.1.a Details about Direct Assessment Tools

Direct Assessment Tools	Description	Evaluation of COs	Related POs/PSOs
Internal Assessment (IA) Test	Three internal assessment tests are conducted for all the courses and their averages are considered.	The questions in the test are mapped against COs of respective courses. All three IA test questions are framed in such a way to cover all CO's. Entered marks are taken for measuring the CO Attainment.	PO1 to PO12 PSO1, PSO2
Assignment	Two assignments per semester are given by Faculty in charge.	Assignment questions are mapped against COs and marks are taken for measuring the CO attainment.	
Quiz	Two Quizzes per semester are given by faculty in charge.	The questions are prepared for each of the courses and marks are considering for calculating CO attainment.	
Internal Lab Examination	During the semester, two laboratory test conduction and evaluation is done.	In every lab, record, observation and viva are assessed by the faculty in charge through continuous internal Assessment. Experiment wise CO is evaluated and attainment is measured.	
SEE	Conduction of both theory and practical/project examination as per the calendar of events announced.	Final marks are taken for assessing the CO attainment.	
Project	Project evaluation is done during 8th semester to test the student's independent analysis and design skills. Three project reviews are conducted.	The project guide and project coordinator follows the rubrics which is set by the department for evaluation and then submit to the Head of the Department.	

<p>Internship</p>	<p>Internship evaluation is done during 8th semester. To get the practical exposure from industries, students are encouraged to carry out Internship in reputed industries/public sectors.</p>	<p>The evaluation of the marks based on Presentation and Report of the Internship and the score for every student is calculated.</p>	
-------------------	---	--	--

Table 3.3.1.b Details about Indirect Assessment Tools

<p>Indirect Assessment Tools</p>	<p>Description</p>	<p>Evaluation Process</p>
<p>Graduate Survey</p>	<p>This survey provides the information about program satisfaction and asks graduates to indicate the level of preparation provided by their graduate program. This type of survey highlights the areas in which the institution should invest more or less resources to enhance a student’s learning and development experience.</p>	<p>This survey is conducted for the students who have passed out of the department for that year. The questionnaire consists of question which is relevant for assessing POs and PSOs. Each question is having 3 options namely, Good, Satisfactory, poor which is given the marks of 3,2,1 respectively.</p>
<p>Alumni Survey</p>	<p>This survey provides the information to identify which areas of our academic program that needs to be changed, improved or expanded.</p>	<p>Collect the information from alumni after two years of graduation. The questionnaire consists of question which is relevant for assessing POs and PSOs. Each question is having 3 options namely, Good, Satisfactory, poor which is given the marks of 3,2,1 respectively.</p>
<p>Employer Survey</p>	<p>This survey helps to determine graduate skills, capabilities and Opportunities.</p>	<p>Collect the information from employers who had given jobs to our graduates. The questionnaire consists of question which is relevant for</p>

		assessing POs and PSOs. Each question is having 3 options namely, Good, Satisfactory, poor which is given the marks of 3,2,1 respectively.
--	--	--

The process for POs/PSOs attainment is described in the flowchart shown in Figure 3.3.1.1.

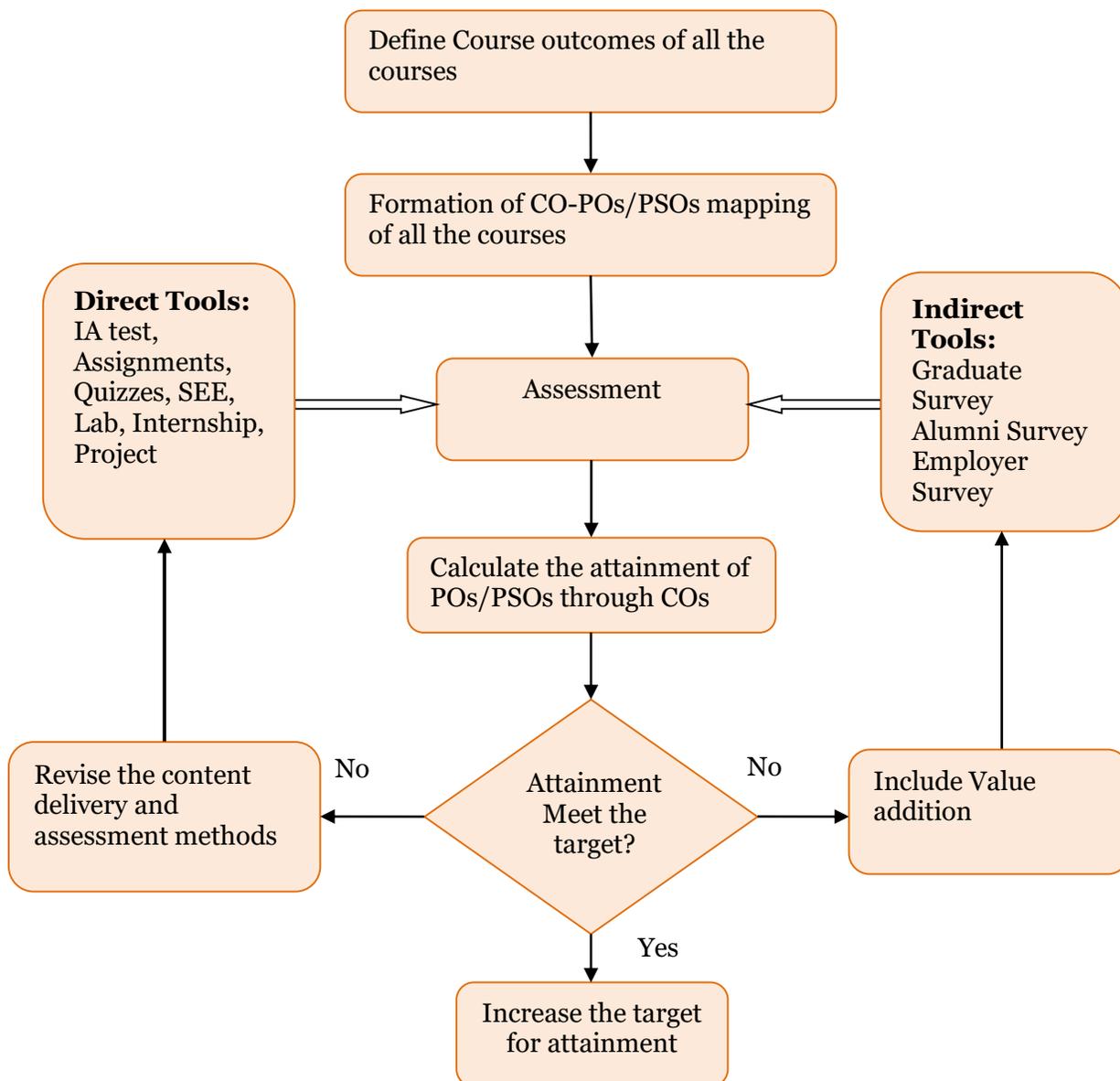


Figure 3.3.1.1 PO/PSO Assessment and Attainment Process

The steps involved in PO Assessment process are as follows:

1. Course outcomes are assessed through Continuous Internal Evaluation and Semester End Examination. The analysis is done to find the level of attainments of COs.
2. The attainment of POs is being calculated based on the COs attainment.

Attainment of POs/PSOs through a course is calculated as *Sum of product of CO attainment and CO PO mapping by sum of weight contributed in CO PO mapping.*

Attainment of POs through all the courses is calculated by taking the *Average across all Courses Addressing that POs/PSOs*

3. The PSOs attainment is calculated by the process similar to that used for POs attainment.
4. 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.

Attainment of POs based on survey= $[(3 * \text{number of students gave option 3}) + (2 * \text{number of students gave option 2}) + (1 * \text{number of students gave option 1})] / \text{Total number of responses}$

5. Overall attainments of POs are calculated by taking 80% of direct attainment and 20% of indirect attainment.

$$\text{PO attainment} = \text{Direct Attainment} * 0.8 + \text{Indirect Attainment} * 0.2$$

6. If the POs and PSOs attainment value is below the target, an essential remedial action has been taken.

Illustration:

A course is taken as an example for the calculation of POs and PSOs attainment. And it is explained in Table 3.3.1.c-f

Table 3.3.1.c CO-PO mapping of a course -ECE64

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	3	3	3	-	-	-	-	-				3	
CO2	3	3	-	-	-	-	-	-	-				3	
CO3	3	3	3	3	-	-	-	-	-				3	
CO4	3	-	-	3	-	2	1	-	1	-	-	2	3	2
CO5	3	3	-	-	-	2	-	-	-	-			3	
CO6	3	3	3	3	-	2	-	-	-	-		2	3	2

Table 3.3.1.d CO Attainment of a course- ECE64

COs	CIE	SEE	CO Attainment=0.5*CIE+0.5*SEE
CO1	3	3	$3*0.5+3*0.5=3$
CO2	3	2	$3*0.5+2*0.5=2.5$
CO3	3	1	$3*0.5+1*0.5=2$
CO4	3	3	$3*0.5+3*0.5=3$
CO5	3	3	$3*0.5+3*0.5=3$
CO6	3	3	$3*0.5+3*0.5=3$

Table 3.3.1.e CO Attainment Vs CO PO mapping

COs	CO_Att	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	3	3	3	3	-	-	-	-	-				3	
CO2	2.5	3	3	-	-	-	-	-	-	-				3	
CO3	2	3	3	3	3	-	-	-	-	-				3	
CO4	3	3	-	-	3	-	2	1	-	1	-	-	2	3	2
CO5	3	3	3	-	-	-	2	-	-	-	-			3	
CO6	3	3	3	3	3	-	2	-	-	-	-		2	3	2

Hence, final contribution of CO attainment in PO attainment can be done using the below formula,

Attainment of POs/PSOs through a course is calculated as *Sum of product of CO attainment and CO PO mapping by sum of weight contributed in CO PO mapping.*

Calculation:

$$PO1 = \frac{(3*3) + (2.5*3) + (2*3) + (3*3) + (3*3) + (3+3)}{(3+3+3+3+3+3)} = 2.75$$

$$PO2 = \frac{(3*3) + (2.5*3) + (2*3) + (3*3) + (3*3)}{(3+3+3+3+3)} = 2.7$$

$$PO6 = \frac{(3*2) + (3*2) + (3*2)}{(2+2+2)} = 3$$

$$PSO2 = \frac{(3*2) + (3*2)}{(2+2)} = 3$$

Table 3.3.1.f PO Attainment of a Course

Course Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
ECE64	2.75	2.7	2.7	2.75	-	3	3	-	3	-		3	2.75	3

Similar way all POs are calculated using above formula. For indirect attainment, Survey results from graduates, alumni, and employer are consolidated and the final PO values are calculated through 3 point scale (Good, Satisfactory, poor). After collection of survey forms, the marks for POs are calculated based on the following formula:

For each Survey = [(3*number of students gave option 3) + (2* number of students gave option 2) + (1* number of students gave option 1)]/Total number of responses

Questionnaire form in the graduate survey, Employer and Alumni Survey are given in Table 3.3.1.g-i. The above formula is used to calculate the marks for indirect attainment of POs and PSOs of the programme at the end of the year.

Table 3.3.1.g Questionnaire form in the graduate survey

Sl. No	Program Outcomes(POS)	Good	Satisfactory	Poor
		(3)	(2)	(1)
1	Engineering Knowledge: Were you able to apply the knowledge of Mathematics, Science, engineering fundamentals, engineering specialization to the solution of complex engineering problems.			
2	Problem analysis: Were you comfortable in identifying, formulating reviewing, research literature and analyzing complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.			
3	Design / Development of Solutions: Were you able to design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety and the cultural, societal, and environmental considerations			
4	Conduct investigations of complex problems: Was it easy to 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: Were you able to create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.			
6	The engineer and society: Did you 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	<p>Environment and sustainability: 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.</p>			
8	<p>Ethics: Were you able to apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice.</p>			
9	<p>Individual and team work: Did you function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings</p>			
10	<p>Communication: Did you communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.</p>			
11	<p>Project management and finance: Did you 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 multi-disciplinary environments.</p>			
12	<p>Life - long learning: How far you 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</p>			

Table 3.3.1.h Questionnaire form in the Alumni survey

Name of the Alumni				
Degree	BE	M. Tech	MBA	MCA
Programme		AUTO / BT/ CIVIL / CSE / EC / EEE/ IS / ME		
Year of Graduation				
Name of the organization where you are working				
Designation				

Please give your assessment of the Institute academics.

Sl. No	Program Outcomes(POs)	Program Outcome	Good	Satisfactory	Poor
			(3)	(2)	(1)
1	Rate the engineering knowledge obtained during course period.	PO1			
2	How do you find the program related to problem analysis?	PO2			
3	How do you rate this program for developing solutions for the problems in the field of electronics & communication engineering?	PO3			
4	How you can rate the program helped for investigating the problems in the field of electronics & communication engineering?	PO4			
5	How fit is this program helped in applying modern tool usage for your problems?	PO5			
6	How do you rate this program helped me in assessing society, health and safety issues?	PO6			
7	How can you rate this program helped you in getting knowledge related to environment and sustainability?	PO7			

8	How can you rate your professional ethics related to the program?	PO8			
9	What value you can express for individual working and team work?	PO9			
10	How can you rate your communication skills related to the program?	PO10			
11	Were you able to manage project and finance aspects effectively?	PO11			
12	How far this program helped for lifelong learning?	PO12			
13	Were you able to provide innovative solutions for challenges and problems in various domains of electronics & communication engineering?	PSO1			
14	Were you able to solve complex electronics & communication engineering problems using latest hardware and software tools along with analytical skills to contribute to useful, frugal and eco-friendly solutions?	PSO2			

Your suggestions

Relevance of curriculum in your job.

.....

Need any change in curriculum and syllabi.

.....

Improvement in Teaching Learning process .

.....

Have you learned the basic concepts through your projects.

.....

Any other suggestions / Comments.

.....

Table 3.3.1.i Questionnaire form in the Employer survey

Company Name:		
Mailing Address:		
City	State	Pin Code
Employment Details	Year	Email

Sl. No	Program Outcomes(POs)	Program Outcome	Good	Satisfactory	Poor
			(3)	(2)	(1)
1	Your views on Engineering knowledge of our graduates.	PO1			
2	How did you find our student in applying the knowledge of maths, science in the solution of complying engineering problems?	PO2			
3	How you found our student with respect to design and development of new products or methods?	PO3			
4	Your view on our students on investigating new problems in the industry.	PO4			
5	How fit is our graduates in applying modern tools for solving problems?	PO5			
6	How responsible is our graduates in contextual knowledge to assess societal, health, safety, legal and cultural issues?	PO6			
7	How responsible is our student in understanding the impact of the electronics & communication engineering solutions in societal and environmental context?	PO7			

8	How can you rate our student with respect to their ethical and moral values?	PO8			
9	How can you rate our students with respect to work and team work?	PO9			
10	How can you rate our student with respect to being open to communicate effectively on complex electronics & communication engineering activities?	PO10			
11	How do you find our graduates performance in understanding project management and financial principles of the company?	PO11			
12	How you rate our student with respect to willingness for lifelong learning?	PO12			
13	Were you happy with the support you received from the college during placement drive?	PSO1			
14	Are our graduates able to find innovative solutions for challenges and problems in various domains of electronics & communication engineering?	PSO2			
15	How do you rate our student's ability to deal with complex engineering problems of electronics & communication engineering?	-			

Your detailed comments on our graduate employee

.....

.....

.....

.....

3.3.2 Provide the results of evaluation of each PO and PSO (65):

Direct Assessment of PO-3

Program outcome 3:

Design/development of solutions: Design solutions for complex engineering problems and design system components or processes of Electronics and Communication Engineering that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

This outcome is assessed from courses like Electronic Circuits –I ,Electronics Circuits –II, Analog Communication , Embedded systems , project work etc.

Direct PO attainment is calculated from CO attainment of the courses addressing PO-3. Average CO attainment level of all courses addressing this PO is calculated which is mentioned in following Table 3.3.2.a

Table 3.3.2.a Direct Assessment of PO3

Semester	SAR Code	Relevant Courses	PO3_Attainment_Course wise
I SEM	C101	Engineering Mathematics I	3
	C103	Introduction to Programming with C	3
	C104	Computer Aided Engineering Drawing	3
	C105	Basic Electronics	3
II SEM	C107	Engineering Mathematics II	3
	C108	Engineering Physics	3
	C109	Elements of Mechanical Engineering	3
	C110	Elements of Civil Engineering	3
	C111	Basic Electrical Engineering	3
III SEM	C201	Engineering Mathematics-III	3
	C202	Life Skills for Engineers	2.8
	C203	Programming with Data Structures	2.31
	C204	Electronic Circuits-I	2.08
	C206	Signals and Systems	2.24
	C207	Logic Design	3
IV SEM	C208	Engineering Mathematics-IV	3
	C209	Introduction to Economics	2.89

	C210	Electronic Circuits-II	2.53
	C211	Digital Signal Processing	2.76
	C212	Control Systems	2.78
	C213	System Design using HDL	2.29
V SEM	C301	Analog Communication	3
	C302	Microcontrollers	2.48
	C303	CMOS VLSI Design	2.72
	C306	Optical Fiber Communication	2.85
VI SEM	C307	Digital Communication	2.37
	C308	Embedded System Design	2.74
	C309	Microelectronic Circuits	2.36
	C310	Microwaves and Radar	2.74
	C311	Routing and Switching	3
VII SEM	C401	Wireless and Mobile Communications	2.64
	C402	Antennas and Wave Propagation	2.42
	C403	Satellite Communication	2.96
	C404	Biomedical signal and image Processing	2.86
	C405	Low power VLSI Design	2.58
	C406	Renewable Energy	2.5
	C407	Routing and switching -2	3
VIII SEM	C408	Routing and switching-03	3
	C409	Internship	3
	C410	Project Phase -I	3
	C411	Project Phase-II	3
	C412	Project Phase – III	3
Total Average of Direct Assessment_PO3			2.78

Indirect Assessment of PO3:

Indirect PO assessment is done using assessment tools like graduate survey, alumni survey, and employer survey as described in following table 3.3.2.b

Table 3.3.2.b Indirect Assessment of PO3

Survey	Attainment level
Graduate Survey	2.42
Alumni Survey	2.82
Employer Survey	2.64
Average	2.63

Average Attainment of PO3

Finally, the average of direct and indirect assessment is calculated which is the attainment level for that PO. Table 3.3.2.c shows overall Attainment calculation for PO3.

Table 3.3.2.c Final Attainment of PO3

Average Attainment				
PO	Assessment Tool	Attainment Level		Overall Attainment
PO3	Direct Assessment Tool	2.78	80% of 2.78=2.22	2.75
PO3	Indirect Assessment Tool	2.64	20% of 2.63=0.53	

Final POs and PSOs Attainment CAY (2015-2019)

Final PO and PSO attainment level is 80% Direct attainment + 20% Indirect attainment. Table 3.3.2.d shows final POs and PSOs calculation for CAY (2015-2019 batch)

Table 3.3.2.d Final POs and PSOs Attainment CAY (2015-2019)

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
Direct Attainment	2.80	2.79	2.78	2.78	2.82	2.76	2.78	2.91	2.75	2.79	2.76	2.72	2.69	2.76
Indirect Attainment	2.58	2.67	2.63	2.43	2.49	2.45	2.50	2.58	2.68	2.64	2.49	2.46	2.51	2.46
80% Direct Attainment	2.24	2.23	2.22	2.22	2.26	2.21	2.23	2.33	2.20	2.23	2.21	2.18	2.15	2.21
20% Direct Attainment	0.52	0.53	0.53	0.49	0.50	0.49	0.50	0.52	0.54	0.53	0.50	0.49	0.50	0.49
Total PO Attainment	2.75	2.77	2.75	2.71	2.75	2.70	2.73	2.84	2.73	2.76	2.71	2.67	2.65	2.70

Comparison of achieved values of POs/PSOs attainment with Target values:

Set the Target values for technical and non-technical POs and PSO and are listed in the Table 3.3.2.e . Obtained values of POs /PSOs attainment are compared with target values. If the set target is met, revise the target percentage of POs/PSOs for the subsequent batches. If the set target is not met, include some corrective action for the subsequent year. PO and PSO achievement matrix is given in Table 3.3.2.f

Table 3.3.2.e Set the Target values for technical and non-technical POs and PSOs

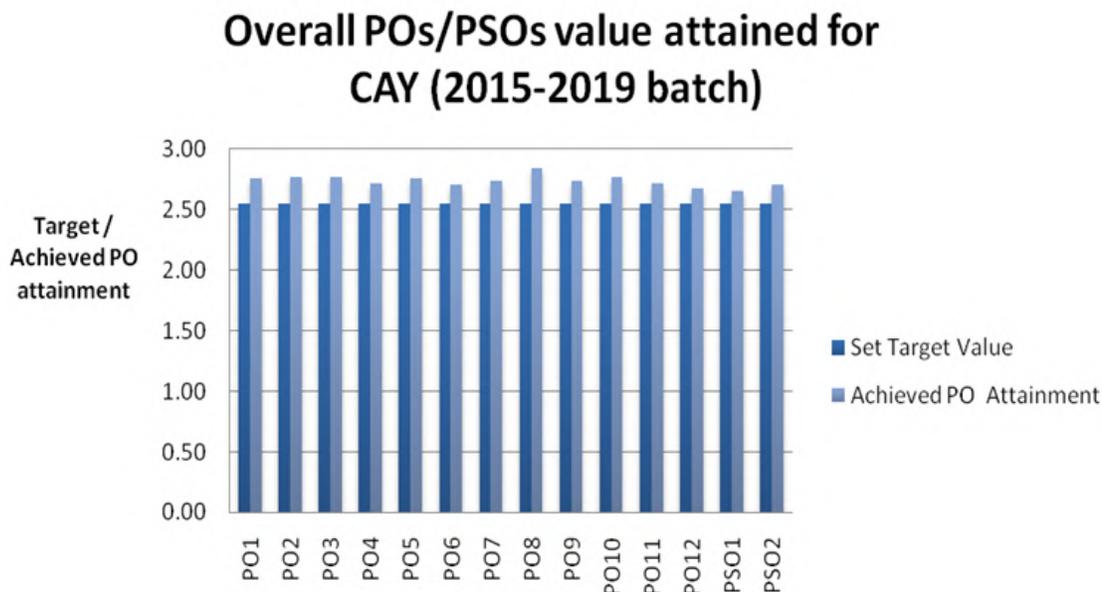
Particulars	Target Values	Associate POs/PSOs
Set target for Technical PO	85% (2.55)	PO1, PO2, PO3, PO4, PO5
Set target for Non –Technical PO	85% (2.55)	PO6, PO7, PO8, PO9, PO10, PO11, PO12
Set target for PSO	85% (2.55)	PSO1, PSO2

Table 3.3.2.f PO and PSO Achievement Matrix

POs/PSOs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
Set Target Value	2.55	2.55	2.55	2.55	2.55	2.55	2.55	2.55	2.55	2.55	2.55	2.55	2.55	2.55
Achieved PO Attainment	2.75	2.77	2.75	2.71	2.75	2.70	2.73	2.84	2.73	2.76	2.71	2.67	2.65	2.70

Attainment of POs/PSOs is shown in Figure 3.3.2 with the help of column chart. These figures gives the summary of POs and PSOs levels attained for 2015-2019 batch of students as mentioned in the chart. It is observed that attained POs and PSOs levels are more when compared to set Target. It is concluded that by practicing OBE procedures, attainment levels can be increased for the subsequent batches.

Figure 3.3.2 Overall POs and PSOs attainment for CAY (2015-2019 Batch)



PO and PSO attainments are recorded as shown in below Table 3.3.2.g-h

Table-3.3.2.g Direct PO & PSO Attainment

PO and PSO Attainment CAY (2015-2019)														
SAR code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C101	3	3	3	3	3	-	-	-	3	3	-	3	-	-
C102	3	3	-	-	-	-	3	-	-	-	-	3	-	-
C103	3	3	3	3	3	-	-	-	3	3	-	3	-	-
C104	3	-	3	3	3	-	-	-	-	3	-	3	-	-
C105	3	3	3	-	-	-	-	-	-	-	-	-	-	-
C106	-	-	-	-	-	3	-	3	3	3	-	3	-	-
C107	3	3	3	3	3	-	-	-	-	3	-	3	-	-
C108	3	3	3	-	-	-	-	-	3	-	-	3	-	-
C109	3	3	3	-	3	3	3	-	-	3	-	3	-	-
C110	3	3	3	-	-	-	-	-	-	-	-	-	-	-
C111	3	3	3	3	-	-	-	-	-	3	3	-	-	-
C112	-	-	-	-	-	-	-	3	3	3	-	3	-	-
C201	3	3	3	3	3	3	3	-	-	3	3	3	-	-
C202	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	-	-
C203	2.54	2.54	2.31	2.5	-	2	2.5	-	2.31	2.31	2.31	2	2.31	2.66
C204	2.35	2.35	2.08	2.5	2.42	-	-	-	2.34	-	-	2.22	2.42	-

Criterion-3 Self-Assessment Report (SAR)



C205	2.82	2.96	-	-	3	-	-	-	-	-	-	2.94	2.82	3
C206	2.23	2.23	2.24	2.24	2.23	-	-	-	2.14	-	-	2.19	2.23	2.09
C207	3	3	3	3	3	-	-	-	2.7	-	-	-	3	3
C208	3	3	3	3	3	3	3	-	3	3	3	3	-	-
C209	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
C210	2.64	2.64	2.53	2.53	2.53	2.64	-	-	3	3	-	2	2.33	3
C211	2.85	2.85	2.76	-	2.85	-	-	-	2.85	-	-	2.76	2.85	2.76
C212	2.66	2.73	2.78	2.67	-	-	-	-	-	-	-	2.57	2.66	-
C213	2.41	2.29	2.29	2.45	3	3	-	-	-	-	-	3	2.23	-
C301	3	3	3	3	3	3	-	-	2	2	-	2	3	2.76
C302	2.7	2.63	2.48	2.48	2.7	-	-	-	2.49	-	-	3	2.7	2.67
C303	2.77	2.77	2.72	2.64	2.77	3	3	3	2.77	-	2.08	2.43	2.77	3
C304	2.65	2.59	-	-	-	1.8	-	-	-	-	-	2.26	2.65	-
C305	2.64	2.58	-	-	-	2.51	2.51	-	-	-	-	2.14	2.14	-
C306	2.86	2.85	2.85	3	-	-	-	-	-	-	-	-	2.86	3
C307	2.44	2.37	2.37	2.32	2.32	3	-	-	3	3	-	3	2.34	2.32
C308	2.75	2.74	2.74	2.66	2.62	-	-	-	2.75	2.5	-	2.62	2.81	2.74
C309	2.36	2.36	2.36	2.27	-	2.25	2.25	-	-	-	-	2.25	2.25	2.5
C310	2.75	2.71	2.74	2.75	-	3	3	-	3	-	-	3	2.75	3
C311	3	3	3	3	3	-	-	3	3	-	-	3	3	3
C401	2.76	2.73	2.64	2.66	2.5	2.5	-	-	2	2	-	2	2.76	-
C402	2.5	2.5	2.42	2.57	2.33	2.57	2.73	2.5	2.5	2.5	2.5	2.73	2.48	2.51
C403	2.96	2.96	2.96	3	-	3	-	-	3	3	-	3	3	-
C404	2.92	2.91	2.86	2.82	2.82	2.82	-	-	3	3	-	2.82	2.92	2.82
C405	2.5	2.56	2.58	2.62	2.5	2.51	2.27	-	2	2	-	2	2.58	2
C406	2.4	2.52	2.5	2.5	-	2.32	2.32	-	2.09	2.09	2.5	2.32	2.4	2.5
C407	3	3	3	3	3	3	3	-	3	3	-	3	3	3
C408	3	3	3	3	3	3	-	-	3	3	-	3	3	3
C409	-	-	3	3	3	-	-	3	3	3	3	3	-	-
C410	3	3	3	3	3	3	3	3	3	3	3	3	3	3
C411	3	3	3	3	3	3	3	3	3	3	3	3	3	3
C412	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Average	2.80	2.79	2.78	2.78	2.82	2.76	2.78	2.91	2.75	2.79	2.76	2.72	2.69	2.76

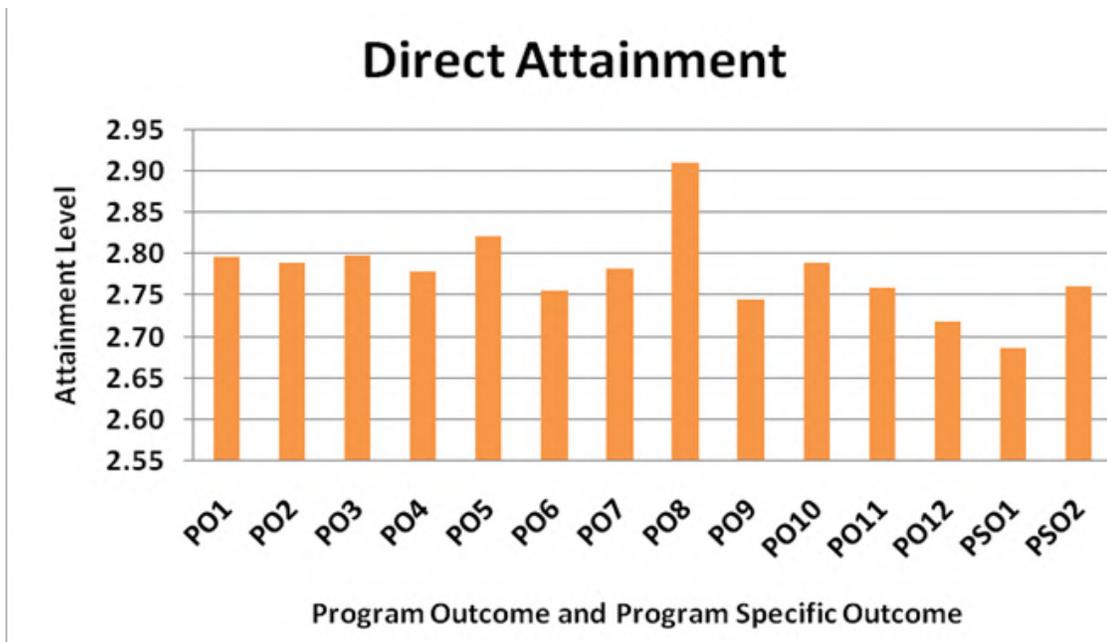


Figure 3.3.2.a POs & PSOs Vs Direct Attainment Level

Indirect PO & PSO Attainment:

Table-3.3.2.h Indirect PO & PSO Attainment

Survey	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
Graduate	2.58	2.58	2.42	2.42	2.42	2.20	2.65	2.69	2.67	2.68	2.22	2.25	2.22	2.20
Alumni	2.54	2.76	2.82	2.46	2.52	2.58	2.4	2.48	2.52	2.46	2.52	2.4	2.62	2.54
Employer	2.62	2.68	2.64	2.4	2.52	2.58	2.44	2.56	2.86	2.78	2.72	2.74	2.68	2.64
Average	2.58	2.67	2.63	2.43	2.49	2.45	2.50	2.58	2.68	2.64	2.49	2.46	2.51	2.46

Indirect Attainment

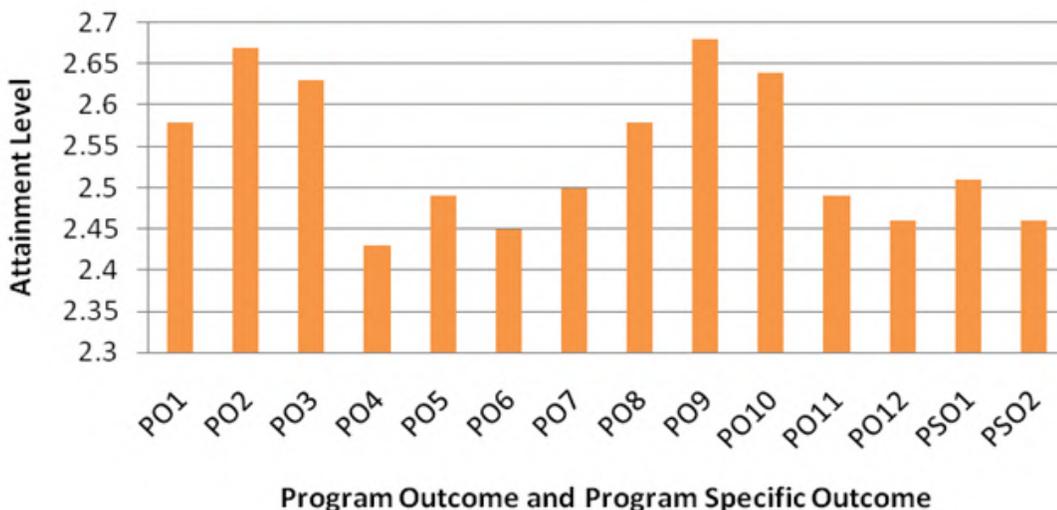


Figure 3.3.2.b POs & PSOs Vs Indirect Attainment Level

From the direct assessment and the indirect assessment values, the overall attainment values are calculated by giving 80% weightage to direct assessment and 20% weightage to indirect assessment and final values are shown in Table 3.3.2.i.

Table 3.3.2.i Final PO & PSO Attainment

Survey	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
Direct Attainment	2.80	2.79	2.78	2.78	2.82	2.76	2.78	2.91	2.75	2.79	2.76	2.72	2.69	2.76
Indirect Attainment	2.58	2.67	2.63	2.43	2.49	2.45	2.50	2.58	2.68	2.64	2.49	2.46	2.51	2.46
80% Direct Attainment	2.24	2.23	2.24	2.22	2.26	2.21	2.23	2.33	2.20	2.23	2.21	2.18	2.15	2.21
20% Indirect Attainment	0.52	0.53	0.53	0.49	0.50	0.49	0.50	0.52	0.54	0.53	0.50	0.49	0.50	0.49
Final PO and PSO Attainment	2.75	2.77	2.75	2.71	2.75	2.70	2.73	2.84	2.73	2.76	2.71	2.67	2.65	2.70

It is observed that attainment of POs and PSOs for 2015-2019 batch is achieved. It is concluded that by practicing OBE procedures, attainment levels can be increased for the subsequent batches.

**DEPARTMENT OF
ELECTRONICS &
COMMUNICATION ENGINEERING**

CRITERION 4

STUDENTS' PERFORMANCE

CRITERION 4	STUDENTS' PERFORMANCE	100
--------------------	------------------------------	------------

Table 1: Sanctioned Intake and Admission Details

Item (Information to be provided cumulatively for all the shifts with explicit headings, wherever applicable)	CAY (2019-20)	CAYm1 (2018-19)	CAYm2 (2017-18)	CAYm3 (2016-17)	CAYm4 (2015-16)	CAYm2 (2014-15)	CAYm2 (2013-14)
Sanctioned intake of the program (N)	180	180	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)	180	180	180	180	180	180	180
Number of students admitted in 2nd year in the same batch via lateral entry (N2)	13	33	32	30	32	29	36
Separate division students, if applicable (N3)	-	-	-	-	-	-	-
Total number of students admitted in the Program (N1 + N2 + N3)	193	213	212	210	212	209	216

- * CAY – Current Academic Year * CAYm1- Current Academic Year minus1= Current Assessment Year
- * CAYm2 - Current Academic Year minus2=Current Assessment Year minus 1
- *LYG – Last Year Graduate
- * LYGm1 – Last Year Graduate minus 1 * LYGm2 – Last Year Graduate minus 2

Table 2: Successfully Graduated Students Without Backlogs

Year of entry	N1 + N2 + N3 (As defined above)	Number of students who have successfully graduated without backlogs in any semester/year of study (Without Backlog means no compartment or failures in any semester/year of study)			
		I Year	II Year	III Year	IV Year
CAY (2019-20)	193 [180+13]				
CAYm1 (2018-19)	213 [180+33]	157			
CAYm2 (2017-18)	212 [180+32]	163	77		
CAYm3 (2016-17)	210 [180+30]	145	123	106	
CAYm4 (LYG) (2015-16)	212 [180+32]	171	175	154	137
CAYm5 (LYGm1) (2014-15)	209 [180+29]	121	97	81	77
CAYm6 (LYGm2) (2013-14)	216 [180+36]	170	125	102	97

Table 3: Successfully Graduated Students with Backlogs

Year of entry	N1 + N2 + N3 (As defined above)	Number of students who have successfully graduated (Students with backlog in stipulated period of study)			
		I Year	II Year	III Year	IV Year
CAY (2019-20)	193 [180+13]				
CAYm1 (2018-19)	213 [180+33]	180			
CAYm2 (2017-18)	212 [180+32]	180	209		
CAYm3 (2016-17)	210 [180+30]	180	214	184	
CAYm4 (LYG) (2015-16)	212 [180+32]	180	212	210	203
CAYm5(LYGm1) (2014-15)	209 [180+29]	180	191	187	156
CAYm6(LYGm2) (2013-14)	216 [180+36]	180	209	178	160

4.1 ENROLMENT RATIO (20)

Table 4.1: Enrolment Ratio

Year	Sanctioned intake of the program - N	Total number of students admitted (Corresponding to sanctioned intake) - N1	Enrolment Ratio [(N1/N) *100]
2019-20 (CAY)	180	180	ER1= 100
2018-19 (CAYm1)	180	180	ER2= 100
2017-18 (CAYm2)	180	180	ER3=100

* Average [(ER1 + ER2 + ER3) / 3]: 100.00

* 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)

- $SI = (\text{Number of students who have graduated from the program without backlog}) / (\text{Number of students admitted in the first year of that batch and actually admitted in 2nd year via lateral entry and separate division, if applicable})$
- Average SI = Mean of Success Index (SI) for past three batches
- Success rate without backlogs in any semester/year of study = $15 \times \text{Average SI}$

Table 4.2.1: Success Rate Without Backlogs

Item	Last Year of Graduate, LYG (2015-16)	Last Year of Graduate minus 1, LYGm1 (2014-15)	Last Year of Graduate minus 2, LYGm2 (2013-14)
Number of students admitted in the corresponding First Year + admitted in 2nd year via lateral entry and separate division, if applicable [X]	212 [180+32]	209 [180+29]	216 [180+36]
Number of students who have graduated without backlogs in the stipulated period [Y]	137	77	97
Success Index ($SI = Y/X$)	0.65	0.37	0.45

* Average SI [$(SI1 + SI2 + SI3) / 3$]: **0.49**

* Assessment [$15 * \text{Average SI}$]: **7.35**

4.2.2 Success rate with backlog in stipulated period of study (5)

- $SI = (\text{Number of students who graduated from the program in the stipulated period of course duration}) / (\text{Number of students admitted in the first year of that batch and actually admitted in 2nd year via lateral entry and separate division, if applicable})$
- Average SI = mean of Success Index (SI) for past three batches Success rate

Table 4.2.2: Success Rate with Backlogs

Item	Last Year of Graduate, LYG (2015-16)	Last Year of Graduate minus 1, LYGm1 (2014-15)	Last Year of Graduate minus 2, LYGm2 (2013-14)
Number of students admitted in the corresponding First Year + admitted in 2nd year via lateral entry and separate division, if applicable [X]	212 [180+32]	209 [180+29]	216 [180+36]
Number of students who have graduated without backlogs in the stipulated period [Y]	203	156	160
Success Index (SI= Y/X)	0.96	0.75	0.72

* **Average SI [(SI1 + SI2 + SI3) / 3]: 0.82**

* **Assessment [15 * Average SI]: 4.08**

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

4.3 ACADEMIC PERFORMANCE IN SECOND YEAR (10)

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

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

Table 4.3: Academic Performance

Academic Performance	CAYm2 (2017-18)	CAYm3 (2016-17)	CAYm4 (2015-16)
Mean of CGPA or Mean Percentage of all successful students (X)	8.33	8.41	7.94
Total no. of successful students (Y)	209	184	212
Total no. of students appeared in the examination (Z)	212	216	212
$API = X * (Y/Z)$	8.21	7.16	7.94

* **Average API [(AP1 + AP2 + AP3)/3]: 8.11**

* **Assessment [1.5 * Average API]: 12.16**

4.4 PLACEMENT, HIGHER STUDIES AND ENTREPRENEURSHIP (30)

Table 4.4.1: Placement, Higher Studies and Entrepreneurship Details

Item	LYG (2015-16)	LYGm1 (2014-15)	LYGm2 (2013-14)
Total No. of Final Year Students (N)	210	187	178
No. of students placed in companies or Government Sector (x)	158	144	115
No. of students admitted to higher studies with valid qualifying scores (GATE or equivalent State or National Level Tests, GRE, GMAT etc.) (y)	12	2	4
No. of students turned entrepreneur in engineering/technology (z)	10	4	1
Placement Index: $(x + y + z)/N$	0.86	0.80	0.67

* **Average Placement [$(P1 + P2 + P3)/3$]: 0.78**

* **Assessment [$30 * \text{Average Placement}$]: 23.30**

Program Name: Electronics & Communication Engineering

Assessment Year: 2018-19 (CAYm1)

Table 4.4.2: Assessment Year: 2018-19 (CAYm1)

Sr. No	USN	Name of the Student	Organization Placed in	Offer Letter Number Required from HRD for NBA
1	1NH15EC001	A Vinay Kumar Reddy	42Gears Mobility Systems	NH-ECE-19-42GMSPL-001
2	1NH15EC009	Anusha M	42Gears Mobility Systems	NH-ECE-19-42GMSPL-002
3	1NH15EC087	Sakkirala Satwik Yadav	42Gears Mobility Systems	NH-ECE-19-42GMSPL-003
4	1NH15EC004	Akash Mallappa Mantur	Allstate Solutions Pvt Ltd	NH-ECE-19-ASSPL-001
5	1NH15EC080	Roopa D Almeida	Allstate Solutions Pvt Ltd	NH-ECE-19-ASSPL-002
6	1NH15EC730	Saladi Rahul	Allstate Solutions Pvt Ltd	NH-ECE-19-ASSPL-003
7	1NH15EC013	Chandini C	Anora Semiconductors	NH-ECE-19-ASLPL-001
8	1NH15EC016	Deepak S	Anora Semiconductors	NH-ECE-19-ASLPL-002
9	1NH15EC019	Denzel Abraham George	Anora Semiconductors	NH-ECE-19-ASLPL-003
10	1NH16EC421	Rakshitha N	Applied Materials	NH-ECE-19-AMIPL-001
11	1NH15EC039	Keerthi U.M	Aricent	NH-ECE-19-ATHL-024
12	1NH15EC091	Sanjay Kumar. A	Aricent	NH-ECE-19-ATHL-025
13	1NH15EC096	Sharath N	Aricent	NH-ECE-19-ATHL-026
14	1NH15EC130	Kaliki Poojasri	Aricent	NH-ECE-19-ATHL-027
15	1NH15EC722	Pavithra R	Aricent	NH-ECE-19-ATHL-028

16	1NH15EC729	Radhika R	CenturyLink Technologies India Pvt Ltd	NH-ECE-19-CLTIPL-002
17	1NH15EC742	Savita. Shivanand.Patil	CenturyLink Technologies India Pvt Ltd	NH-ECE-19-CLTIPL-003
18	1NH15EC027	Hemanth Karthik R	Elmeasure	NH-ECE-19-EIPL-001
19	1NH15EC032	Jayanth S	Elmeasure	NH-ECE-19-EIPL-002
20	1NH15EC038	Kavya.D. R	Elmeasure	NH-ECE-19-EIPL-003
21	1NH15EC042	Konuru Gopi	Elmeasure	NH-ECE-19-EIPL-004
22	1NH15EC044	Madala Kalyan Kumar	Elmeasure	NH-ECE-19-EIPL-005
23	1NH15EC052	Monika A Reddy	Elmeasure	NH-ECE-19-EIPL-006
24	1NH16EC419	Praveenkumar R Jadhav	Elmeasure	NH-ECE-19-EIPL-007
25	1NH15EC078	Radhika.B	Eurofins IT Solutions Pvt Ltd	NH-ECE-19-EISIPL-006
26	1NH15EC113	Subramanya Ganesh	Eurofins IT Solutions Pvt Ltd	NH-ECE-19-EISIPL-007
27	1NH15EC005	Akhil Chowdary M	EXL Service	NH-ECE-19-EXLA-006
28	1NH15EC059	Nanditha S	EXL Service	NH-ECE-19-EXLA-007
29	1NH15EC060	Naveen K R	EXL Service	NH-ECE-19-EXLA-008
30	1NH15EC082	Rushali Raina	EXL Service	NH-ECE-19-EXLA-009
31	1NH15EC107	Sneha P	EXL Service	NH-ECE-19-EXLA-010
32	1NH15EC733	Ramya R	Extra Marks	NH-ECE-19-EM-004
33	1NH15EC025	Harshitha J R	Huawei Technologies	NH-ECE-19-HTCL-001
34	1NH15EC118	Tarungowda S M	Huawei Technologies	NH-ECE-19-HTCL-002
35	1NH15EC725	Pratap R	IBM	NH-ECE-19-IBMIPL-002

Criterion-4 Self-Assessment Report (SAR)

36	1NH15EC023	Gurushree Bhat U	Ideas91 India Pvt Ltd	NH-ECE-19-IIPL-003
37	1NH15EC061	Naveen.P	Ideas91 India Pvt Ltd	NH-ECE-19-IIPL-004
38	1NH15EC064	Noti Dinesh Kumar Reddy	Ideas91 India Pvt Ltd	NH-ECE-19-IIPL-005
39	1NH15EC066	Pamisetty Udayabhanu	Ideas91 India Pvt Ltd	NH-ECE-19-IIPL-006
40	1NH16EC416	Naresh Babu	Ideas91 India Pvt Ltd	NH-ECE-19-IIPL-007
41	1NH15EC037	Karthik V	Infosys Ltd	NH-ECE-19-IL-021
42	1NH15EC048	Megha D R	Infosys Ltd	NH-ECE-19-IL-022
43	1NH15EC069	Pavan Kumar S	Infosys Ltd	NH-ECE-19-IL-023
44	1NH15EC074	Putti Reddy Akhil Reddy	Infosys Ltd	NH-ECE-19-IL-024
45	1NH15EC079	Riya Dey	Infosys Ltd	NH-ECE-19-IL-025
46	1NH15EC101	Shruti Jana	Infosys Ltd	NH-ECE-19-IL-026
47	1NH15EC045	Manikanta K	ITC Infotech	NH-ECE-19-ITCIIL-016
48	1NH15EC050	Mohammed Musaveer	ITC Infotech	NH-ECE-19-ITCIIL-017
49	1NH15EC056	Nagarjun.K. S	ITC Infotech	NH-ECE-19-ITCIIL-018
50	1NH15EC057	Nalini.K	ITC Infotech	NH-ECE-19-ITCIIL-019
51	1NH15EC083	S P Rahul Kumar	ITC Infotech	NH-ECE-19-ITCIIL-020
52	1NH15EC131	S Reshma	ITC Infotech	NH-ECE-19-ITCIIL-021
53	1NH15EC700	Abhishek Gowda K M	ITC Infotech	NH-ECE-19-ITCIIL-022
54	1NH15EC709	Goutham R	ITC Infotech	NH-ECE-19-ITCIIL-023
55	1NH15EC713	I G Kevin Christopher	ITC Infotech	NH-ECE-19-ITCIIL-024
56	1NH15EC740	S Krithika	ITC Infotech	NH-ECE-19-ITCIIL-025

57	1NH16EC412	Mohammed Faizulla D. K	ITC Infotech	NH-ECE-19-ITCIIL-026
58	1NH15EC003	B Achal	JMR Infotech	NH-ECE-19-JMRII-005
59	1NH15EC010	Aparna.M	JMR Infotech	NH-ECE-19-JMRII-006
60	1NH15EC029	Irfan A	JMR Infotech	NH-ECE-19-JMRII-007
61	1NH15EC040	Keshav S	JMR Infotech	NH-ECE-19-JMRII-008
62	1NH15EC071	Preeti K Mehtry	JMR Infotech	NH-ECE-19-JMRII-009
63	1NH15EC084	S. Suhas	JMR Infotech	NH-ECE-19-JMRII-010
64	1NH15EC086	Sachin Yadav	JMR Infotech	NH-ECE-19-JMRII-011
65	1NH15EC104	Shwetha. R	JMR Infotech	NH-ECE-19-JMRII-012
66	1NH15EC123	V Megha	JMR Infotech	NH-ECE-19-JMRII-013
67	1NH15EC132	Deepti S	JMR Infotech	NH-ECE-19-JMRII-014
68	1NH15EC743	Sharath C R	JMR Infotech	NH-ECE-19-JMRII-015
69	1NH15EC011	Bhavana Savanth	L & T Technologies	NH-ECE-19-LTTS-011
70	1NH15EC028	Hemanth Kumar B R	L & T Technologies	NH-ECE-19-LTTS-012
71	1NH15EC035	K.R. Amrutha	L & T Technologies	NH-ECE-19-LTTS-013
72	1NH15EC053	Monisha M	L & T Technologies	NH-ECE-19-LTTS-014
73	1NH15EC094	Satish J	L & T Technologies	NH-ECE-19-LTTS-015
74	1NH15EC108	Sneha S	L & T Technologies	NH-ECE-19-LTTS-016
75	1NH15EC114	Sumanth.R	L & T Technologies	NH-ECE-19-LTTS-017
76	1NH15EC115	Suraj R	L & T Technologies	NH-ECE-19-LTTS-018

77	1NH15EC122	V.Bharath Raj	L & T Technologies	NH-ECE-19-LTTS-019
78	1NH15EC125	Veda J	L & T Technologies	NH-ECE-19-LTTS-020
79	1NH15EC741	Sanjana Ranjan	L & T Technologies	NH-ECE-19-LTTS-021
80	1NH15EC089	Samarpan Chakraborty	L&T Infotech	NH-ECE-19-LTIL-006
81	1NH15EC098	Shilpa.V	L&T Infotech	NH-ECE-19-LTIL-007
82	1NH15EC106	Sidharth P	L&T Infotech	NH-ECE-19-LTIL-008
83	1NH15EC112	Sree Renukakshitha J M	L&T Infotech	NH-ECE-19-LTIL-009
84	1NH15EC120	Thribhuvan L	L&T Infotech	NH-ECE-19-LTIL-010
85	1NH15EC126	Vidhut Sharma	Lowe's Services India Pvt Ltd	NH-ECE-19-LSIPL-003
86	1NH15EC135	Archana M	Lowe's Services India Pvt Ltd	NH-ECE-19-LSIPL-004
87	1NH15EC705	Chandana M	Microchip Technology India Pvt Ltd	NH-ECE-19-MTIPL-001
88	1NH15EC051	Mohammed Shabaz	Mindtree	NH-ECE-19-MCRT-004
89	1NH15EC117	Swathi.R	Mindtree	NH-ECE-19-MCRT-005
90	1NH15EC716	Megha N	Mindtree	NH-ECE-19-MCRT-006
91	1NH15EC111	Sowmya. S	Moengage	NH-ECE-19-MIPL-003
92	1NH15EC708	Ekta Shukla	Moengage	NH-ECE-19-MIPL-004
93	1NH15EC092	Sanjeev Jayasurya.S	Nineleaps	NH-ECE-19-NL-005
94	1NH15EC076	Rachitha M. R	NTT DATA	NH-ECE-19-NDGDSPL-003
95	1NH15EC127	Virender Singh	NTT DATA	NH-ECE-19-NDGDSPL-004
96	1NH15EC134	Manoj Kumar K	NTT DATA	NH-ECE-19-NDGDSPL-005

97	1NH15EC702	Anusha R	NTT DATA	NH-ECE-19-NDGDSPL-006
98	1NH15EC723	Pradeep K	NTT DATA	NH-ECE-19-NDGDSPL-007
99	1NH15EC738	Tandulkar Rushika Ujjwal	NTT DATA	NH-ECE-19-NDGDSPL-008
100	1NH15EC753	Surya V	NTT DATA	NH-ECE-19-NDGDSPL-009
101	1NH15EC755	Syed Zahidulla	NTT DATA	NH-ECE-19-NDGDSPL-010
102	1NH15EC070	Polisetty Venkata Sai Ganesh	Ocwen Financial	NH-ECE-19-OFSP-002
103	1NH15EC750	Snehith V Gowda	Pinclick	NH-ECE-19-PC-003
104	1NH15EC726	Praveen P Nair	QtPi Robotics	NH-ECE-19-QTPIPL-001
105	1NH16EC429	Ullas M S	QtPi Robotics	NH-ECE-19-QTPIPL-002
106	1NH15EC728	Raahul John Alex	SoCronics Technologies Pvt Ltd	NH-ECE-19-VEDAIIT-001
107	1NH15EC002	Abhuri Greeshma	SonicWALL Technology Systems India Pvt Ltd	NH-ECE-19-STSP-003
108	1NH15EC012	Bujja Ajay	SonicWALL Technology Systems India Pvt Ltd	NH-ECE-19-STSP-004
109	1NH15EC014	Chandrashekhar. K	SonicWALL Technology Systems India Pvt Ltd	NH-ECE-19-STSP-005
110	1NH15EC018	Deexith S	SonicWALL Technology Systems India Pvt Ltd	NH-ECE-19-STSP-006
111	1NH15EC026	Harshitha N	Sony India	NH-ECE-19-SC-001
112	1NH15EC718	Namrata Sudhir Katrle	Sony India	NH-ECE-19-SC-002

113	1NH15EC031	Jayanth Mk	Speridian Technologies	NH-ECE-19-ST-002
114	1NH15EC033	Jitin Jain Mathew	Speridian Technologies	NH-ECE-19-ST-003
115	1NH15EC099	Shreyas S	Speridian Technologies	NH-ECE-19-ST-004
116	1NH15EC021	Gattu Raghunadham	Surya Software Systems Pvt Ltd	NH-ECE-19-SSSPL-004
117	1NH15EC073	Punarva.A	Surya Software Systems Pvt Ltd	NH-ECE-19-SSSPL-005
118	1NH15EC121	Tirumala Satheesh Himakeerthi	Surya Software Systems Pvt Ltd	NH-ECE-19-SSSPL-006
119	1NH15EC745	Shivani Kumari	Surya Software Systems Pvt Ltd	NH-ECE-19-SSSPL-007
120	1NH15EC020	Gadipudi Asrith	TCS	NH-ECE-19-TCS-004
121	1NH15EC081	Rukmini.N	TCS	NH-ECE-19-TCS-005
122	1NH15EC712	V Hari Chandana	TCS	NH-ECE-19-TCS-006
123	1NH15EC724	Prasanna Kumar D	TCS	NH-ECE-19-TCS-007
124	1NH15EC739	S K Mohammad Akhleem Nawaz	TCS	NH-ECE-19-TCS-008
125	1NH15EC049	Mithun.V	Telaverge Communications	NH-ECE-19-TCIPL-003
126	1NH15EC090	Sandhya B	Telaverge Communications	NH-ECE-19-TCIPL-004
127	1NH15EC752	Suraj Kumar Sharma	Telaverge Communications	NH-ECE-19-TCIPL-005
128	1NH16EC425	Sachin B S	Telaverge Communications	NH-ECE-19-TCIPL-006
129	1NH16EC426	Sachin Kb	Telaverge Communications	NH-ECE-19-TCIPL-007
130	1NH15EC017	Deepika.S	Torry Harris Business Solutions	NH-ECE-19-THBSPL-001
131	1NH15EC105	Shyla Shree.R	Torry Harris Business Solutions	NH-ECE-19-THBSPL-002

132	1NH15EC744	Shivaprasad H S	Torry Harris Business Solutions	NH-ECE-19-THBSPL-003
133	1NH15EC036	Karthik R	Udaan	NH-ECE-19-APL-005
134	1NH15EC116	Surendra Kumar R	Udaan	NH-ECE-19-APL-006
135	1NH16EC410	M Mrinal	Udaan	NH-ECE-19-APL-007
136	1NH15EC006	Akshitha K S	Velocis Systems Pvt Ltd	NH-ECE-19-VSPL-003
137	1NH15EC022	Greeshma. R	Velocis Systems Pvt Ltd	NH-ECE-19-VSPL-004
138	1NH15EC030	Janardhan.S. P	Velocis Systems Pvt Ltd	NH-ECE-19-VSPL-005
139	1NH16EC427	Shashikumar M R	Velocis Systems Pvt Ltd	NH-ECE-19-VSPL-006
140	1NH15EC034	K B Hithesh	VVDN Technologies	NH-ECE-19-VVDNTPL-002
141	1NH15EC046	Manamohan	Wipro	NH-ECE-19-WL-009
142	1NH15EC054	Mukesh	Wipro	NH-ECE-19-WL-010
143	1NH15EC102	Shubha.A	Wipro	NH-ECE-19-WL-011
144	1NH15EC133	Namratha B R	Wipro	NH-ECE-19-WL-012
145	1NH15EC711	Kolukonu Hakesh	Wipro	NH-ECE-19-WL-013
146	1NH15EC714	Jishma Asmi V	Wipro	NH-ECE-19-WL-014
147	1NH15EC731	Rakshitha.L	Wipro	NH-ECE-19-WL-015
148	1NH15EC746	Shivani.V	Wipro	NH-ECE-19-WL-016
149	1NH16EC420	Priyanka P	Yokogawa	NH-ECE-19-YIAT IPL-001
150	1NH15EC085	Saahil Rai	42Gears Mobility Systems	NH-ECE-19-42GMSPL-004
151	1NH15EC402	Bharath Kumar N	42Gears Mobility Systems	NH-ECE-19-42GMSPL-005

152	1NH16EC411	Madhavi Iranna Sajjan	42Gears Mobility Systems	NH-ECE-19-42GMSPL-006
153	1NH16EC431	Aravind K	42Gears Mobility Systems	NH-ECE-19-42GMSPL-007
154	1NH16EC401	Dilip Kumar R	42Gears Mobility Systems	NH-ECE-19-42GMSPL-008
155	1NH16EC413	Mohan Kumar V	42Gears Mobility Systems	NH-ECE-19-42GMSPL-009
156	1NH16EC417	Padmini M E	42Gears Mobility Systems	NH-ECE-19-42GMSPL-010
157	1NH16EC423	Ramitha B	42Gears Mobility Systems	NH-ECE-19-42GMSPL-011
158	1NH16EC404	Hemavathi S	42Gears Mobility Systems	NH-ECE-19-42GMSPL-012

Assessment Year: 2017-18 (CAYm2)

Table 4.4.3: Assessment Year: 2017-18 (CAYm2)

Sr. No.	USN	Name of the Student	Organization Placed in	Offer Letter Number Required from HRD for NBA
1	1NH14EC080	Monika Yadav	Allstate	NH-ECE-18-ASSPL-005
2	1NH14EC755	Shraddha Kiran	Applied Materials	NH-ECE-18-AMIPL-002
3	1NH14EC049	Harshitha.T. R	Broadridge	NH-ECE-18-BR-002
4	1NH15EC415	Priyanka P	Cameo Global	NH-ECE-18-CGCPL-001
5	1NH14EC003	Adarsh Gowda.A. P	CCP IOT	NH-ECE-18-CCPITPL-005
6	1NH14EC004	Agnes Maria James	CCP IOT	NH-ECE-18-CCPITPL-006
7	1NH14EC010	Alok Kumar Swain	CCP IOT	NH-ECE-18-CCPITPL-007
8	1NH14EC066	Keerthana.R	Century Link	NH-ECE-18-CLTIPL-002
9	1NH14EC145	Sravani Yadugiri	Century Link	NH-ECE-18-CLTIPL-003
10	1NH14EC703	Amrut Narasinha	Century Link	NH-ECE-18-CLTIPL-004

11	1NH14EC064	Karthik.K	Cyient	NH-ECE-18-CL-006
12	1NH14EC701	Abdullah Aejaz	Datagres IT	NH-ECE-18-DISPL-002
13	1NH14EC704	Arun Kumar	Datagres IT	NH-ECE-18-DISPL-003
14	1NH14EC705	Arun R	Datagres IT	NH-ECE-18-DISPL-004
15	1NH14EC706	Baba Kedranath Sahu	Datagres IT	NH-ECE-18-DISPL-005
16	1NH14EC043	Harish P	DXC	NH-ECE-18-DXCT-002
17	1NH14EC056	Jerlin.S	DXC	NH-ECE-18-DXCT-003
18	1NH14EC077	Mohammed Asif.F	DXC	NH-ECE-18-DXCT-004
19	1NH14EC707	Bhavani. R	DXC	NH-ECE-18-DXCT-005
20	1NH14EC710	Fiona Nikhita Pinto	DXC	NH-ECE-18-DXCT-006
21	1NH14EC713	Jennifer Melissa	DXC	NH-ECE-18-DXCT-007
22	1NH14EC738	Aksash Bhardwaj	DXC	NH-ECE-18-DXCT-008
23	1NH14EC740	Ambika.M. R	DXC	NH-ECE-18-DXCT-009
24	1NH15EC419	Shivaraj D S	DXC	NH-ECE-18-DXCT-010
25	1NH15EC420	Shivaranjan M	DXC	NH-ECE-18-DXCT-011
26	1NH14EC109	Shama Moshin Shaik	EFI	NH-ECE-18-EFIPL-001
27	1NH14EC116	Salman Hilal Bhat	EFI	NH-ECE-18-EFIPL-002
28	1NH14EC139	Thombarapu Hemanth Kumar	EFI	NH-ECE-18-EFIPL-003
29	1NH14EC155	Vinay Bhandari	EFI	NH-ECE-18-EFIPL-004
30	1NH14EC400	Abhishek. N	EFI	NH-ECE-18-EFIPL-005
31	1NH14EC048	Harshitha.R	Ellucian	NH-ECE-18-EHESIPL-004

32	1NH14EC406	Hemanth Kumar S R	Ellucian	NH-ECE-18-EHESIPL-005
33	1NH14EC407	Jagadish Suramanji	Ellucian	NH-ECE-18-EHESIPL-006
34	1NH14EC410	M.Pooja	Ellucian	NH-ECE-18-EHESIPL-007
35	1NH14EC027	Darshan.P	Envision Financial	NH-ECE-18-EFS-003
36	1NH14EC067	Kiran Kumar R	Envision Financial	NH-ECE-18-EFS-004
37	1NH14EC140	Thulasi.Ram. R	Envision Financial	NH-ECE-18-EFS-005
38	1NH14EC700	Aliya	Envision Financial	NH-ECE-18-EFS-006
39	1NH14EC065	Kashmitha.D	Eurofins IT	NH-ECE-18-EITSIPL-005
40	1NH14EC112	Sachin.R	Eurofins IT	NH-ECE-18-EITSIPL-006
41	1NH14EC113	Sachin.R.M	Eurofins IT	NH-ECE-18-EITSIPL-007
42	1NH14EC134	Sushmitha.M. A	Eurofins IT	NH-ECE-18-EITSIPL-008
43	1NH14EC070	Lakshmi.M	Eximius Design	NH-ECE-18-EDIPL-001
44	1NH14EC150	Neha Singh	Eximius Design	NH-ECE-18-EDIPL-002
45	1NH14EC153	Suraksha Chaudhary	Eximius Design	NH-ECE-18-EDIPL-003
46	1NH14EC009	Alankrit Mishra	Fintellix Solutions	NH-ECE-18-FSPL-002
47	1NH14EC108	Ruby Khan	Fintellix Solutions	NH-ECE-18-FSPL-003
48	1NH14EC753	Rigil Gracious	Fintellix Solutions	NH-ECE-18-FSPL-004
49	1NH14EC419	Punithkumar.P.H	Hexaware	NH-ECE-18-HTL-004
50	1NH14EC425	Ankush Kumar Hg	Hexaware	NH-ECE-18-HTL-005
51	1NH14EC058	K R Pranav Bhargav Reddy	Hotelsoft	NH-ECE-18-RTPL-007
52	1NH14EC072	Mahalakshmi T S	Hotelsoft	NH-ECE-18-RTPL-008

53	1NH14EC074	Mallikarjun S Patil	Hotelsoft	NH-ECE-18-RTPL-009
54	1NH14EC083	Nanda Gopal Naik	Hotelsoft	NH-ECE-18-RTPL-010
55	1NH14EC085	Naveen Kumar Reddy	Hotelsoft	NH-ECE-18-RTPL-011
56	1NH14EC089	Prabbathi Sravani	Hotelsoft	NH-ECE-18-RTPL-012
57	1NH14EC714	Kandati Praveen Kumar	Infosys Ltd	NH-ECE-18-IL-004
58	1NH14EC742	Antonita Aishwarya.A	Infosys Ltd	NH-ECE-18-IL-005
59	1NH14EC092	Pavan Kumar Reddy.A	Intimetec	NH-ECE-18-ITVPL-001
60	1NH14EC094	Pawan Kaushik	Intimetec	NH-ECE-18-ITVPL-002
61	1NH14EC119	Santhosh M	Juniper Networks	NH-ECE-18-JNIPL-001
62	1NH14EC124	Shreen John	Juniper Networks	NH-ECE-18-JNIPL-002
63	1NH14EC126	Sirisha S	Juniper Networks	NH-ECE-18-JNIPL-003
64	1NH14EC012	Amruth Raju G	Mindtree	NH-ECE-18-MTL-005
65	1NH14EC017	Anu.R. Reddy	Mindtree	NH-ECE-18-MTL-006
66	1NH14EC029	Dhanush R	Mindtree	NH-ECE-18-MTL-007
67	1NH14EC030	Dilip Kumar	Mindtree	NH-ECE-18-MTL-008
68	1NH14EC032	Dondha Naveen Kumar	Mindtree	NH-ECE-18-MTL-009
69	1NH14EC041	Harish K	Mindtree	NH-ECE-18-MTL-010
70	1NH14EC045	Harsha K S	Mindtree	NH-ECE-18-MTL-011
71	1NH14EC051	Hemashree G	Mindtree	NH-ECE-18-MTL-012
72	1NH14EC143	Vinay Prasad.N	NineLeaps	NH-ECE-18-NLTSPL-005
73	1NH14EC022	Meghana.C	NTTDATA	NH-ECE-18-NTTDGDSPL-008

74	1NH14EC154	Abhijnan Mitra	NTTDATA	NH-ECE-18-NTTDGDSPL-009
75	1NH14EC747	Mohd Saquib Pasha	NTTDATA	NH-ECE-18-NTTDGDSPL-010
76	1NH14EC754	Rohit Prasad.K.M	NTTDATA	NH-ECE-18-NTTDGDSPL-011
77	1NH14EC757	Soumya Shree.C. Javali	NTTDATA	NH-ECE-18-NTTDGDSPL-012
78	1NH14EC758	Varsha G Hiregoudar	NTTDATA	NH-ECE-18-NTTDGDSPL-013
79	1NH14EC135	Swaroop Reddy	Profinch	NH-ECE-18-PSPL-010
80	1NH14EC138	Tejaswini M	Profinch	NH-ECE-18-PSPL-011
81	1NH14EC146	Maheswar Reddy	Profinch	NH-ECE-18-PSPL-012
82	1NH14EC156	Prahlada Reddy Peddi Reddy	Profinch	NH-ECE-18-PSPL-013
83	1NH14EC101	Puneeth.N	Quick Logic	NH-ECE-18-QLSIPL-001
84	1NH14EC104	Reine D Bharati	Quick Logic	NH-ECE-18-QLSIPL-002
85	1NH14EC110	S. Divya	Quick Logic	NH-ECE-18-QLSIPL-003
86	1NH14EC115	Sai Manoj N	Quick Logic	NH-ECE-18-QLSIPL-004
87	1NH14EC118	Sanjay S Nayak	Quick Logic	NH-ECE-18-QLSIPL-005
88	1NH14EC014	Amrutha Varshini.B	Quintiles(IQVIA)	NH-ECE-18-IHASPL-005
89	1NH14EC069	Krishna Priya.S	Quintiles(IQVIA)	NH-ECE-18-IHASPL-006
90	1NH14EC073	Malbika Singh	Quintiles(IQVIA)	NH-ECE-18-IHASPL-007
91	1NH14EC076	Manu.N	Sankalp Semiconductor	NH-ECE-18-SSPL-001
92	1NH14EC091	Parthivi Singh	Sankalp Semiconductor	NH-ECE-18-SSPL-002
93	1NH14EC093	Pavithta.M	Sankalp Semiconductor	NH-ECE-18-SSPL-003
94	1NH14EC095	Kushal Reddy	Sankalp Semiconductor	NH-ECE-18-SSPL-004

95	1NH14EC096	Prakruthi.M	Sankalp Semiconductor	NH-ECE-18-SSPL-005
96	1NH14EC739	Akshay Kumar Nayaka.R	Sankalp Semiconductor	NH-ECE-18-SSPL-006
97	1NH14EC130	Sowmya Priya.V	Secpod	NH-ECE-18-MCDBSECPOD-001
98	1NH15EC409	Komaleshwari. K	Secpod	NH-ECE-18-MCDBSECPOD-002
99	1NH15EC410	Loknath. A	Secpod	NH-ECE-18-MCDBSECPOD-003
100	1NH15EC417	Ranjith B	Secpod	NH-ECE-18-MCDBSECPOD-004
101	1NH15EC422	Sunil C P	Secpod	NH-ECE-18-MCDBSECPOD-005
102	1NH15EC432	Rajashekhara Reddy	Secpod	NH-ECE-18-MCDBSECPOD-006
103	1NH14EC050	Sonal Ganesh Hegde	Servion	NH-ECE-18-SGSL-001
104	1NH14EC151	Parbej Alam Khan	Servion	NH-ECE-18-SGSL-002
105	1NH14EC131	Sowmya.N	Sonata	NH-ECE-18-SSL-001
106	1NH14EC718	Kethineni Suneetha	Sonata	NH-ECE-18-SSL-002
107	1NH14EC720	Kartheek Nandina	Sonata	NH-ECE-18-SSL-003
108	1NH14EC735	Tarun M	Sonata	NH-ECE-18-SSL-004
109	1NH14EC055	Jayashree.T	Sony	NH-ECE-18-SC-001
110	1NH14EC057	Gnaneshwar	Sony	NH-ECE-18-SC-002
111	1NH14EC059	Jagathejeswara Reddy	Sony	NH-ECE-18-SC-003
112	1NH14EC071	Muppireddy Shanmuya Ajay	Sony	NH-ECE-18-SC-004
113	1NH14EC075	Manasa.H. R	Sony	NH-ECE-18-SC-005
114	1NH14EC745	Harish.P	Sony	NH-ECE-18-SC-006
115	1NH14EC106	Riny Elizabeth Alex	Speridian Technologies	NH-ECE-18-ST-003

Criterion-4 Self-Assessment Report (SAR)

116	1NH14EC142	Varsha.A	Torry Harris	NH-ECE-18-THBSPL-005
117	1NH15EC408	Jayashreedevi. K	Valtech	NH-ECE-18-VISPL-002
118	1NH15EC426	Anilkumar Biradar	Valtech	NH-ECE-18-VISPL-003
119	1NH15EC428	Lavanya B K	Valtech	NH-ECE-18-VISPL-004
120	1NH15EC431	Prem Kumar M	Valtech	NH-ECE-18-VISPL-005
121	1NH15EC433	Rayphale Amit Dhanraj	Valtech	NH-ECE-18-VISPL-006
122	1NH14EC736	Vanitha T	Verdantis	NH-ECE-18-VTPL-003
123	1NH14EC746	Jayashree.R	Verdantis	NH-ECE-18-VTPL-004
124	1NH15EC402	Bharath Kumar N	Verdantis	NH-ECE-18-VTPL-005
125	1NH15EC405	Dinesh Chandra P.S	Verdantis	NH-ECE-18-VTPL-006
126	1NH14EC005	Agnes Sneha K	VVDN	NH-ECE-18-VVDNTPL-001
127	1NH14EC020	Bharathi.V	VVDN	NH-ECE-18-VVDNTPL-002
128	1NH14EC031	Dinaz Z Sholapurwala	VVDN	NH-ECE-18-VVDNTPL-003
129	1NH14EC044	Harish.T	VVDN	NH-ECE-18-VVDNTPL-004
130	1NH14EC024	Chandana.S.M	Wipro Ltd	NH-ECE-18-WL-014
131	1NH14EC036	Gaurav Kumar Gupta	Wipro Ltd	NH-ECE-18-WL-015
132	1NH14EC090	Pallavi.G. A	Wipro Ltd	NH-ECE-18-WL-016
133	1NH14EC117	Sanjana.K	Wipro Ltd	NH-ECE-18-WL-017
134	1NH14EC152	Pranjal Pokhrel	Wipro Ltd	NH-ECE-18-WL-018
135	1NH14EC732	Rethna Jennifer	Wipro Ltd	NH-ECE-18-WL-019
136	1NH14EC741	Amrutha Reddy.R. G	Wipro Ltd	NH-ECE-18-WL-020

137	1NH14EC751	Priya Pai.K	Wipro Ltd	NH-ECE-18-WL-021
138	1NH14EC752	Rama Tonapi	Wipro Ltd	NH-ECE-18-WL-022
139	1NH14EC018	Bada Sai Anil Prasanna Kumar	Zapcom Solutions	NH-ECE-18-ZCSPL-001
140	1NH14EC028	Deekshitha.R	Zapcom Solutions	NH-ECE-18-ZCSPL-002
141	1NH14EC034	Gollapudi Gowtham Sai Gopal	Zapcom Solutions	NH-ECE-18-ZCSPL-003
142	1NH14EC040	Gundala Pardhasaradhi Reddy	Zapcom Solutions	NH-ECE-18-ZCSPL-004
143	1NH14EC063	Karah Vir Kumar	Zapcom Solutions	NH-ECE-18-ZCSPL-005
144	1NH14EC068	Kiran R	Zapcom Solutions	NH-ECE-18-ZCSPL-006

Assessment Year: 2016-17 (CAYm3)

Table 4.4.3: Assessment Year: 2016-17 (CAYm3)

Sr. No.	USN	Name of the Student	Organization Placed in	Offer Letter Number Required from HRD for NBA
1	1NH13EC754	Shubham Mishra	Amazon	NH-ECE-17-ADC-004
2	1NH13EC007	Amareshwar Babu U	Anora Semiconductors	NH-ECE-17-ASLPL-001
3	1NH13EC009	Anand B V	Capgemini	NH-ECE-17-CTSIL-013
4	1NH13EC041	Jayashree J	Capgemini	NH-ECE-17-CTSIL-014
5	1NH13EC052	Kevin Gonsalves	Capgemini	NH-ECE-17-CTSIL-015
6	1NH13EC057	Kusumanjali.S	Capgemini	NH-ECE-17-CTSIL-016
7	1NH13EC063	Megha S R	Capgemini	NH-ECE-17-CTSIL-017
8	1NH13EC102	Sithara T R	Capgemini	NH-ECE-17-CTSIL-018

9	1NH13EC116	Tasmia Shafi	Capgemini	NH-ECE-17-CTSIL-019
10	1NH13EC715	C. Vinay Sagar	Capgemini	NH-ECE-17-CTSIL-020
11	1NH13EC758	Swetha S	Capgemini	NH-ECE-17-CTSIL-021
12	1NH13EC090	Sagar D N	Cyient	NH-ECE-17-CL-002
13	1NH13EC004	Akhila V	Epsilon	NH-ECE-17-CSDCMLLP-008
14	1NH13EC074	Pavithra.T. G	Epsilon	NH-ECE-17-CSDCMLLP-009
15	1NH13EC736	Nanditha.K	Epsilon	NH-ECE-17-CSDCMLLP-010
16	1NH13EC760	Theertha Prabhakaran	Epsilon	NH-ECE-17-CSDCMLLP-011
17	1NH13EC721	Geetanjali Puri	Eurofins IT	NH-ECE-17-EITSIPL-013
18	1NH13EC064	Nagesh.C. R	Global Logic	NH-ECE-17-GL-001
19	1NH13EC038	Gowthami P	Global Logic	NH-ECE-17-GL-002
20	1NH13EC042	Jeevitha Naidu V	Global Logic	NH-ECE-17-GL-003
21	1NH13EC044	Jerald Manuel P	Global Logic	NH-ECE-17-GL-004
22	1NH13EC110	Swapna N	Lowe's	NH-ECE-17-LSIPL-002
23	1NH13EC135	Immadiseti Venkata Pavan Kumar	Lowe's	NH-ECE-17-LSIPL-003
24	1NH13EC137	Dhanush Kumar	Lowe's	NH-ECE-17-LSIPL-004
25	1NH13EC703	Aishwarya T	Lowe's	NH-ECE-17-LSIPL-007
26	1NH13EC704	Ajay S	Lowe's	NH-ECE-17-LSIPL-008
27	1NH13EC002	Adnan Zuhaib	Microland	NH-ECE-17-ML-001
28	1NH13EC095	Saranya A	Microland	NH-ECE-17-ML-002

29	1NH13EC027	D.V. Hemanth Kumar	Mindtree	NH-ECE-17-MTL-004
30	1NH13EC119	U Praveen	Mindtree	NH-ECE-17-MTL-005
31	1NH13EC035	Domnic Paul Hoover	NTT Data	NH-ECE-17-NTTDGDSPL-012
32	1NH13EC045	Jiji M Varghese	NTT Data	NH-ECE-17-NTTDGDSPL-013
33	1NH13EC059	Liby Ann Baby	NTT Data	NH-ECE-17-NTTDGDSPL-014
34	1NH13EC072	Parvathy K	NTT Data	NH-ECE-17-NTTDGDSPL-015
35	1NH13EC109	Sushmita Mohapatra	NTT Data	NH-ECE-17-NTTDGDSPL-016
36	1NH13EC118	Thejaswini K	NTT Data	NH-ECE-17-NTTDGDSPL-017
37	1NH13EC124	Vijay Krishna Sharma	NTT Data	NH-ECE-17-NTTDGDSPL-018
38	1NH13EC739	P Yashaswini	NTT Data	NH-ECE-17-NTTDGDSPL-019
39	1NH13EC746	Saheera Banu Mudna L	NTT Data	NH-ECE-17-NTTDGDSPL-020
40	1NH13EC748	Santhosh S	NTT Data	NH-ECE-17-NTTDGDSPL-021
41	1NH13EC006	Akshaya S	Pin Click	NH-ECE-17-PC-003
42	1NH13EC024	Chethan.C	Pin Click	NH-ECE-17-PC-004
43	1NH13EC717	Chethan R	Pin Click	NH-ECE-17-PC-005
44	1NH13EC005	Aksharamurali N	Sankalp Semiconductors	NH-ECE-17-SSPL-001
45	1NH13EC050	Kavya S	Sankalp Semiconductors	NH-ECE-17-SSPL-002
46	1NH13EC053	Kiran Kumar N	Sankalp Semiconductors	NH-ECE-17-SSPL-003
47	1NH13EC054	Kiran R	Sankalp Semiconductors	NH-ECE-17-SSPL-004
48	1NH13EC058	Lavanya S	Sankalp Semiconductors	NH-ECE-17-SSPL-005
49	1NH13EC062	Manjunatha.M	Sankalp Semiconductors	NH-ECE-17-SSPL-006

50	1NH13EC724	K Rakshith Rao	Sankalp Semiconductors	NH-ECE-17-SSPL-007
51	1NH13EC725	Kavya S	Sankalp Semiconductors	NH-ECE-17-SSPL-008
52	1NH13EC727	M Jeevan Kishore	Sankalp Semiconductors	NH-ECE-17-SSPL-009
53	1NH14EC408	Keerthi. V. A	Sankalp Semiconductors	NH-ECE-17-SSPL-010
54	1NH14EC409	Lakshme. A	Sankalp Semiconductors	NH-ECE-17-SSPL-011
55	1NH13EC097	Sheetal Agarwal	Servion Global Solutions	NH-ECE-17-SGSL-002
56	1NH13EC744	Rakshita S	Sigma infosolutions	NH-ECE-17-SI-001
57	1NH13EC099	Shruti R Barker	Sony	NH-ECE-17-SC-001
58	1NH13EC111	Swaroop Mithra B R	Sony	NH-ECE-17-SC-002
59	1NH13EC112	Sweta Subramanian	Sony	NH-ECE-17-SC-003
60	1NH13EC113	Syed Sameer M	Sony	NH-ECE-17-SC-004
61	1NH13EC125	Vijay S	Sony	NH-ECE-17-SC-005
62	1NH13EC130	Yashashwini C	Sony	NH-ECE-17-SC-006
63	1NH13EC132	Sonu Kumar	Sony	NH-ECE-17-SC-007
64	1NH13EC728	Madduru Sasidhar Reddy	Sony	NH-ECE-17-SC-008
65	1NH13EC756	Smitha C	Sony	NH-ECE-17-SC-009
66	1NH13EC757	Suraj Kumar	Sony	NH-ECE-17-SC-010
67	1NH14EC422	Sridevi. S	Sony	NH-ECE-17-SC-011
68	1NH13EC129	Vismaya Menon	Speridian	NH-ECE-17-ST-001
69	1NH13EC750	Sendil B	Speridian	NH-ECE-17-ST-002
70	1NH13EC049	Kavya K	Sprinklr	NH-ECE-17-SPB-001

71	1NH13EC085	Ranganatha K	Sprinklr	NH-ECE-17-SPB-002
72	1NH13EC087	S Vinay Kumar Reddy	Sprinklr	NH-ECE-17-SPB-003
73	1NH13EC088	S. Manjunatha	Sprinklr	NH-ECE-17-SPB-004
74	1NH13EC089	Safvana K K	Sprinklr	NH-ECE-17-SPB-005
75	1NH13EC091	Sampada Aryal	Sprinklr	NH-ECE-17-SPB-006
76	1NH13EC092	Sanjay S	Sprinklr	NH-ECE-17-SPB-007
77	1NH13EC743	Raju S	Sprinklr	NH-ECE-17-SPB-008
78	1NH13EC749	Seema R P	Sprinklr	NH-ECE-17-SPB-009
79	1NH13EC751	Shashank Kulkarni S	Sprinklr	NH-ECE-17-SPB-010
80	1NH13EC752	Shivakumar Yevoor	Sprinklr	NH-ECE-17-SPB-011
81	1NH13EC065	Neelam Gupta	Stellapps	NH-ECE-17-STPL-002
82	1NH13EC066	Nischitha A	Stellapps	NH-ECE-17-STPL-003
83	1NH13EC738	Nikhil.V	Stellapps	NH-ECE-17-STPL-005
84	1NH14EC412	Nagesh. V	Stellapps	NH-ECE-17-STPL-006
85	1NH14EC414	P. R Aravind	Stellapps	NH-ECE-17-STPL-007
86	1NH14EC429	Pavan. L	Stellapps	NH-ECE-17-STPL-008
87	1NH13EC742	Prassanathma P	TCS	NH-ECE-17-TCSL-001
88	1NH13EC055	Kushal Kumar.S. V	TCS	NH-ECE-17-TCSL-002
89	1NH13EC017	Benoy Samuel Mathews	Tech Mahindra	NH-ECE-17-ELTP-005
90	1NH13EC020	Bhaswanth Mannam	Tech Mahindra	NH-ECE-17-ELTP-006

91	1NH13EC036	E. V. Mahesh Kumar	Tech Mahindra	NH-ECE-17-ELTP-007
92	1NH13EC056	Kushal V	Tech Mahindra	NH-ECE-17-ELTP-008
93	1NH13EC061	Madhu.V	Tech Mahindra	NH-ECE-17-ELTP-009
94	1NH13EC070	P Lahari Prasad	Tech Mahindra	NH-ECE-17-ELTP-010
95	1NH13EC071	Parashuram.K	Tech Mahindra	NH-ECE-17-ELTP-011
96	1NH13EC075	Peketi Reshma	Tech Mahindra	NH-ECE-17-ELTP-012
97	1NH13EC083	Rachana N Patil	Tech Mahindra	NH-ECE-17-ELTP-013
98	1NH13EC103	Soham Ghosh	Tech Mahindra	NH-ECE-17-ELTP-014
99	1NH13EC115	T Sadrak	Tech Mahindra	NH-ECE-17-ELTP-015
100	1NH13EC121	Varsha K V	Tech Mahindra	NH-ECE-17-ELTP-016
101	1NH13EC723	Jhansi V	Tech Mahindra	NH-ECE-17-ELTP-017
102	1NH13EC733	Mohammed Sadiq	Tech Mahindra	NH-ECE-17-ELTP-018
103	1NH13EC735	N Rajeev Singh	Tech Mahindra	NH-ECE-17-ELTP-019
104	1NH13EC745	Renuka Bathula	Tech Mahindra	NH-ECE-17-ELTP-020
105	1NH13EC003	Aishwarya Sudarsan	Torry Harris	NH-ECE-17-THBSPL-007
106	1NH13EC078	Pragathi Prabhu	Torry Harris	NH-ECE-17-THBSPL-008
107	1NH13EC709	Ankit Yadav	Wipro	NH-ECE-17-WL-019
108	1NH13EC011	Aparna Revi	Wipro	NH-ECE-17-WL-020
109	1NH13EC015	Athira Revi	Wipro	NH-ECE-17-WL-021
110	1NH13EC032	Diana Lenita Dias	Wipro	NH-ECE-17-WL-022
111	1NH13EC098	Shruthi H V	Wipro	NH-ECE-17-WL-023

Criterion-4 Self-Assessment Report (SAR)

112	1NH13EC101	Shubham Shekhar Mishra	Wipro	NH-ECE-17-WL-024
113	1NH13EC108	Sushma N	Wipro	NH-ECE-17-WL-025
114	1NH13EC114	Syeda Sana	Wipro	NH-ECE-17-WL-026
115	1NH13EC722	Himanshu Kandpal	Wipro	NH-ECE-17-WL-027

4.5 PROFESSIONAL ACTIVITIES (20)

4.5.1 Professional Societies/Chapters and Organizing Engineering Events (5)

The Department of Electronics and Communication Engineering, encourages team work and the spirit of self-reliance among the students. The Professional bodies like IEEE, ISTE, and IEI are involved in grooming professionalism and technical competency by forming various student clubs. These professional societies have the following broad objectives:

- 1) Forming societies/clubs to spread the knowledge of one person to the masses of the people who are ready to seek it.
- 2) Exchange of information among its members and the technical community throughout the world there by fostering all round development to the student community.
- 3) Plan & organize technical programs and activities, such as special lectures, workshops, Training, seminars, webinars, symposia, and exhibitions etc. for benefit of students on regular basis.
- 4) 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 mechanical engineering discipline etc.
- 5) Augment various aspects relating to professional development of students.

Activities like Hands-on training, workshops, distinguished lectures, competitions helped the student community in designing and developing complex engineering problems as well as to attain problem solving skills for engineering systems. Students are benefited in terms of innovative, frugal and eco-friendly projects, Journal publications and further encouraged to file patents of their own creative ideas.

Table 4.5.1: List of Professional Societies/Chapters

Sl. No	Professional Societies/ Chapters	Branch Code/Branch Name/Reference	No of Events Organized
1	Indian Society for Technical Education (ISTE)	New Horizon College of Engineering	17
2	The Institute of Electronics and Telecommunication Engineering (IETE)	New Horizon College of Engineering	08
3	Institute of Electrical and Electronics Engineering (IEEE)	STB66131/New Horizon College of Engineering	26
4	Marine Technology Society (MTS)	New Horizon College of Engineering	05
5	The Institution of Engineers (IEI)	IM000146-7/New Horizon College of Engineering	05
6	University Space Engineering Consortium (UNISEC)- India	New Horizon College of Engineering	01

Table 4.5.2: Summary of Events Organized under Professional Societies/Chapters

Sl. No	Professional Societies/chapters	No of Events		
		2017-18	2018-19	2019-20
1	Indian Society for Technical Education (ISTE)	11	5	1
2	The Institute of Electronics and Telecommunication Engineering (IETE)	-	1	7
3	Institute of Electrical and Electronics Engineering (IEEE)	-	13	13
4	Marine Technology Society (MTS)	-	4	1
5	The Institution of Engineers (IEI)	-	2	3
6	University Space Engineering Consortium (UNISEC)- India	-	-	1

Table 4.5.1.3: List of Professional Societies/Chapters and Organizing Engineering Events in CAY (2019-20)

Sl. No	Event Type	Name of Professional Societies/ Chapters	Organized Event and Title	Name of Coordinators	Resource Person	Organized Date	No. of Participants/ Attendees
1	Workshop	IEEE	Hands on workshop on Node MCU & Block chain	Dr. Nisha, Professor and Branch Counselor, IEEE NHCE Student Branch Prof. Divya Sharma. Prof. Neethu Jhony	Mr. Muhammed Mussaveer, ITC Info tech	26/10/2019	48
2	Workshop	IEEE & Electronics for you	Do it yourself Part-2 (Encouraged students to do their min projects)	Dr. Nisha, Professor and Branch Counselor, IEEE NHCE Student Branch Prof. Dharmambal Mr. Shyam Sampath, Chair, IEEE NHCE SBMs. Sushma Secretary, IEEE NHCE SB	Mr. Shyam, Mr. Akshay Rao, Mr. Shripath	26/10/2019	34
3	Workshop	IETE	Two Days Inter-Disciplinary Workshop on Robotics	Dr Piruthiviraj P	Mr Goutham & Mr Ullas, Glacko Semiconductor, Bangalore	30/09/2019 & 01/10/2019	48

Criterion-4 Self-Assessment Report (SAR)



4	Workshop	IEEE & Electronics for you	Do it yourself (Hand on workshop which trained students to do their own Mini projects)	Dr. Nisha, Professor and Branch Counselor, IEEE NHCE Student Branch. Prof. Dharmambal Mr Yasir- Student co-ordinator Ms. Sushma – Student co-ordinator	Faculty and Students Co-ordinators	31/08/2019	29
5	Workshop	IETE	Workshop on PCB Designing and Fabrication	Dr Piruthiviraj P	Mr. Kotresh, Indian Tech Keys, Bangalore	30/08/2019	55
6	Student Activity	IEEE	Event Brain Games 2.0 (Technical Quiz, Debug and decode lab circuits & Tenknovation)	Prof. Divya Sharma, Prof. Karthik C V, Mr. Mohammad Ghassan, Student Co-ordinator Mr. Suraj Suresh, Student Co-ordinator	NA	27/02/2020	80 (56 from ECE)
7	Student Activity	IETE	Subject Oriented activity on Engineering Electromagnetics	Dr. Naveen H, Dr. Gurulakshmi A B Mr. Jagadeesh D, Student coordinator. Mr. K Girivardhan, Student coordinator.	NA	13/11/2019	80

Criterion-4 Self-Assessment Report (SAR)



8	Student Activity	IEEE, IETE & MTS	Electronics for Dummies (Analyze the circuits using Smart Phone App)	Dr. Naveen H, Dr. Gurulakshmi, Mr. Jagadeesh D, Student coordinator. Mr. K Girivardhan, Student coordinator.	NA	24/08/2019	50
9	Seminar/ Student Activity	IETE	Seminar and Demonstration on Robotics	Dr Piruthiviraj P	Mr Goutham & Mr Ullas, Glacko Semiconductor, Bangalore	24/08/2019	40
10	Webinar /Seminar	IEEE	Hands On Workshop “Introduction to Matlab and Simulink”	Prof. Rajesh G	Mr. Rakshith Senior Application Engineer	16/06/2020	137
11	Webinar /Seminar	IEEE	Nuts and bolts of an effective scientific Research Manuscript	Dr. M. Jayanthi	Dr. Jude Hemanth Asso Professor, ECE, Karunya University	25/06/2020	45

Criterion-4 Self-Assessment Report (SAR)



12	Webinar /Seminar	IEI	Career options and opportunities for Electronics and Communication Engineering Graduates	Dr. Mohan Kumar Naik	Mr. Renjith C V Electrical Architect /Product designer Philips India limited pune	30/05/2020	135
13	Webinar /Seminar	IEI	Cracking the code of career development, Unlocking the Potential Talent	Dr. Mohan Kumar Naik	Ms. Neha Bagaria, Founder & CEO of JobsforHer	16/05/2020	100
14	Webinar /Seminar	IEI	How Technology can be leveraged in professional and personal life to address issues during COVID-19	Dr. Mohan Kumar Naik	Ms. Neha Bagaria, Founder & CEO of JobsforHer	25/04/2020	100
15	Seminar	IEEE	Application Reliability of a Wide Bandgap (WBG) Semiconductor Power Electronics Switch”.	Dr. Nisha, Professor and Branch Counselor, IEEE NHCE Student Branch. Prof.Dharmambal V. Mr. Shyam Sampath-chair IEEE NHCE SB. Ms. Athira Ajay Vice chair IEEE NHCE SB.	Dr. Krishna Shenai University of Chicago, Chicago, Illinois (USA)	26/07/19	64

Criterion-4 Self-Assessment Report (SAR)



16	Seminar	IEEE	"Industry 4.0 - Evolution, Components, Roles and Challenges"	Mr. Shyam Sampath, Chair, IEEE NHCE SB. Athira, Vice chair, IEEE NHCE SB. Akshay, Treasurer, IEEE NHCE SB. Sushma, Secretary, IEEE NHCE SB.	Dr. B. Hariram Selvamurugan Satheesh, Principal Scientist ABB	18/09/19	65
17	Seminar	IETE	One-day Seminar on "Wireless Generations Leading to 5G"	Dr Piruthiviraj P Associate Professor	Prof C Murali Co-Chairman, IMAPS India, Past Vice President IETE HQ, New Delhi	02/08/2019	50
18	Conference	IEEE	International Conference On "Innovative Research in Engineering and Management and Sciences" (ICIREMS – 2019)	Dr Sanjeev Sharma HOD-ECE, Conference Steering Committee Dr Piruthiviraj P Associate Professor Department Coordinator	Keynote Speaker Mr. Bipin, Sr. Director, INVECAS. External Track Chair Dr P S Bhatnagar Advisor, SarlaBirlaUniversity Ranchi	19/12/2019 20/12/2019 21/12/2019	52

Criterion-4 Self-Assessment Report (SAR)

19	Paper presentation	IEEE	Paper presentation on emerging technologies	Prof. Divya Sharma, Prof. Karthik C V, Mr. Mohammad Ghassan, Student Co-ordinator Mr. Prajwal, Student Co-ordinator	Dr. Gurulakshmi A B Prof. Maheshwari M Internal Jury	13/09/2019	11
20	Project Exhibition & Conference	IEEE, ISTE & IETE	TECHORIZON - 2020 Project Exhibition & Conference	Prof. Ishani Mishra	Ms. Aksharamurali N Design Engineer Frenus Tech PVT LTD Bengaluru	22nd to 29th June 2020	52 batches

by Nisha Shaji

Distinguished Lecturer Visits IEEE PELS Bangalore Chapter

The IEEE Power Electronics Society (PELS) Bangalore Chapter, in association with the local IEEE Industrial Electronics Society (IES) Chapter, presented a seminar, "Application Reliability of a Wide Bandgap (WBG) Semiconductor Power Electronics Switch" on 26 July 2019 at the New Horizon College of Engineering (NHCE) in Bangalore, India. The lecture was delivered by Prof. Krishna Shenai, an IEEE PELS Distinguished Lecturer and a pioneer in solid-state power conversion. The event was attended by approximately 64 students and faculty members from several engineering colleges. Nisha Shaji, a professor of electronics and communication engineering (ECE) at NHCE and an IEEE PELS Bangalore Chapter executive committee member, formally welcomed the gathering on behalf of the PELS Bangalore Chapter and the college. Athira Ajayakumar, vice chair of the IEEE Student Branch Chapter at NHCE, introduced the souvenir, and Prof. Sanjeev Sharma, head of the



FIG 1 Prof. Sanjeev Sharma, head of the Department of ECE at New Horizon College of Engineering, Bangalore, presenting a souvenir to Prof. Shenai (left).

Prof. Shenai emphasized the need to develop converter designs that optimize performance, cost and reliability metrics.

ECE Department at NHCE, presented the souvenir (Figure 1).

Prof. Shenai started his presentation with a brief discussion of the benefits of becoming a member of

IEEE PELS and followed with an inspiring one-hour lecture on the application reliability of modern power semiconductor devices. The discussion focused on three major applications driving the current Indian economy: 1) grid integration of solar power, 2) electric vehicles, and 3) advanced motor drives. In his talk, Prof. Shenai emphasized the need to develop converter designs that optimize performance, cost, and reliability metrics. He illustrated a systematic technology development approach that is needed

for the rapid market adaptation of new and emerging power conversion technologies, such as those based on silicon carbide and gallium nitride semiconductors. He also stressed the importance of developing a holistic engineering education that focuses on the application engineering of advanced solid-state power conversion technologies to develop optimum solutions for impending energy and environmental challenges. A vigorous discussion and lively intellectual exchange of many novel research ideas concluded the event.

Digital Object Identifier 10.1109/PEL.2019.2947108
Date of current version: 17 December 2019

Figure 4.5.1.1: Souvenir presented to Prof. Shenai by Dr. Sanjeev Sharma, HOD-ECE, New Horizon College of Engineering, Bangalore

Table 4.5.1.4: List of Professional Societies/Chapters and Organizing Engineering Events in CAY (2018-19)

Sl. No	Event Type	Name of Professional Societies / Chapters	Organized Event and Title	Name of Co-ordinators	Resource Person	Organized Date	No. of Participants/ Attendees
1	Workshop	IEEE	A hands on Workshop on Sensors and Arduino	Dr. Nisha, Professor and Branch Counselor, IEEE NHCE Student Branch. Ms. Dharmambal V, Mr. Shyam Sampath- Chair IEEE NHCE SB Ms. Athira Ajay Vice Chair IEEE NHCE SB	Mr. Shyam & Mr. Aksay Rao VI Sem ECE Students	17/04/19	11 Teams
2	Workshop	IEEE, ISTE & MTS	Workshop on Marine exploration build your own ROV	Dr. Nisha, Professor and Branch Counselor, IEEE NHCE Student Branch, Dr. Naveen H, Assistant Professor, MTS co-ordinator.	Dr. Naveen H, Assistant Professor, NHCE. Students club co-ordinators	16/04/19	30
3	Workshop	IEEE	Soldering Workshop	Dr. Nisha, Professor and Branch Counselor, IEEE NHCE Student Branch. Prof. Dharmambal V.	Mr. Nikhil Riyaz Research Engineer, NHCE	13/03/19	25

Criterion-4 Self-Assessment Report (SAR)



				Mr. Shyam Sampath- Chair IEEE NHCE SB Ms. Athira Ajay Vice chair IEEE NHCE SB			
4	Workshop	MTS	Workshop on underwater Autonomous vehicle	Dr. Nisha, Professor and Branch Counselor, IEEE NHCE Student Branch, Dr. Naveen H	Mr. Girish V Embedded Software Engineer, Synapptra Technology	26/11/18	30
5	Workshop	IEEE & Electronics for you	Workshop on PCB design and fabrication	Prof. Dharmambal Dr. Nisha, Professor and Branch Counselor, IEEE NHCE Student Branch	Student and faculty coordinators	24/10/18	34 (14 from ECE)
6	Workshop	ISTE	Workshop on IOT and Embedded System Design	Prof. Dharmambal V Mr. Hariraj R Student co-ordinator Mr. Janardhan Student co-ordinator	Student and faculty coordinators	02/10/18 03/10/18	42
7	Workshop	IEI	Workshop on Arduino	Prof. Dharmambal V. Mr. Hariraj R, Student co-ordinator Mr. Janardhan, Student co-ordinator	Student and faculty coordinators	26/09/18	45 (14 from ECE)
8	Seminar	IEEE	National Seminar— “New Space – An Era of Small	Dr. Nisha, Professor and Branch Counselor, IEEE NHCE Student Branch. Ms. Athira Ajayakumar, Vice chair, IEEE NHCE SB	Padamashri.Prof. R M Vasagam Project Director for APPLE	12/04/19	150

Criterion-4 Self-Assessment Report (SAR)



			Satellites: Opportunities and Challenges”				
9	Seminar	IEEE	Recent Trends on Embedded System: Airborne Electronic Applications	Dr. Nisha, Professor and Branch Counselor, IEEE NHCE Student Branch Prof. Dharmambal V.	Mr. Kulbhusan Bhaji Patariya ADA, Bangalore	11/04/19	110
10	Seminar	IEEE	Technical Talk on Machine learning	Dr. Nisha, Professor and Branch Counselor, IEEE NHCE Student Branch. Prof. Divya Sharma. Prof. Neethu Jhony.	Mr. RISHI JAIN, Senior Data Analyst, Schneider Electric, Bangalore	15/03/19	175 (69 from ECE)
11	IEEE Chapter Meet	IEEE	IEEE PELS and IES AGM Bangalore Chapter Meet 2019	Dr. Nisha, Professor and Branch Counselor, IEEE NHCE Student Branch, Mr. Denzel George, Student co-ordinator Ms. Athira Ajay, Student co-ordinator	Dr. Kaushik Basu IISC, Bangalore. Dr.B. Hariram Selvamurugan Satheesh Principal Scientist, ABB, Bangalore	17/02/19	24
12	Seminar	MTS	Seminar on marine technology	Dr. Nisha, Professor and Branch Counselor, MTS branch Counselor. Ms. Athira Ajayakumar, Student Co-ordinator	Dr. Venkatesan, Scientist G and Program Director at the National Institute of Ocean	24/11/18	30

Criterion-4 Self-Assessment Report (SAR)

					Technology. Nanda Kumar, CEO of Elektroniklab India Pvt Ltd. Nanda Kumar, CEO of Elektroniklab.		
13	Seminar	IEEE	Student Satellite Seminar 2018	Dr. Nisha, Professor and Branch Counselor, IEEE NHCE Student Branch	Dr. Meir Ariel – Director, Nano Satellite Centre, The Tel Aviv University, Israel	04/09/18	150
14	Student Activity	IEEE, ISTE & MTS	Designing ROV competition “Jalayantra – Navigate the Tempest “	Dr. Nisha, Professor and Branch Counselor, IEEE NHCE Student Branch. Dr. Naveen H, MTS Co-ordinator.	NA	27/04/19	20
15	Student Activity	IEEE	Event Brain games (Technical Quiz, Code debugging & Circuit debugging)	Dr. Nisha, Professor and Branch Counselor, IEEE NHCE Student Branch, Prof..Divya Sharma, Mr. Prajwal, Student co-ordinator, Mr. Parithosh, Student co-ordinator	NA	05/04/19	60

Criterion-4 Self-Assessment Report (SAR)



16	Student Activity	ISTE	Students Activity Idea Hunt (Encouraged students to give solutions to real world problems)	Dr. Naveen H, Dr. Priyamvada Singh, Mr. Denzel George, Student coordinator. Ms. Sanjana Ranjan, Student coordinator.	NA	05/10/18	13 (6 from ECE)
17	Student Activity	IEEE	Event TEST 360 (General aptitude, Technical Aptitude and treasure hunt)	Prof. Divya Sharma. Prof. Karthik C V. Mr. Prajwal, Student Co-ordinator Mr. Parithosh Student Co-ordinator	NA	22/09/18	130
18	Project Exhibition	IEEE, ISTE, IEI& IETE	TECHORIZO N -2019 Project Exhibition	Dr Sanjeev Sharma HOD-ECE, Convener Dr Jayanthi Associate Professor Department Coordinator	Dr Piruthiviraj P Dr. Nisha Internal Jury/Project Exhibition Judge	27/04/19	60



Figure 4.5.1.2: IEEE Student Satellite Seminar by Dr. Meir Ariel, Director, Nano Satellite Centre, The Tel Aviv University, Israel



Figure 4.5.1.3: MTS Executive Committee members handing over MTS NHCE Student Section Certificate



Figure 4.5.1.4: IEEE Workshop on PCB Design and Fabrication (EagleCAD)



Figure 4.5.1.5: MTS Workshop on Marine Exploration- Build your own RO

Table 4.5.1.5: List of Professional Societies/Chapters and Organizing Engineering Events in CAY (2017-18)

Sl. No	Event Type	Name of Professional Societies / Chapters	Organized Event and Title	Name of Co-ordinators	Resource Person	Organized Date	No. of Participants/ Attendees
1	Workshop	ISTE	Workshop on Arduino	Prof. Aruna Prof. Dharmambal Mr. Nikhil Riyaz- Student Co-ordinator Mr. Hariraj R Student Co-ordinator	Faculty & Student and coordinators	03/04/2018 04/04/2018	50
2	Workshop	ISTE	Workshop on Embedded System Design - ARM Cortex M4	Dr. Naveen H, Prof. Priyamvada Singh, Mr. Denzel George Student Co-ordinator Ms. Sanjana Ranjan Student Co-ordinator	Mr. Mohammed Hussain, StartCom India Pvt Ltd	28/03/2018	34
3	Workshop	ISTE	Workshop on Research Paper Writing using Latex	Dr. Naveen H, Prof. Priyamvada Singh. Mr. Denzel George Student Co-ordinator. Ms. Sanjana Ranjan Student Co-ordinator.	Dr. Naveen H, NHCE Prof. Rajeev Gopal, NHCE	20/03/2018	16
4	Workshop	ISTE	PCB fabrication Workshop	Prof. Aruna Prof. Dharmambal	Faculty & Student and coordinators	03/03/2018	49

Criterion-4 Self-Assessment Report (SAR)


				Mr. Janardhan- Student Co-ordinator Mr. Subramanya- Student Co-ordinator			
5	Workshop	ISTE	Workshop on Embedded System Design using PSOC 5LP	Dr. Naveen H Prof. Monika Gupta Prof. Parul Wadwa Amrut N G, Student Co-ordinator.	Dr. Naveen H, NHCE	18/11/2017	16
6	Workshop	ISTE	Workshop on IOT using Raspberry Pi.	Dr. Naveen H Prof. Monika Gupta Prof Parul Wadwa Mr. Nikhil Riyaz- Student Co-ordinator	Mr. Moorthy Enthu Technology Solutions India	28/10/2017	42
7	Workshop	ISTE	PCB Design and circuit etching	Prof. Aravinda K, Prof. Dharmambal Amrut N G, Student Co-ordinator. Sonal Hegde, Student Co-ordinator.	Faculty & Student and coordinators	25/10/2017	22
8	Workshop	ISTE	Workshop on Arduino Uno	Dr. Naveen H Prof. Monika Gupta Prof Parul Wadwa Mr. Subramanya- Student Co-ordinator	Mr. Faizan Shukoor, Sun Softronic systems	16/09/2017	65
9	Seminar	ISTE	Connect (Technical Talk on Basics and Importance	Prof. Divya Sharma. Prof. Karthik C V. Mohammed Musaveer,	Alumini Industrial Expert.	21/02/2018	170

Criterion-4 Self-Assessment Report (SAR)



			of –Python & Artificial Intelligence)	Student Co-ordinator Nagarjun K S, Student Co-ordinator			
10	Student Activity	ISTE	Student Activity Techie Hunt (To unleash real Techie in student)	Prof. Divya Sharma, Prof. Karthik C V, Mohammed Musaveer, Student Co-ordinator Nagarjun K S, Student Co-ordinator	NA	03/04/2018	50
11	Project Exhibition & Conference	ISTE	TECHORIZON -2018 Project Exhibition & Conference	Prof. Divya Sharma Prof. Ishani Mishra Mr. Denzel George Student Co-ordinator Mohammed Musaveer, Student Co-ordinator	Prof. Aravinda K Dr. K C R Nisha Internal Jury	19/05/2018	74

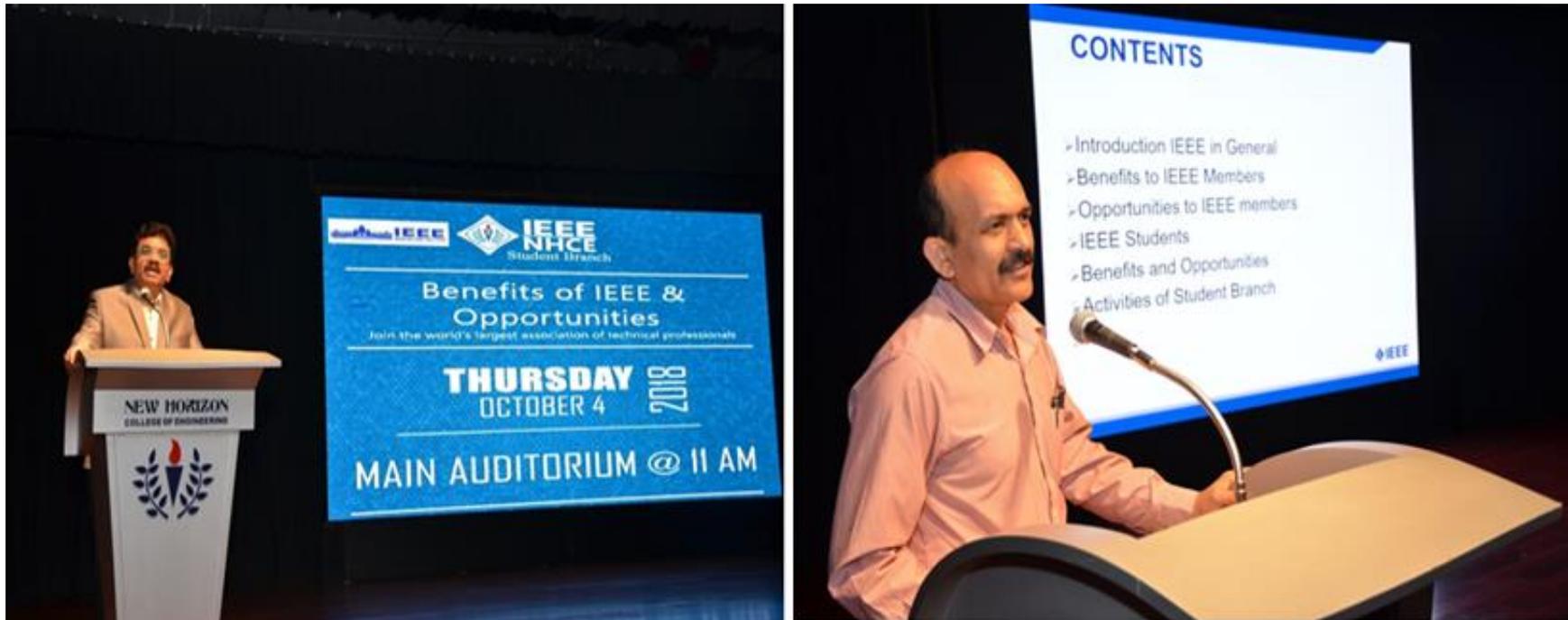


Figure 4.5.1.6: Presidential Address by Dr. Manjunatha, Principal, New Horizon College of Engineering and Orientation Talk by Dr. Navin Kumar, Chair, ComSoc Bangalore Section



Figure 4.5.1.7: NHCE team with Dr. Srinivas Talabattula, Associate Professor, ECE, IISC, IEEE Chapter Co-ordinator Chair, Bangalore Section

4.5.2 PUBLICATION OF TECHNICAL MAGAZINES, NEWSLETTERS, ETC... (5)

Table 4.5.2.1. List of Technical Magazines, News Letter [2019-20]

Sl. No	Year	Name of the Publication of Technical Magazines/Newsletters	Month of Publication	Name of the Chief Editor	Name of the Associate Editor	Student Editors
1	2019-20	The Connect-Issue 9 (Bi annual ECE Newsletter)	Jul-2019	Dr Sanjeev Sharma, HOD- ECE Prof. Aravinda K	Prof. Karthik C V	Nagarjun K S, Subramanya S
2	2019-20	The Connect-Issue 10 (Bi annual ECE Newsletter)	Jan-2020	Dr Sanjeev Sharma, HOD- ECE Prof. Aravinda K	Prof. Karthik C V Prof. Tessa Tommy	Stanislaus Lasrado

Table 4.5.2.2 College magazines [2019-20]

Sl. No	Year	Name of the Publication of Technical Magazines/Newsletters	Month of publication
1.	2019-20	NH-Bytes - Volume -IX- Issue 7 (Monthly College Magazine)	Jul-2019
2.	2019-20	NH-Bytes - Volume -IX- Issue 8 (Monthly College Magazine)	Aug-2019
3.	2019-20	NH-Bytes - Volume -IX- Issue 9 (Monthly College Magazine)	Sep-2019
4.	2019-20	NH-Bytes - Volume -IX- Issue 10(Monthly College Magazine)	Oct-2019
5.	2019-20	NH-Bytes - Volume -IX- Issue 11(Monthly College Magazine)	Nov-2019
6.	2019-20	NH-Bytes - Volume -IX- Issue 12 (Monthly College Magazine)	Dec-2019
7.	2019-20	NH-Bytes	Jan-2020

Table 4.5.2.3. List of Technical Magazines, News Letter [2018-19]

Sl. No	Year	Name of the Publication of Technical Magazines/Newsletters	Month of Publication	Name of the Chief Editor	Name of the Associate Editor	Student Editors
1	2018-19	The Connect-Issue 7 (Bi annual ECE Newsletter)	Jul-2018	Prof. Aravinda K	Prof. Sachin V	Nagarjun K S Subramanya G
2	2018-19	The Connect-Issue 8 (Bi annual ECE Newsletter)	Jan-2019	Dr Sanjeev Sharma, HoD-ECE, Prof. Aravinda K	Prof. Karthik C V	Nagarjun K S Subramanya S

Table 4.5.2.4 College magazines [2018-19]

Sl. No	Year	Name of the Publication of Technical Magazines/Newsletters	Month of publication
1.	2018-19	NH-Bytes - Volume -VIII- Issue 7 (Monthly College Magazine)	Jul-2018
2.	2018-19	NH-Bytes - Volume -VIII- Issue 8 (Monthly College Magazine)	Aug-2018
3.	2018-19	NH-Bytes - Volume -VIII Issue 9 (Monthly College Magazine)	Sep-2018
4.	2018-19	NH-Bytes - Volume -VIII- Issue 10 (Monthly College Magazine)	Oct-2018
5.	2018-19	NH-Bytes - Volume -VIII- Issue 11 (Monthly College Magazine)	Nov-2018
6.	2018-19	NH-Bytes - Volume -VIII- Issue 12 (Monthly College Magazine)	Dec-2018
7.	2018-19	NH-Bytes - Volume -IX- Issue 1 (Monthly College Magazine)	Jan-2019
8.	2018-19	NH-Bytes - Volume -IX- Issue 2 (Monthly College Magazine)	Feb-2019

9.	2018-19	NH-Bytes - Volume -IX- Issue 3 (Monthly College Magazine)	Mar-2019
10.	2018-19	NH-Bytes - Volume -IX- Issue 4 (Monthly College Magazine)	Apr-2019
11.	2018-19	NH-Bytes - Volume -IX- Issue 5 (Monthly College Magazine)	May-2019
12.	2018-19	NH-Bytes - Volume -IX- Issue 6 (Monthly College Magazine)	Jun-2019

Table 4.5.2.5. List of Publication of Technical Magazines, Newsletters in CAY 2017-18

Sl. No	Year	Name of the Publication of Technical Magazines/Newsletters	Month of Publication	Name of the Chief Editor	Name of the Associate Editor	Student Editors
1	2017-18	The Connect-Issue 6 (Bi annual ECE Newsletter)	Jan-2018	Prof. Mani Laxman Iyer Prof. Aravinda K	Prof. Sachin V Prof. Shachi P	Nagarjun K S Subramanya

Table 4.5.2.6: College magazines [2018-19]

Sl. No	Year	Name of the Publication of Technical Magazines/Newsletters	Month of Publication
1.	2017-18	NH-Bytes - Volume -VII- Issue 7 (Monthly College Magazine)	Jul-2017
2.	2017-18	NH-Bytes - Volume -VII- Issue 8 (Monthly College Magazine)	Aug-2017
3.	2017-18	NH-Bytes - Volume -VII Issue 9 (Monthly College Magazine)	Sep-2017
4.	2017-18	NH-Bytes - Volume -VII- Issue 10 (Monthly College Magazine)	Oct-2017
5.	2017-18	NH-Bytes - Volume -VII- Issue 11 (Monthly College Magazine)	Nov-2017
6.	2017-18	NH-Bytes - Volume -VII- Issue 12 (Monthly College Magazine)	Dec-2017

Criterion-4 Self-Assessment Report (SAR)



7.	2017-18	NH-Bytes - Volume -VIII- Issue 1 (Monthly College Magazine)	Jan-2018
8.	2017-18	NH-Bytes - Volume -VIII- Issue 2 (Monthly College Magazine)	Feb-2018
9.	2017-18	NH-Bytes - Volume -VIII- Issue 3 (Monthly College Magazine)	Mar-2018
10.	2017-18	NH-Bytes - Volume -VIII- Issue 4 (Monthly College Magazine)	Apr-2018
11.	2017-18	NH-Bytes - Volume -VIII- Issue 5 (Monthly College Magazine)	May-2018
12.	2017-18	NH-Bytes - Volume -VIII- Issue 6 (Monthly College Magazine)	Jun-2018

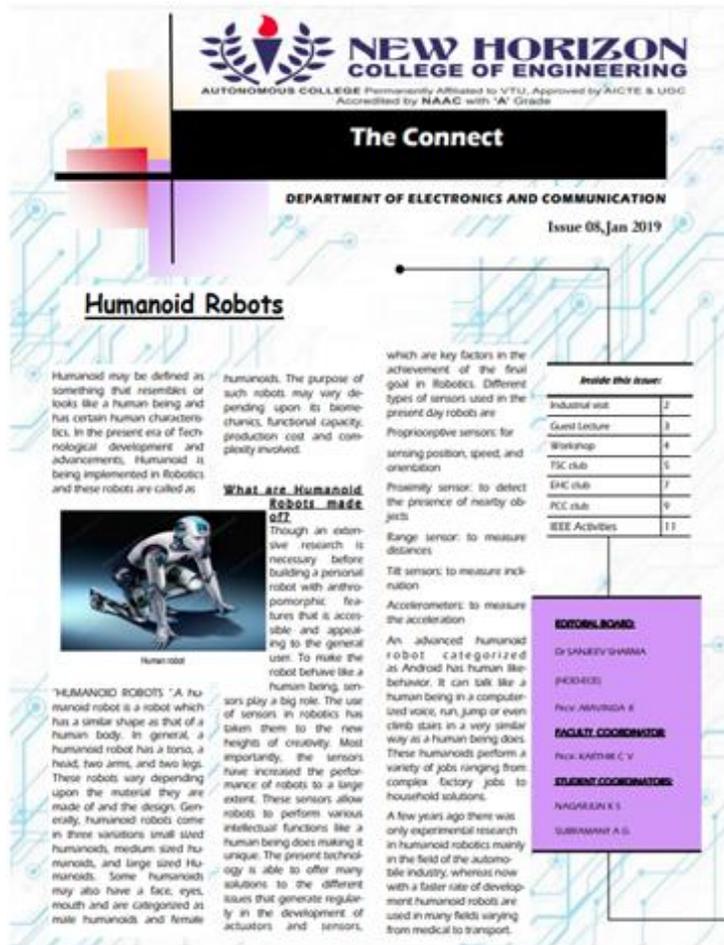


Figure 4.5.2.1: Sample Department Magazine [Jan 2020]



Figure 4.5.2.2: Sample College News Letters [Vol. VIII July 2020]

4.5.3. PARTICIPATION IN INTER-INSTITUTE EVENTS BY STUDENTS OF THE PROGRAM OF STUDY (10)

Participation in inter-institute events by students of the program of study.

Table 4.5.3.1: Summary of Students Participation in Inter-Institute events

CAY (2019-20)			
Sl. No	Number of Students Participated in Inter-Institute Events	Number of Students Within State	Number of Students Outside the State
1	166	156	10
CAYm1 (2018-19)			
Sl. No	Number of Students Participated in Inter-Institute Events	Number of Students Within State	Number of Students Outside the State
1	40	35	5
CAYm2 (2017-18)			
Sl. No	Number of Students Participated in Inter-Institute Events	Number of Students Within State	Number of Students Outside the State
1	329	241	88

Table 4.5.3.2 A: Summary of Participation in outside country, State and Awards [2019-2020]

Sl. No	USN	Name of the Student	Institution/ Organization	Event Details	Event Date	Achievement
1	1NH16EC012	Athira Ajayakumar K	Tel Aviv University, Israel	COSPAR Capacity Building Workshop on Small Satellites	26th Oct to 3rd Nov 2019	Participation in outside country event
2	1NH16EC012	Athira Ajayakumar K	Serbia	CanSat/Rocketry International Competition	4th to 6th October 2019	First Prize (outside country event)
3	1NH16EC754	Tarun	Serbia	CanSat/Rocketry International Competition	4th to 6th October 2019	Second Prize (outside country event)
4	1NH16EC748	Shyam	Serbia	CanSat/Rocketry International Competition	4th to 6th October 2019	Third Prize (outside country event)
6	1NH16EC012	Athira Ajayakumar K (ECE) & research team	Jeppiaar Institute of Technology Sriperumpudur, Chennai.	International Cansat Workshop: Space Quest and launching of CanSata	8th Feb 2020	Young research engineer Award by National Design and research forum and UNISEC-India.
7	1NH16EC012	Athira Ajayakumar K (ECE) & research team	Dr. Sivanthi Aditanar College of Engineering, Tiruchendur.	National Seminar on New Space: Small Satellites-Big Applications	6th Feb 2020	ICE Centenary Innovation Award as Young Research Team

Criterion-4 Self-Assessment Report (SAR)



8	INH17EC011	Bharath M	Indian Institute of Technology, Chennai, Tamil Nadu	Technical Symposium	29th Feb 2020 & 1st Mar 2020	Participation (Outside state event)
9	1NH16EC714 1NH16EC715 1NH16EC717 1NH16EC730	Gagana M R . Gouri Shneha S. Harshitha P Mounica E.	Santhiram Engineering College, Nandyal.	National Conference on Advances in Engineering, Management and Sciences- 2020	13th June 2020	Outside State Participation (Outside state event)
10	INH17EC052	Mohammed Ghassan and team	Nitte Meenakshi Institute of Technology, P.B.No.6429. Yelahanka, Bangalore 560064.	Hackathon (All India Level)	4th Mar 2020	First Prize- 1 lakh rupees for winning under the category Future Mobility.



Figure 4.5.3.1: ECE team Won IBM-UC Berkeley-Andhra Smart Village Hackathon at KL University, Vijayawada



Figure 4.5.3.2: NHCE ECE team won First Place in 2019 CanSat/Rocketry International Competition held in Serbia



Award of Appreciation Presented to New Horizon College of Engineering, Bangalore, INDIA for promoting Small Satellites Programmes

Figure 4.5.3.3: Award of Appreciation has been Presented to TSC Team @ NHCE during 7th UNISEC Global Meeting held at Japan



Figure 4.5.3.4: NHCE ECE Team was Part of Indo-Israel Space Tech Leadership Program 2019

Table 4.5.3.2 B: Table for Participation in Within State and awards [2019-2020]

Sl. No	USN	Name of the Student	Institution/ Organization	Event	Event Details	From	To
1	1NH18EC140	Anusha K	MSRIT, Bangalore	Seminar	Machine Learning and its application	20-Oct-19	20-Oct-19
2	1NH18EC002	Aishwarya M Halli	MSRIT, Bangalore	Seminar	Machine Learning and its application	20-Oct-19	20-Oct-19
3	1NH18EC003	Aishwarya Nagras	MSRIT, Bangalore	Seminar	Machine Learning and its application	20-Oct-19	20-Oct-19
4	1NH18EC004	Akilesh K	MSRIT, Bangalore	Seminar	Machine Learning and its application	20-Oct-19	20-Oct-19
5	1NH18EC006	Anand Chaitanya.V	MSRIT, Bangalore	Seminar	Machine Learning and its application	20-Oct-19	20-Oct-19
6	1NH18EC007	Anil Kumar K M	IETE Bangalore Centre	Seminar	Foundation Course on IOT	15-Sep-19	15-Sep-19
7	1NH18EC008	Anjali R	MSRIT, Bangalore	Seminar	Machine Learning and its application	20-Oct-19	20-Oct-19
8	1NH18EC011	Appolla Mouneesh Kumar	MSRIT, Bangalore	Seminar	Machine Learning and its application	20-Oct-19	20-Oct-19
9	1NH18EC013	Arnab Sangam	MSRIT, Bangalore	Seminar	Machine Learning and its application	20-Oct-19	20-Oct-19
10	1NH18EC017	Bada Bhavani	MSRIT, Bangalore	Seminar	Machine Learning and its application	20-Oct-19	20-Oct-19
11	1NH18EC020	Budideti Gowthami	MSRIT, Bangalore	Seminar	Machine Learning and its application	20-Oct-19	20-Oct-19

Criterion-4 Self-Assessment Report (SAR)

12	1NH18EC021	Madala Chaitanya Gopinadh	MSRIT, Bangalore	Seminar	Machine Learning and its application	20-Oct-19	20-Oct-19
13	1NH18EC022	Challa Kundana Sai	MSRIT, Bangalore	Seminar	Machine Learning and its application	20-Oct-19	20-Oct-19
14	1NH18EC023	Chandana C	MSRIT, Bangalore	Seminar	Machine Learning and its application	20-Oct-19	20-Oct-19
15	1NH18EC024	Chandra Mohan P	IETE Bangalore Centre	Seminar	Foundation Course on IOT	15-Sep-19	15-Sep-19
16	1NH18EC025	Chandra Rohith Choudary	MSRIT, Bangalore	Seminar	Machine Learning and its application	20-Oct-19	20-Oct-19
17	1NH18EC026	Chitte Abhinaykumarreddy	MSRIT, Bangalore	Seminar	Machine Learning and its application	20-Oct-19	20-Oct-19
18	1NH18EC027	Chokkam Preethi Kiran	MSRIT, Bangalore	Seminar	Machine Learning and its application	20-Oct-19	20-Oct-19
19	1NH18EC029	Dhamini.S	MSRIT, Bangalore	Seminar	Machine Learning and its application	20-Oct-19	20-Oct-19
20	1NH18EC034	Gandavarapu Bhavadeep Reddy	MSRIT, Bangalore	Seminar	Machine Learning and its application	20-Oct-19	20-Oct-19
21	1NH18EC036	Gelli Saranya	MSRIT, Bangalore	Seminar	Machine Learning and its application	20-Oct-19	20-Oct-19
22	1NH18EC037	Gokaraju Reshma Bhavani	IETE Bangalore Centre	Seminar	Foundation Course on IOT	15-Sep-19	15-Sep-19
23	1NH18EC038	Gokaraju.Venkata Vamsi Krishna	IETE Bangalore Centre	Seminar	Foundation Course on IOT	15-Sep-19	15-Sep-19
24	1NH18EC039	Gourav D H	MSRIT, Bangalore	Seminar	Machine Learning	20-Oct-19	20-Oct-19

Criterion-4 Self-Assessment Report (SAR)

					and its application		
25	1NH18EC040	Govindraj C S	IETE Bangalore Centre	Seminar	Foundation Course on IOT	15-Sep-19	15-Sep-19
26	1NH18EC042	K C Ankith	IETE Bangalore Centre	Seminar	Foundation Course on IOT	15-Sep-19	15-Sep-19
27	1NH18EC043	K Harsha Vardhan	IETE Bangalore Centre	Seminar	Foundation Course on IOT	15-Sep-19	15-Sep-19
28	1NH18EC046	K Sandeep Kumar Reddy	MSRIT, Bangalore	Seminar	Machine Learning and its application	20-Oct-19	20-Oct-19
29	1NH18EC047	Kamala Vennela Vasireddy	MSRIT, Bangalore	Seminar	Machine Learning and its application	20-Oct-19	20-Oct-19
30	1NH18EC048	Kamineni Chandrika	MSRIT, Bangalore	Seminar	Machine Learning and its application	20-Oct-19	20-Oct-19
31	1NH18EC049	Kandru Harshitha	IETE Bangalore Centre	Seminar	Foundation Course on IOT	15-Sep-19	15-Sep-19
32	1NH18EC050	Kankanala Hemanth	IETE Bangalore Centre	Seminar	Foundation Course on IOT	15-Sep-19	15-Sep-19
33	1NH18EC051	Kasetty Abisheka Vardhan	MSRIT, Bangalore	Seminar	Machine Learning and its application	20-Oct-19	20-Oct-19
34	1NH18EC052	Kavin Anbalagan	IETE Bangalore Centre	Seminar	Foundation Course on IOT	15-Sep-19	15-Sep-19
35	1NH18EC053	Keerthana S	MSRIT, Bangalore	Seminar	Machine Learning and its application	20-Oct-19	20-Oct-19
36	1NH18EC054	Konanki Vamsi Krishna	MSRIT, Bangalore	Seminar	Machine Learning and its application	20-Oct-19	20-Oct-19

Criterion-4 Self-Assessment Report (SAR)

37	1NH18EC055	Korapati Reddy Yamini	MSRIT, Bangalore	Seminar	Machine Learning and its application	20-Oct-19	20-Oct-19
38	1NH18EC056	Kuchu Saipradeep	IETE Bangalore Centre	Seminar	Foundation Course on IOT	15-Sep-19	15-Sep-19
39	1NH18EC057	Kuchu Somasekhar	IETE Bangalore Centre	Seminar	Foundation Course on IOT	15-Sep-19	15-Sep-19
40	1NH18EC058	Kuldeep Singh A	IETE Bangalore Centre	Seminar	Foundation Course on IOT	15-Sep-19	15-Sep-19
41	1NH18EC060	Kurapati Sai Swathi	MSRIT, Bangalore	Seminar	Machine Learning and its application	20-Oct-19	20-Oct-19
42	1NH18EC127	Kakumanu Praneetha	IETE Bangalore Centre	Seminar	Foundation Course on IOT	15-Sep-19	15-Sep-19
43	1NH18EC135	Greeshma M N	MSRIT, Bangalore	Seminar	Machine Learning and its application	20-Oct-19	20-Oct-19
44	1NH18EC144	Gummi Reddy Manoj Kumar Reddy	MSRIT, Bangalore	Seminar	Machine Learning and its application	20-Oct-19	20-Oct-19
45	1NH19EC409	Lakshmipathi G N	DJS Polytechnique	Workshop	PCB Fabrication	20-Oct-19	20-Oct-19
46	1NH19EC400	Anusha S	DJS Polytechnique	Workshop	PCB Fabrication	20-Oct-19	20-Oct-19
47	1NH19EC408	Arshitha P Reddy	DJS Polytechnique	Workshop	PCB Fabrication	20-Oct-19	20-Oct-19
48	1NH19EC402	Farzee Sulthana	DJS Polytechnique	Workshop	PCB Fabrication	20-Oct-19	20-Oct-19
49	INH17EC020	D Avinash	IETE Bangalore Centre	Seminar	Foundation Course on IOT	15-Sep-19	15-Sep-19
50	1NH18EC061	Lokesh Y	M.S.R.I.T, Bengaluru	Workshop	Machine Learning and its Application	20-Oct-19	20-Oct-19

Criterion-4 Self-Assessment Report (SAR)

51	1NH18EC063	M Suchith	M.S.R.I.T, Bengaluru	Workshop	Machine Learning and its Application	20-Oct-19	20-Oct-19
52	1NH18EC064	Madala Bhanu Prakash	M.S.R.I.T, Bengaluru	Workshop	Machine Learning and its Application	20-Oct-19	20-Oct-19
53	1NH18EC065	Malikireddy Chaitanya Kumar Reddy	Institute of Electronics and Telecommunication Engineer, Bengaluru	Seminar	Internet of Things	15-Sep-19	15-Sep-19
54	1NH18EC066	Manish M	IETE Bangalore Centre, Bengaluru	Workshop	Workshop and foundation course on IOT	15-Sep-19	15-Sep-19
55	1NH18EC067	Manisha Prem	M.S.R.I.T, Bengaluru	Workshop	Machine Learning and its Application	20-Oct-19	20-Oct-19
56	1NH18EC068	Manyam Saihemanth Reddy	Institute of Electronics and Telecommunication Engineer, Bengaluru	Seminar	Internet of Things	15-Sep-19	15-Sep-19
57	1NH18EC069	Marellasuresh	Institute of Electronics and Telecommunication Engineer, Bengaluru	Seminar	Internet of Things	15-Sep-19	15-Sep-19
58	1NH18EC071	Melita Rose G	M.S.R.I.T, Bengaluru	Workshop	Machine Learning and its Application	20-Oct-19	20-Oct-19
59	1NH18EC072	Nadendla Lakshmi Prasanna	IETE Bangalore Centre, Bengaluru	Workshop	Workshop and foundation course	15-Sep-19	15-Sep-19

Criterion-4 Self-Assessment Report (SAR)



					on IOT		
60	1NH18EC073	Nandankumar K	M.S.R.I.T, Bengaluru	Workshop	Machine Learning and its Application	20-Oct-19	20-Oct-19
61	1NH18EC074	Navodit Tiwari	M.S.R.I.T, Bengaluru	Workshop	Machine Learning and its Application	20-Oct-19	20-Oct-19
62	1NH18EC075	Navya M K	M.S.R.I.T, Bengaluru	Workshop	Machine Learning and its Application	20-Oct-19	20-Oct-19
63	1NH18EC076	Neerumalla.Lakshmi Sai Manikanta	IETE Bangalore Centre, Bengaluru	Workshop	Workshop and foundation course on IOT	15-Sep-19	15-Sep-19
64	1NH18EC077	Neetha Nataraj	M.S.R.I.T, Bengaluru	Workshop	Machine Learning and its Application	20-Oct-19	20-Oct-19
65	1NH18EC078	Nidhishree Kawri	M.S.R.I.T, Bengaluru	Workshop	Machine Learning and its Application	20-Oct-19	20-Oct-19
66	1NH18EC079	Nikitha M S	IETE Bangalore Centre	Workshop	Workshop and foundation course on IOT	15-Sep-19	15-Sep-19
67	1NH18EC080	Nivedita Salimath	RIT Bangalore	Workshop	Workshop on Machine Learning	20-Oct-19	20-Oct-19
68	1NH18EC081	Pendyala Manikanta	IETE Bangalore Centre	Workshop	Workshop and foundation course on IOT	15-Sep-19	15-Sep-19
69	1NH18EC082	Ponnaganti Naveen Krishna	M.S.R.I.T, Bengaluru	Workshop	Machine Learning and its Application	20-Oct-19	20-Oct-19
70	1NH18EC084	Peddaiahgari Sree Raj	M.S.R.I.T, Bengaluru	Workshop	Machine Learning and its Application	20-Oct-19	20-Oct-19

Criterion-4 Self-Assessment Report (SAR)

71	1NH18EC086	Poornima.R.M	IETE Bangalore Centre	Workshop	Workshop and foundation course on IOT	15-Sep-19	15-Sep-19
72	1NH18EC087	Pramod Aithal	M.S.R.I.T, Bengaluru	Workshop	Machine Learning and its Application	20-Oct-19	20-Oct-19
73	1NH18EC089	R Anusha	M.S.R.I.T, Bengaluru	Workshop	Machine Learning and its Application	20-Oct-19	20-Oct-19
74	1NH18EC095	Ramya Priya Y	M.S.R.I.T, Bengaluru	Workshop	Machine Learning and its Application	20-Oct-19	20-Oct-19
75	1NH18EC099	Samanthula Saihasan	M.S.R.I.T, Bengaluru	Workshop	Machine Learning and its Application	20-Oct-19	20-Oct-19
76	1NH18EC101	Sanskrit Sanjay Garud	M.S.R.I.T, Bengaluru	Workshop	Machine Learning and its Application	20-Oct-19	20-Oct-19
77	1NH18EC102	Santhosh Gowda M	M.S.R.I.T, Bengaluru	Workshop	Machine Learning and its Application	20-Oct-19	20-Oct-19
78	1NH18EC103	Shivani Yadav	Institute of Electronics and Telecommunication Engineer, Bengaluru	Seminar	Internet of Things	15-Sep-19	15-Sep-19
79	1NH18EC108	Sowmya L	M.S.R.I.T, Bengaluru	Workshop	Machine Learning and its Application	20-Oct-19	20-Oct-19
80	1NH18EC110	Suraj Suresh	M.S.R.I.T, Bengaluru	Workshop	Machine Learning and its Application	20-Oct-19	20-Oct-19
81	1NH18EC112	Tanmaya S Halemani	RIT Bangalore	Workshop	Workshop on Machine Learning	20-Oct-19	20-Oct-19
82	1NH18EC114	Umadevi	M.S.R.I.T, Bengaluru	Workshop	Machine Learning and its Application	20-Oct-19	20-Oct-19

Criterion-4 Self-Assessment Report (SAR)

83	1NH18EC115	V B Vasu	M.S.R.I.T, Bengaluru	Workshop	Machine Learning and its Application	20-Oct-19	20-Oct-19
84	1NH18EC116	Vaddi Chetan Kumar Reddy	M.S.R.I.T, Bengaluru	Workshop	Machine Learning and its Application	20-Oct-19	20-Oct-19
85	1NH18EC117	Vaishak.Lakshmanan	M.S.R.I.T, Bengaluru	Workshop	Machine Learning and its Application	20-Oct-19	20-Oct-19
86	1NH18EC118	Varikuntla Midhun Venkata Maheshbabu	M.S.R.I.T, Bengaluru	Workshop	Machine Learning and its Application	20-Oct-19	20-Oct-19
87	1NH18EC119	Varun Gowda K V	M.S.R.I.T, Bengaluru	Workshop	Machine Learning and its Application	20-Oct-19	20-Oct-19
88	1NH18EC122	Vutukuri Gowtham	IETE Bangalore Centre	Workshop	Workshop and foundation course on IOT	15-Sep-19	15-Sep-19
89	1NH18EC123	Vyshak Sathish Shetty	M.S.R.I.T, Bengaluru	Workshop	Machine Learning and its Application	20-Oct-19	20-Oct-19
90	1NH18EC126	Yoshitha S	M.S.R.I.T, Bengaluru	Workshop	Machine Learning and its Application	20-Oct-19	20-Oct-19
91	1NH18EC128	Meghanashree C	M.S.R.I.T, Bengaluru	Workshop	Machine Learning and its Application	20-Oct-19	20-Oct-19
92	1NH18EC139	Nehna Manoj Mudakkayil	M.S.R.I.T, Bengaluru	Workshop	Machine Learning and its Application	20-Oct-19	20-Oct-19
93	1NH18EC134	Pudi Yeshwanth	M.S.R.I.T, Bengaluru	Workshop	Machine Learning and its Application	20-Oct-19	20-Oct-19

Criterion-4 Self-Assessment Report (SAR)



94	1NH16EC013	Bomme Reddy Yugendhar Reddy	NSRCEL @ IIMB, Bengaluru, Bengaluru	Contest	DST & Texas Instruments India Innovation Challenge Design Contest 2019	25-Oct-19	25-Oct-19
95	1NH16EC027	Eldo Jose	B.M.S.C.E, Bengaluru	Workshop	Harvesting Solar Energy	14-Sep-09	15-Sep-09
96	1NH17EC002	Adesh V	Dayanada Sagar University, Bengaluru	Workshop	Internet of Things	29-Sep-19	29-Sep-19
97	1NH17EC004	Akshitha R	Dayanada Sagar University, Bengaluru	Workshop	Internet of Things	29-Sep-19	29-Sep-19
98	1NH17EC006	Anand T	NSRCEL @ IIMB, Bengaluru, Bengaluru	Contest	DST & Texas Instruments India Innovation Challenge Design Contest 2019	25-Oct-19	25-Oct-19
99	1NH17EC008	Arun Y S	NSRCEL @ IIMB, Bengaluru, Bengaluru	Contest	DST & Texas Instruments India Innovation Challenge Design Contest 2019	25-Oct-19	25-Oct-19
100	1NH16EC067	Nitesh K	Powered by AICTE and anchored by NSRCEL @ IIMB Bangalore	Design Contest	DST & Texas Instruments India Innovation Challenge and Design Contest '19	30-Aug-19	30-Aug-19

Criterion-4 Self-Assessment Report (SAR)

101	1NH16EC070	Mahalakshmi P	Powered by AICTE and anchored by NSRCEL @ IIMB Bangalore	Design Contest	DST & Texas Instruments India Innovation Challenge and Design Contest 2019	30-Aug-19	30-Aug-19
102	1NH16EC076	Prajwal. T. J	Powered by AICTE and anchored by NSRCEL @ IIMB Bangalore	Design Contest	DST & Texas Instruments India Innovation Challenge and Design Contest 2019	30-Aug-19	30-Aug-19
103	1NH16EC077	Pranay Reddy S	Powered by AICTE and anchored by NSRCEL @ IIMB Bangalore	Design Contest	DST & Texas Instruments India Innovation Challenge and Design Contest 2019	30-Aug-19	30-Aug-19
104	1NH16EC080	Preshika J M	Powered by AICTE and anchored by NSRCEL @ IIMB Bangalore	Design Contest	DST & Texas Instruments India Innovation Challenge and Design Contest 2019	30-Aug-19	30-Aug-19
105	1NH16EC081	Prithipa A	Powered by AICTE and anchored by NSRCEL @ IIMB Bangalore	Design Contest	DST & Texas Instruments India Innovation Challenge and	30-Aug-19	30-Aug-19

Criterion-4 Self-Assessment Report (SAR)



					Design Contest 2019		
106	1NH16EC082	R. Pavan Raj	Powered by AICTE and anchored by NSRCEL @ IIMB Bangalore	Design Contest	DST & Texas Instruments India Innovation Challenge and Design Contest 2019	30-Aug-19	30-Aug-19
107	1NH16EC084	Rakshitha N	Powered by AICTE and anchored by NSRCEL @ IIMB Bangalore	Design Contest	DST & Texas Instruments India Innovation Challenge and Design Contest 2019	30-Aug-19	30-Aug-19
108	1NH16EC096	Shravin.R. Sekhar	Powered by AICTE and anchored by NSRCEL @ IIMB Bangalore	Design Contest	DST & Texas Instruments India Innovation Challenge and Design Contest 2019	30-Aug-19	30-Aug-19
109	1NH16EC102	Siva Challa	Powered by AICTE and anchored by NSRCEL @ IIMB Bangalore	Design Contest	DST & Texas Instruments India Innovation Challenge and Design Contest 2019	30-Aug-19	30-Aug-19

Criterion-4 Self-Assessment Report (SAR)



110	1NH16EC106	T.E. Habishek	Powered by AICTE and anchored by NSRCEL @ IIMB Bangalore	Design Contest	DST & Texas Instruments India Innovation Challenge and Design Contest 2019	30-Aug-19	30-Aug-19
111	1NH16EC114	Vijay C	Powered by AICTE and anchored by NSRCEL @ IIMB Bangalore	Design Contest	DST & Texas Instruments India Innovation Challenge and Design Contest 2019	30-Aug-19	30-Aug-19
112	1NH16EC115	Vijay Kumar C	Powered by AICTE and anchored by NSRCEL @ IIMB Bangalore	Design Contest	DST & Texas Instruments India Innovation Challenge and Design Contest 2019	30-Aug-19	30-Aug-19
113	1NH16EC119	W M Magdoom Fuaad	Powered by AICTE and anchored by NSRCEL @ IIMB Bangalore	Design Contest	DST & Texas Instruments India Innovation Challenge and Design Contest 2019	30-Aug-19	30-Aug-19
114	1NH16EC133	Sridhar. P	Powered by AICTE and anchored by NSRCEL @ IIMB Bangalore	Design Contest	DST & Texas Instruments India Innovation Challenge and	30-Aug-19	30-Aug-19

Criterion-4 Self-Assessment Report (SAR)



					Design Contest 2019		
115	1NH17EC426	Sachin. M	Powered by AICTE and anchored by NSRCEL @ IIMB Bangalore	Design Contest	DST & Texas Instruments India Innovation Challenge and Design Contest 2019	30-Aug-19	30-Aug-19
116	1NH14EC019	Bharath P M	Nimhans Convention Centre, Bengaluru	Workshop	The Future of Foods: Emerging Agri Technologies	4-Sep-19	5-Sep-19
117	1NH15EC075	R Raghav Srivatsav	Nimhans Convention Centre, Bengaluru	Workshop	Future Intelligence	4-Sep-19	5-Sep-19
118	1NH16EC132	Abbireddy Prem Kumar	Nimhans Convention Centre, Bengaluru	Workshop	The Future of Foods: Emerging Agri Technologies	4-Sep-19	5-Sep-19
119	1NH17EC096	Souvik Das	Nimhans Convention Centre, Bengaluru	Workshop	The Future of Foods: Emerging Agri Technologies	4-Sep-19	5-Sep-19
120	1NH17EC104	Sunil Patil	Nimhans Convention Centre, Bengaluru	Workshop	Future Intelligence	4-Sep-19	5-Sep-19
121	1NH17EC107	Talluri Venkata Varun Sai	Nimhans Convention Centre, Bengaluru	Workshop	Satellite machine	4-Sep-19	5-Sep-19

Criterion-4 Self-Assessment Report (SAR)

122	1NH17EC113	V.Dharanidhar Reddy	Nimhans Convention Centre, Bengaluru	Workshop	Satellite machine	4-Sep-19	5-Sep-19
123	1NH17EC136	Gade Naveen Reddy	Nimhans Convention Centre, Bengaluru	Workshop	Future Intelligence	4-Sep-19	5-Sep-19
124	1NH17EC138	Sykam Karthik Reddy	Nimhans Convention Centre, Bengaluru	Workshop	Future Intelligence	4-Sep-19	5-Sep-19
125	1NH17EC009	B S Abhishek	CMRIT, Bengaluru	Workshop	Big Data Hadoop and Spark	17-Sep-19	18-Sep-19
126	1NH17EC128	Suhail Pasha	CMRIT, Bengaluru	Workshop	Big Data Hadoop and Spark	17-Sep-19	18-Sep-19
127	1NH17EC011	Bharath M	Vidya Sanga Technology, Bengaluru	Seminar	Drone Conclave - 2019	28-Sep-19	28-Sep-19
128	1NH17EC021	Devashrutha S	Vidya Sanga Technology, Bengaluru	Seminar	Drone Conclave - 2019	28-Sep-19	28-Sep-19
129	1NH17EC022	Dhanyashree V Reddy	Vidya Sanga Technology, Bengaluru	Seminar	Drone Conclave - 2019	28-Sep-19	28-Sep-19
130	1NH17EC023	Divya Sagar Reddy	Vidya Sanga Technology, Bengaluru	Seminar	Drone Conclave - 2019	28-Sep-19	28-Sep-19
131	1NH17EC045	Madhumitha R	Vidya Sanga Technology, Bengaluru	Seminar	Drone Conclave - 2019	28-Sep-19	28-Sep-19

Criterion-4 Self-Assessment Report (SAR)

132	1NH17EC052	Mohammed Ghassan	Vidya Sanga Technology, Bengaluru	Seminar	Drone Conclave - 2019	28-Sep-19	28-Sep-19
133	1NH17EC053	Monika K Reddy	Vidya Sanga Technology, Bengaluru	Seminar	Drone Conclave - 2019	28-Sep-19	28-Sep-19
134	1NH17EC055	Navajith R Reddy	Vidya Sanga Technology, Bengaluru	Seminar	Drone Conclave - 2019	28-Sep-19	28-Sep-19
135	1NH17EC056	Naveen K M	Vidya Sanga Technology, Bengaluru	Seminar	Drone Conclave - 2019	28-Sep-19	28-Sep-19
136	1NH17EC080	Riya Rakesh	ITI, Bengaluru	Competition	Drone Conclave	28-Sep-19	28-Sep-19
137	1NH17EC083	S Rishita	ITI, Bengaluru	Competition	Drone Conclave	28-Sep-19	28-Sep-19
138	1NH17EC091	Shiva S	ITI, Bengaluru	Competition	Drone Conclave	28-Sep-19	28-Sep-19
139	1NH17EC092	Shoaib Ahmed	ITI, Bengaluru	Competition	Drone Conclave	28-Sep-19	28-Sep-19
140	1NH17EC032	Ivaturi S S Harshavardhan	Vidya Sanga Technology, Bengaluru	Seminar	Drone Conclave - 2019	28-Sep-19	28-Sep-19
141	1NH18EC408	Pragati Shrinivas Naik	Dayanada Sagar University, Bengaluru	Workshop	Internet of Things	29-Sep-19	29-Sep-19
142	1NH18EC417	Spoorthi S T	Dayanada Sagar University, Bengaluru	Workshop	Internet of Things	29-Sep-19	29-Sep-19
143	1NH17EC013	Bhaskar K	NSRCEL @ IIMB, Bengaluru	Contest	DST & Texas Instruments India	25-Oct-19	25-Oct-19

Criterion-4 Self-Assessment Report (SAR)



					Innovation Challenge Design Contest 2019		
144	1NH17EC015	Boreddy Naga Maheswar Reddy	NSRCEL @ IIMB, Bengaluru	Contest	DST & Texas Instruments India Innovation Challenge Design Contest 2019	25-Oct-19	25-Oct-19
145	1NH17EC019	Deekshith N Reddy	NSRCEL @ IIMB, Bengaluru	Contest	DST & Texas Instruments India Innovation Challenge Design Contest 2019	25-Oct-19	25-Oct-19
146	1NH17EC030	H K Bhaskar	NSRCEL @ IIMB, Bengaluru	Contest	DST & Texas Instruments India Innovation Challenge Design Contest 2019	25-Oct-19	25-Oct-19
147	1NH17EC043	M Hemanth Yadav	NSRCEL @ IIMB, Bengaluru	Contest	DST & Texas Instruments India Innovation Challenge Design Contest 2019	25-Oct-19	25-Oct-19
148	1NH17EC048	Manikanta	NSRCEL @ IIMB, Bengaluru	Contest	DST & Texas Instruments India Innovation Challenge Design Contest 2019	25-Oct-19	25-Oct-19

Criterion-4 Self-Assessment Report (SAR)

149	1NH17EC049	Manish B	NSRCEL @ IIMB, Bengaluru	Contest	DST & Texas Instruments India Innovation Challenge Design Contest 2019	25-Oct-19	25-Oct-19
150	1NH17EC058	Nikith Babu	NSRCEL @ IIMB, Bengaluru	Contest	DST & Texas Instruments India Innovation Challenge Design Contest 2019	25-Oct-19	25-Oct-19
151	1NH18EC066	Manish M	Maven Silicon, Bangalore 560076	Workshop	SoC Design and Verification	23-Feb-20	23-Feb-20
152	1NH18EC751	S. Ashish Kumar	Gateway2 silicon, spice garden, Bengaluru	Workshop	Introduction to VLSI and IOT	29-Feb-20	29-Feb-20
153	1NH16EC121	Yathish K	MVJ College of Engineering	Hakathon	Crypt and code	9-Mar-20	9-Apr-20
154	1NH18EC712	Faizal F	Sree Vidyanikethan Engineering College, Bengaluru	Activity	Electrical Hunky Brain	20-May-20	20-May-20
155	1NH18EC085	Mahidhar Kumar Peddisetty	K R Puram, Cambridge Institute of Technology.	Webinar	Introduction to design verification using system verilog	30-May-20	31-May-20
156	1NH18EC109	Srikakulam Hari Venkata Siva Nagamani Sandeep	K R Puram, Cambridge Institute of Technology	Webinar	Introduction to design verification using system verilog	30-May-20	31-May-20

Table 4.5.3.3 A: Table for Participation in outside country, State and awards [2018-2019]

Sl. No	USN	Name of the Student	Institution/ Organization	Event Details	Event Date	Achievement
1	1NH15EC019 1NH15EC062	Denzel Abraham George Nikhil Riyaz	Tokyo, Japan	UNISEC-India at the 7th annual UNISEC-Global conference	30 Nov - 05 Dec 2018	Participation in outside country event
2	1NH15EC019	Denzel Abraham George	IBM Open POWER Europe Summit and Hackathon, Amsterdam	AI4GOOD Hackathon by IBM at Amsterdam	06 th & 07 th Oct 2018	Runner-up position for lung cancer malignancy detection model (outside country event)
3	1NH15EC019	Denzel Abraham George	Rouen, France	Exchange program at ESIGELEC, Rouen, France.	Sept to Dec 2018	Participation in outside country event
4	1NH15EC062 1NH15EC727 1NH15EC019	Nikhil Riyaz Hariraj R Denzel Abraham George.	Samara National Research University, Samara, Russia	The International Summer Space School: Future Space Technologies and Experiments in Space	17 th to 29 th June 2019	Presented the Seminar on 6U CubeSat for studying CME from the sun's corona - Participation of students outside country
5	1NH16EC015	Bhaskar Choudhury	IIT Madras	3D Printing Workshop	21-Jan-2019	Outside State Participation (Outside state event)

Table 4.5.3.3 B: Table for Participation Within State and awards [2018-2019]

Sl. No	USN	Name of the Student	Institution/ Organization	Event	Event Details	From	To
1	1NH17EC088	Shakthi A	East Point College of Engineering	Seminar	Crafting of Computer Organization	23-Mar-19	24-Mar-19
2	1NH17EC063	Palagiri Jyothi Krishna	Dayanand Sagar College of Engineering	Workshop	VLSI Design	6-Apr-19	6-Apr-19
3	1NH17EC065	Parthasarathi N	Dayanand Sagar College of Engineering	Workshop	VLSI Design	6-Apr-19	6-Apr-19
4	1NH17EC069	Praveen Kumar S	Dayanand Sagar College of Engineering	Workshop	VLSI Design	6-Apr-19	6-Apr-19
5	1NH17EC070	Preethu C	Dayanand Sagar College of Engineering	Workshop	VLSI Design	6-Apr-19	6-Apr-19
6	1NH17EC072	Puneeth Reddy V	Dayanand Sagar College of Engineering	Workshop	VLSI Design	6-Apr-19	6-Apr-19
7	1NH16EC020	Chethan S	Cambridge Institute	Workshop	IIoT Workshop	8-Apr-19	8-Apr-19
8	1NH16EC023	Deepak K. Pradhan	Cambridge Institute	Workshop	IIoT Workshop	8-Apr-19	8-Apr-19
9	1NH17EC412	Kiran. R	Cambridge Institute	Workshop	IIoT Workshop	8-Apr-19	8-Apr-19
10	1NH17EC423	Rajasha. T. A	Cambridge Institute	Workshop	IIoT Workshop	8-Apr-19	8-Apr-19
11	1NH17EC091	Shiva S	PES - University South Campus	Workshop	Photonic Devices and Applications	13-Apr-19	13-Apr-19
12	1NH16EC010	Anusha H N	AMC Engineering College	Workshop	RTL Design and Functional Verification	17-Apr-19	17-Apr-19

Criterion-4 Self-Assessment Report (SAR)



13	1NH15EC406	Gayathri.V	AMC Engineering College	Workshop	RTL Design and Functional Verification	17-Apr-19	17-Apr-19
14	1NH16EC001	A M Amarjith	Seshadripuram College	Workshop	Geek-O-Workshop	19-Apr-19	19-Apr-19
15	1NH16EC016	Bipin Dixit.H	Seshadripuram College	Workshop	Geek-O-Workshop	19-Apr-19	19-Apr-19
16	1NH16EC033	Harsh Srivastava	Seshadripuram College	Workshop	Geek-O-Workshop	19-Apr-19	19-Apr-19
17	1NH16EC046	Sachit M	Seshadripuram College	Workshop	Geek-O-Workshop	19-Apr-19	19-Apr-19
18	1NH16EC061	Mohit Sahu	Seshadripuram College	Workshop	Geek-O-Workshop	19-Apr-19	19-Apr-19
19	1NH16EC062	Mujeer Pasha	Seshadripuram College	Workshop	Geek-O-Workshop	19-Apr-19	19-Apr-19
20	1NH17EC082	Rupsa Datta	Seshadripuram College	Workshop	IoT -Workshop	19-Apr-19	19-Apr-19
21	1NH17EC083	S Rishita	Seshadripuram College	Workshop	IoT -Workshop	19-Apr-19	19-Apr-19
22	1NH17EC085	Saimanti Saha	Seshadripuram College	Workshop	IoT -Workshop	19-Apr-19	19-Apr-19
23	1NH17EC089	Shalini P N	Seshadripuram College	Workshop	IoT -Workshop	19-Apr-19	19-Apr-19
24	1NH17EC092	Shoaib Ahmed	Seshadripuram College	Workshop	IoT -Workshop	19-Apr-19	19-Apr-19
25	1NH17EC093	Shrestha Patnaik	Seshadripuram College	Workshop	IoT -Workshop	19-Apr-19	19-Apr-19
26	1NH17EC095	Shweta S	Seshadripuram College	Workshop	IoT -Workshop	19-Apr-19	19-Apr-19
27	1NH17EC097	Sowmiya A	Seshadripuram College	Workshop	IoT -Workshop	19-Apr-19	19-Apr-19
28	1NH17EC105	Sushma S	Seshadripuram College	Workshop	IoT -Workshop	19-Apr-19	19-Apr-19
29	1NH17EC106	Syale Raj Kumar	Seshadripuram College	Workshop	IoT -Workshop	19-Apr-19	19-Apr-19
30	1NH17EC110	Sai Avinash Reddy	Seshadripuram College	Workshop	IoT -Workshop	19-Apr-19	19-Apr-19
31	1NH17EC111	Thommandru Venkata Sai Mani Teja	Seshadripuram College	Workshop	IoT -Workshop	19-Apr-19	19-Apr-19
32	1NH17EC114	V R Sai	Seshadripuram College	Workshop	IoT -Workshop	19-Apr-19	19-Apr-19

Criterion-4 Self-Assessment Report (SAR)

		Laalithya					
33	1NH17EC115	V S Mounika	Seshadripuram College	Workshop	IoT -Workshop	19-Apr-19	19-Apr-19
34	1NH17EC117	Vidhya B	Seshadripuram College	Workshop	IoT -Workshop	19-Apr-19	19-Apr-19
35	1NH17EC134	Salla Guna Pradeep	Seshadripuram College	Workshop	IoT -Workshop	19-Apr-19	19-Apr-19

Table 4.5.3.3 C: Table for Participation in outside country, State and awards [2017-2018]

Sl. No	USN	Name of the Student	Institution/ Organization	Event	Event Details	From	To
1	1NH15EC019	Denzel Abraham George	KL University – Vijawada	Hackathon	Open Innovation Hackathon	28-Aug-17	2-Sep-17
2	1NH15EC062	Nikhil Riyaz	KL University – Vijawada	Hackathon	Open Innovation Hackathon	28-Aug-17	2-Sep-17
3	1NH15EC040	Kesav. S	Bannari Amman institute of Technology	Workshop	Real Time Applications using IoT	20-Oct-17	21-Oct-17
4	1NH15EC105	Shyla Shree.R	Bannari Amman institute of Technology	Workshop	Real Time Applications using IoT	20-Oct-17	21-Oct-17
5	1NH15EC406	Gayathri V	Bannari Amman institute of Technology	Workshop	Real Time Applications using IoT	20-Oct-17	21-Oct-17

Criterion-4 Self-Assessment Report (SAR)

6	1NH16EC405	Kavyashree M	Bannari Amman institute of Technology	Workshop	Real Time Applications using IoT	20-Oct-17	21-Oct-17
7	1NH16EC406	Kushal D Pravarda	Bannari Amman institute of Technology	Workshop	Real Time Applications using IoT	20-Oct-17	21-Oct-17
8	1NH16EC410	M. Mrinal	Bannari Amman institute of Technology	Workshop	Real Time Applications using IoT	20-Oct-17	21-Oct-17
9	1NH15EC005	Akhil Chowdary. M	JNTUA College of Engineering, Anantapur	Workshop	Recent Trends in Big Data & Cloud Computing	26-Oct-17	27-Oct-17
10	1NH15EC012	Bujja Ajay	JNTUA College of Engineering, Anantapur	Workshop	Recent Trends in Big Data & Cloud Computing	27-Oct-17	28-Oct-17
11	1NH15EC014	Chandra Shekhar.K. R	JNTUA College of Engineering, Anantapur	Workshop	Recent Trends in Big Data & Cloud Computing	27-Oct-17	28-Oct-17
12	1NH15EC016	Deepak S	JNTUA College of Engineering, Anantapur	Workshop	Recent Trends in Big Data & Cloud Computing	27-Oct-17	28-Oct-17
13	1NH15EC024	Harsha E	JNTUA College of Engineering, Anantapur	Workshop	Recent Trends in Big Data & Cloud Computing	27-Oct-17	28-Oct-17

Criterion-4 Self-Assessment Report (SAR)

14	1NH15EC032	Jayanth S	JNTUA College of Engineering, Anantapur	Workshop	Recent Trends in Big Data & Cloud Computing	27-Oct-17	28-Oct-17
15	1NH15EC054	Mukesh	JNTUA College of Engineering, Anantapur	Workshop	Recent Trends in Big Data & Cloud Computing	27-Oct-17	28-Oct-17
16	1NH15EC011	Bhavana Savanth	IITM Research Park, Chennai	Confernece	IBM WATSON ana AI (NIOT, VISIT)	2-Nov-17	3-Nov-17
17	1NH15EC741	Sanjana Ranjan	IIT Madras Research Park – Chennai	Conference	IBM Watson IoT and Power AI Developer Conference	3-Nov-17	3-Nov-17
18	1NH16EC001	A M Amarjith	IIT Madras	Workshop	Basics of Electronics and Robotics	9-Jan-18	9-Jan-18
19	1NH16EC016	Bipin Dixit.H	IIT Madras	Workshop	Basics of Electronics and Robotics	9-Jan-18	9-Jan-18
20	1NH16EC033	Harsh Srivastava	IIT Madras	Workshop	Basics of Electronics and Robotics	9-Jan-18	9-Jan-18
21	1NH16EC043	Kushi Ponnamma.K. P	IIT Madras	Workshop	Basics of Electronics and Robotics	9-Jan-18	9-Jan-18

Criterion-4 Self-Assessment Report (SAR)

22	1NH16EC052	Maurya Reddy	IIT Madras	Workshop	ROBOSAPIENS	9-Jan-18	10-Jan-18
23	1NH16EC061	Mohit Sahu	IIT Madras	Workshop	Basics of Electronics and Robotics	9-Jan-18	9-Jan-18
24	1NH16EC001	A M Amarjith	IIT Madras	Workshop	Basics of Electronics and Robotics	9-Jan-18	9-Jan-18
25	1NH16EC016	Bipin Dixit.H	IIT Madras	Workshop	Basics of Electronics and Robotics	9-Jan-18	9-Jan-18
26	1NH16EC033	Harsh Srivastava	IIT Madras	Workshop	Basics of Electronics and Robotics	9-Jan-18	9-Jan-18
27	1NH16EC043	Kushi Ponnamma.K. P	IIT Madras	Workshop	Basics of Electronics and Robotics	9-Jan-18	9-Jan-18
28	1NH16EC052	Maurya Reddy	IIT Madras	Workshop	ROBOSAPIENS	9-Jan-18	10-Jan-18
29	1NH16EC061	Mohit Sahu	IIT Madras	Workshop	Basics of Electronics and Robotics	9-Jan-18	9-Jan-18

Criterion-4 Self-Assessment Report (SAR)

30	1NH15EC131	S Reshma	The Zonal Cognizance, IIT Roorkee	Workshop	Android App Development	28-Jan-18	29-Jan-18
31	1NH16EC008	Anmol P Kumar	IIT Roorkee	Workshop	Android App Development	29-Jan-18	29-Jan-18
32	1NH16EC136	Alvira Suzana	IIT Roorkee	Workshop	Android App Development	29-Jan-18	29-Jan-18
33	1NH16EC008	Anmol P Kumar	IIT Roorkee	Workshop	Android App Development	29-Jan-18	29-Jan-18
34	1NH16EC136	Alvira Suzana	IIT Roorkee	Workshop	Android App Development	29-Jan-18	29-Jan-18
35	1NH13EC729	Mohammed Sabah. M	The Zonal Cognizance, IIT Roorkee	Workshop	Android App Development	29-Jan-18	29-Jan-18
36	1NH14EC132	Srustik Subhash	The Zonal Cognizance, IIT Roorkee	Workshop	Android App Development	29-Jan-18	29-Jan-18
37	1NH15EC005	Akhil Chowdary. M	The Zonal Cognizance, IIT Roorkee	Workshop	Android App Development	29-Jan-18	29-Jan-18

Criterion-4 Self-Assessment Report (SAR)

38	1NH15EC006	Akshitha.KS	The Zonal Cognizance, IIT Roorkee	Workshop	Android App Development	29-Jan-18	29-Jan-18
39	1NH15EC009	Anusha M	The Zonal Cognizance, IIT Roorkee	Workshop	Android App Development	29-Jan-18	29-Jan-18
40	1NH15EC012	Bujja Ajay	The Zonal Cognizance, IIT Roorkee	Workshop	Android App Development	29-Jan-18	29-Jan-18
41	1NH15EC016	Deepak S	The Zonal Cognizance, IIT Roorkee	Workshop	Android App Development	29-Jan-18	29-Jan-18
42	1NH15EC025	Harshitha J R	The Zonal Cognizance, IIT Roorkee	Workshop	Android App Development	29-Jan-18	29-Jan-18
43	1NH15EC026	Harshitha N	The Zonal Cognizance, IIT Roorkee	Workshop	Android App Development	29-Jan-18	29-Jan-18
44	1NH15EC027	Hemanth Kathick R	The Zonal Cognizance, IIT Roorkee	Workshop	Android App Development	29-Jan-18	29-Jan-18
45	1NH15EC029	Irfan	The Zonal Cognizance, IIT Roorkee	Workshop	Android App Development	29-Jan-18	29-Jan-18

Criterion-4 Self-Assessment Report (SAR)

46	1NH15EC032	Jayanth S	The Zonal Cognizance, IIT Roorkee	Workshop	Android App Development	29-Jan-18	29-Jan-18
47	1NH15EC033	Jitin Jain Mathew	The Zonal Cognizance, IIT Roorkee	Workshop	Android App Development	29-Jan-18	29-Jan-18
48	1NH15EC034	K B Hithesh	The Zonal Cognizance, IIT Roorkee	Workshop	Android App Development	29-Jan-18	29-Jan-18
49	1NH15EC043	Laxmi Sah	The Zonal Cognizance, IIT Roorkee	Workshop	Android App Development	29-Jan-18	29-Jan-18
50	1NH15EC051	Mohammed Shabaz	The Zonal Cognizance, IIT Roorkee	Workshop	Android App Development	29-Jan-18	29-Jan-18
51	1NH15EC052	Monika Reddy	The Zonal Cognizance, IIT Roorkee	Workshop	Android App Development	29-Jan-18	29-Jan-18
52	1NH15EC058	Priyanka Nallagouni	The Zonal Cognizance, IIT Roorkee	Workshop	Android App Development	29-Jan-18	29-Jan-18
53	1NH15EC086	Sachin Yadav	The Zonal Cognizance, IIT Roorkee	Workshop	Android App Development	29-Jan-18	29-Jan-18

Criterion-4 Self-Assessment Report (SAR)

54	1NH15EC121	Tirumala Satheesh Himakeerthi	The Zonal Cognizance, IIT Roorkee	Workshop	Android App Development	29-Jan-18	29-Jan-18
55	1NH15EC132	Deepti S	The Zonal Cognizance, IIT Roorkee	Workshop	Android App Development	29-Jan-18	29-Jan-18
56	1NH15EC135	Archana M	The Zonal Cognizance, IIT Roorkee	Workshop	Android App Development	29-Jan-18	29-Jan-18
57	1NH15EC435	Thyagaraj M	The Zonal Cognizance, IIT Roorkee	Workshop	Android App Development	29-Jan-18	29-Jan-18
58	1NH15EC707	Deepak Tomslee	The Zonal Cognizance, IIT Roorkee	Workshop	Android App Development	29-Jan-18	29-Jan-18
59	1NH15EC755	Syed Zahid Ulla	The Zonal Cognizance, IIT Roorkee	Workshop	Android App Development	29-Jan-18	29-Jan-18
60	1NH15EC019	Denzel Abraham George	The Zonal Cognizance, IIT Roorkee	Workshop	Android App Development	29-Jan-18	29-Jan-18
61	1NH15EC100	Shruthi Rajamani	The Zonal Cognizance, IIT Roorkee	Workshop	Android App Development	29-Jan-18	29-Jan-18

Criterion-4 Self-Assessment Report (SAR)

62	1NH15EC741	Sanjana Ranjan	The Zonal Cognizance, IIT Roorkee	Workshop	Android App Development	29-Jan-18	29-Jan-18
63	1NH15EC748	Shuvam Pal	The Zonal Cognizance, IIT Roorkee	Workshop	Android App Development	29-Jan-18	29-Jan-18
64	1NH15EC752	Suraj Kumar Sharma	The Zonal Cognizance, IIT Roorkee	Workshop	Android App Development	29-Jan-18	29-Jan-18
65	1NH15EC754	Syed Saqlain Ahmed	The Zonal Cognizance, IIT Roorkee	Workshop	Android App Development	29-Jan-18	29-Jan-18
66	1NH15EC752	Suraj Kumar Sharma	BHU (BANARASH HINDU UNIVERSITY), Varanasi	Hackthon	Smart India Hackthon	30-Mar-18	31-Mar-18
67	1NH15EC070	Venkata Sai Ganesh	Brahmaiah College of Engineering	Workshop	Microwave and antennas	11-Apr-18	11-Apr-18
68	1NH13EC022	C Akshay Reddy	Vellore Institute of Technology, Vellore	Workshop	Practical introduction to MATLAB Onramp and Simulink R2016b	14-Apr-18	14-Apr-18
69	1NH15EC001	Vinay Kumar Reddy	Vellore Institute of Technology, Vellore	Workshop	Practical introduction to MATLAB Onramp and Simulink R2016b	14-Apr-18	14-Apr-18

Criterion-4 Self-Assessment Report (SAR)

70	1NH15EC030	Janardhan.S. P	Vellore Institute of Technology, Vellore	Workshop	Practical introduction to MATLAB Onramp and Simulink R2016b	14-Apr-18	14-Apr-18
71	1NH15EC106	Siddharth P	Vellore Institute of Technology, Vellore	Workshop	Practical introduction to MATLAB Onramp and Simulink R2016b	14-Apr-18	14-Apr-18
72	1NH15EC127	Virender Singh	Vellore Institute of Technology, Vellore	Workshop	Practical introduction to MATLAB Onramp and Simulink R2016b	14-Apr-18	14-Apr-18
73	1NH15EC413	Pavana M	Vellore Institute of Technology, Vellore	Workshop	Practical introduction to MATLAB Onramp and Simulink R2016b	14-Apr-18	14-Apr-18
74	1NH15EC430	Niveditha V	Vellore Institute of Technology, Vellore	Workshop	Practical introduction to MATLAB Onramp and Simulink R2016b	14-Apr-18	14-Apr-18
75	1NH15EC727	R. Hari Raj	Vellore Institute of Technology, Vellore	Workshop	Practical introduction to MATLAB Onramp and Simulink R2016b	14-Apr-18	14-Apr-18
76	1NH15EC756	Venkatesh T	Vellore Institute of Technology, Vellore	Workshop	Practical introduction to MATLAB Onramp and Simulink R2016b	14-Apr-18	14-Apr-18
77	1NH16EC400	Chethan B R	Vellore Institute of Technology, Vellore	Workshop	Practical introduction to MATLAB Onramp and Simulink R2016b	14-Apr-18	14-Apr-18

Criterion-4 Self-Assessment Report (SAR)

78	1NH16EC404	Hemavathi S	Vellore Institute of Technology, Vellore	Workshop	Practical introduction to MATLAB Onramp and Simulink R2016b	14-Apr-18	14-Apr-18
79	1NH16EC405	Kavyashree M	Vellore Institute of Technology, Vellore	Workshop	Practical introduction to MATLAB Onramp and Simulink R2016b	14-Apr-18	14-Apr-18
80	1NH16EC407	Lavanya C Y	Vellore Institute of Technology, Vellore	Workshop	Practical introduction to MATLAB Onramp and Simulink R2016b	14-Apr-18	14-Apr-18
81	1NH16EC409	Lokesharao V	Vellore Institute of Technology, Vellore	Workshop	Practical introduction to MATLAB Onramp and Simulink R2016b	14-Apr-18	14-Apr-18
82	1NH16EC410	M. Mrinal	Vellore Institute of Technology, Vellore	Workshop	Practical introduction to MATLAB Onramp and Simulink R2016b	14-Apr-18	14-Apr-18
83	1NH16EC414	Muralidharan E	Vellore Institute of Technology, Vellore	Workshop	Practical introduction to MATLAB Onramp and Simulink R2016b	14-Apr-18	14-Apr-18
84	1NH16EC416	Naresh Babu	Vellore Institute of Technology, Vellore	Workshop	Practical introduction to MATLAB Onramp and Simulink R2016b	14-Apr-18	14-Apr-18
85	1NH16EC421	Rakshitha N	Vellore Institute of Technology, Vellore	Workshop	Practical introduction to MATLAB Onramp and Simulink R2016b	14-Apr-18	14-Apr-18

Criterion-4 Self-Assessment Report (SAR)



86	1NH16EC424	Rohit R	Vellore Institute of Technology, Vellore	Workshop	Practical introduction to MATLAB Onramp and Simulink R2016b	14-Apr-18	14-Apr-18
87	1NH16EC429	Ullas M S	Vellore Institute of Technology, Vellore	Workshop	Practical introduction to MATLAB Onramp and Simulink R2016b	14-Apr-18	14-Apr-18
88	1NH16EC430	Vijay Kumar Valmiki	Vellore Institute of Technology, Vellore	Workshop	Practical introduction to MATLAB Onramp and Simulink R2016b	14-Apr-18	14-Apr-18

Table 4.5.3.3 D Table for Participation Within State and awards [2017-2018]

Sl. No	USN	Name of the Student	Institution/ Organization	Event	Event Details	From	To
1.	1NH15EC060	Naveen. K. R	ISRO, Bengaluru	Workshop	National Workshop on Popularization of Remote Sensing	11-Aug-17	11-Aug-17
2.	1NH14EC726	P. Likith Chowdary	The Oxford College of Engineering	Workshop	Cyber Security and Malware Analysis	26-Oct-17	27-Oct-17
3.	1NH15EC018	Deexith S	The Oxford College of Engineering	Workshop	Cyber Security and Malware Analysis	26-Oct-17	27-Oct-17
4.	1NH15EC036	Karthik R	The Oxford College of Engineering	Workshop	Cyber Security and Malware Analysis	26-Oct-17	27-Oct-17
5.	1NH15EC048	Megha. D. R	The Oxford College of Engineering	Workshop	Cyber Security and Malware Analysis	26-Oct-17	27-Oct-17

Criterion-4 Self-Assessment Report (SAR)

6.	1NH15EC065	Obili Srinidhi	The Oxford College of Engineering	Workshop	Cyber Security and Malware Analysis	26-Oct-17	27-Oct-17
7.	1NH15EC066	Pamisetty Udayabhanu	The Oxford College of Engineering	Workshop	Cyber Security and Malware Analysis	26-Oct-17	27-Oct-17
8.	1NH15EC114	Sumanth.R	The Oxford College of Engineering	Workshop	Cyber Security and Malware Analysis	26-Oct-17	27-Oct-17
9.	1NH16EC409	Lokesharao V	The Oxford College of Engineering	Workshop	Cyber Security and Malware Analysis	26-Oct-17	27-Oct-17
10.	1NH16EC112	Veena K	The Oxford College of Engineering, Bengaluru	Workshop	Cyber security and Malware Analysis	26-Oct-17	27-Oct-17
11.	1NH13EC138	D Ramya	The Oxford College of Engineering, Bengaluru, Bengaluru	Workshop	Cyber security & Malware Analysis	26-Oct-17	27-Oct-17
12.	1NH13EC729	Mohammed Sabah. M	The Oxford College of Engineering, Bengaluru, Bengaluru	Workshop	Cyber security & Malware Analysis	26-Oct-17	27-Oct-17
13.	1NH14EC037	Geetha M	The Oxford College of Engineering, Bengaluru, Bengaluru	Workshop	Cyber security & Malware Analysis	26-Oct-17	27-Oct-17
14.	1NH14EC723	Nithya V	The Oxford College of Engineering, Bengaluru, Bengaluru	Workshop	Cyber security & Malware Analysis	26-Oct-17	27-Oct-17
15.	1NH15EC002	Abhuri Greeshma	The Oxford College of Engineering, Bengaluru, Bengaluru	Workshop	Cyber security & Malware Analysis	26-Oct-17	27-Oct-17

Criterion-4 Self-Assessment Report (SAR)

16.	1NH15EC006	Akshitha.KS	The Oxford College of Engineering, Bengaluru	Workshop	Cyber security & Malware Analysis	26-Oct-17	27-Oct-17
17.	1NH15EC010	Aparna.M	The Oxford College of Engineering, Bengaluru	Workshop	Cyber security & Malware Analysis	26-Oct-17	27-Oct-17
18.	1NH15EC017	Deepika.S	The Oxford College of Engineering, Bengaluru	Workshop	Cyber security & Malware Analysis	26-Oct-17	27-Oct-17
19.	1NH15EC025	Harshitha J R	The Oxford College of Engineering, Bengaluru	Workshop	Cyber security & Malware Analysis	26-Oct-17	27-Oct-17
20.	1NH15EC038	Kavya. D. R	The Oxford College of Engineering, Bengaluru	Workshop	Cyber security & Malware Analysis	26-Oct-17	27-Oct-17
21.	1NH15EC039	Keerthi.U.M	The Oxford College of Engineering, Bengaluru	Workshop	Cyber security & Malware Analysis	26-Oct-17	27-Oct-17
22.	1NH15EC052	Monika Reddy	The Oxford College of Engineering, Bengaluru	Workshop	Cyber security & Malware Analysis	26-Oct-17	27-Oct-17
23.	1NH15EC057	Nalini.K	The Oxford College of Engineering, Bengaluru	Workshop	Cyber security & Malware Analysis	26-Oct-17	27-Oct-17
24.	1NH15EC058	Priyanka Nallagouni	The Oxford College of Engineering, Bengaluru	Workshop	Cyber security & Malware Analysis	26-Oct-17	27-Oct-17
25.	1NH15EC113	Subramanaya Ganesh	The Oxford College of Engineering, Bengaluru	Workshop	Cyber security & Malware Analysis	26-Oct-17	27-Oct-17
26.	1NH15EC121	Tirumala Satheesh Himakeerthi	The Oxford College of Engineering, Bengaluru	Workshop	Cyber security & Malware Analysis	26-Oct-17	27-Oct-17
27.	1NH15EC135	Archana M	The Oxford College of Engineering, Bengaluru	Workshop	Cyber security & Malware Analysis	26-Oct-17	27-Oct-17

Criterion-4 Self-Assessment Report (SAR)

28.	1NH15EC714	Jishma Asmi. V	The Oxford College of Engineering, Bengaluru	Workshop	Cyber security & Malware Analysis	26-Oct-17	27-Oct-17
29.	1NH15EC755	Syed Zahid Ulla	The Oxford College of Engineering, Bengaluru	Workshop	Cyber security & Malware Analysis	26-Oct-17	27-Oct-17
30.	1NH16EC401	Dilip Kumar R	The Oxford College of Engineering, Bengaluru	Workshop	Cyber security & Malware Analysis	26-Oct-17	27-Oct-17
31.	1NH16EC413	Mohan Kumar V	The Oxford College of Engineering, Bengaluru	Workshop	Cyber security & Malware Analysis	26-Oct-17	27-Oct-17
32.	1NH16EC415	Namitha Reddy V	The Oxford College of Engineering, Bengaluru	Workshop	Cyber security & Malware Analysis	26-Oct-17	27-Oct-17
33.	1NH16EC417	Padmini M E	The Oxford College of Engineering, Bengaluru	Workshop	Cyber security & Malware Analysis	26-Oct-17	27-Oct-17
34.	1NH16EC420	Priyanka P	The Oxford College of Engineering, Bengaluru	Workshop	Cyber security & Malware Analysis	26-Oct-17	27-Oct-17
35.	1NH16EC427	Shashikumar M R	The Oxford College of Engineering, Bengaluru	Workshop	Cyber security & Malware Analysis	26-Oct-17	27-Oct-17
36.	1NH16EC428	Sowmya P	The Oxford College of Engineering, Bengaluru	Workshop	Cyber security & Malware Analysis	26-Oct-17	27-Oct-17
37.	1NH16EC704	Abu Bakar Siddiq	BMS Institute of Technology, Bengaluru	Seminar & Technical Fest	Tech Hunt & HR Talk	27-Oct-17	28-Oct-17
38.	1NH16EC064	Neha Mahesh	BMS Institute of Technology & Management	Workshop	Circuit Debugging	27-Oct-17	27-Oct-17
39.	1NH16EC071	Deepak P S	BMS Institute of Technology & Management	Workshop	Circuit Debugging	27-Oct-17	27-Oct-17

Criterion-4 Self-Assessment Report (SAR)



40.	1NH16EC094	Shaikh Asif	BMS Institute of Technology & Management	Workshop	Circuit Debugging	27-Oct-17	27-Oct-17
41.	1NH15EC078	Radhika.B	NAL, Wind Tunnel Road - Bangalore	Workshop	RC Micro Quadcopter	28-Oct-17	29-Oct-17
42.	1NH15EC129	Yakshika.A	NAL, Wind Tunnel Road - Bangalore	Workshop	RC Micro Quadcopter	28-Oct-17	29-Oct-17
43.	1NH16EC128	Simon Chauhan	PES University south campus, Bengaluru.	Workshop	Cloud Computing	28-Oct-17	29-Oct-17
44.	1NH14EC082	N. Sivakumar Reddy	Alliance University - Bangalore	Project Based Training	RC Air Craft Design	30-Oct-17	31-Oct-17
45.	1NH14EC019	Bharath P.M	Alliance University - Bangalore	Project Based Training	RC Air Craft Design	30-Oct-17	31-Oct-17
46.	1NH14EC061	K S Divyateja	Alliance University - Bangalore	Project Based Training	RC Air Craft Design	30-Oct-17	31-Oct-17
47.	1NH14EC737	Abhishek Reddy V	Alliance University - Bangalore	Project Based Training	RC Air Craft Design	30-Oct-17	31-Oct-17
48.	1NH14EC747	Gourav. K	Alliance University - Bangalore	Project Based Training	RC Air Craft Design	30-Oct-17	31-Oct-17
49.	1NH14EC748	Narendra Kumar	Alliance University - Bangalore	Project Based Training	RC Air Craft Design	30-Oct-17	31-Oct-17
50.	1NH15EC030	Janardhan.S. P	Impact College of Engineering and Applied Science	Workshop	RC Air Craft Design	30-Oct-17	31-Oct-17
51.	1NH15EC106	Siddharth P	Impact College of Engineering and Applied Science	Workshop	RC Air Craft Design	30-Oct-17	31-Oct-17

Criterion-4 Self-Assessment Report (SAR)

52.	1NH15EC112	Sree Renukaakshitha	Alliance University - Bangalore	Project Based Training	RC Air Craft Design	30-Oct-17	31-Oct-17
53.	1NH15EC413	Pavana M	Alliance University - Bangalore	Project Based Training	RC Air Craft Design Workshop	30-Oct-17	31-Oct-17
54.	1NH15EC430	Niveditha V	Alliance University - Bangalore	Project Based Training	RC Air Craft Design	30-Oct-17	31-Oct-17
55.	1NH15EC709	Goutham R	Impact College of Engineering and Applied Science	Workshop	RC Air Craft Design	30-Oct-17	31-Oct-17
56.	1NH15EC719	Nirmal Anand	Alliance University - Bangalore	Project Based Training	RC Air Craft Design	30-Oct-17	31-Oct-17
57.	1NH15EC727	R. Hari Raj	Alliance University - Bangalore	Project Based Training	RC Air Craft Design	30-Oct-17	31-Oct-17
58.	1NH15EC728	Raahul John Alex	Impact College of Engineering and Applied Science	Workshop	RC Air Craft Design	30-Oct-17	31-Oct-17
59.	1NH15EC752	Suraj Kumar Sharma	Impact College of Engineering and Applied Science	Workshop	RC Air Craft Design	30-Oct-17	31-Oct-17
60.	1NH16EC404	Hemavathi S	Alliance University - Bangalore	Project Based Training	RC Air Craft Design	30-Oct-17	31-Oct-17
61.	1NH16EC407	Lavanya C Y	Alliance University - Bangalore	Project Based Training	RC Air Craft Design	30-Oct-17	31-Oct-17
62.	1NH16EC421	Rakshitha N	Alliance University - Bangalore	Project Based Training	RC Air Craft Design	30-Oct-17	31-Oct-17

Criterion-4 Self-Assessment Report (SAR)

63.	1NH16EC068	Nithin.E	Dr. Ambedkar Institute of Technology	Technical Fest	Tech-Quiz	30-Oct-17	31-Oct-17
64.	1NH16EC078	Prashanth Gowda.R. S	Dr. Ambedkar Institute of Technology, Bengaluru	Technical Fest	Tech-Quiz	30-Oct-17	31-Oct-17
65.	1NH16EC079	Praveen Kumar S	Dr. Ambedkar Institute of Technology, Bengaluru	Technical Fest	Tech-Quiz	30-Oct-17	31-Oct-17
66.	1NH16EC086	Rushab.S. G	Dr. Ambedkar Institute of Technology, Bengaluru	Technical Fest	Tech-Quiz	30-Oct-17	31-Oct-17
67.	1NH16EC122	Yeshwanth J M	Dr. Ambedkar Institute of Technology, Bengaluru	Technical Fest	Tech-Quiz	30-Oct-17	31-Oct-17
68.	1NH16EC125	Yeshwanth.M. L	Dr. Ambedkar Institute of Technology, Bengaluru.	Technical Fest	Tech-Quiz	30-Oct-17	31-Oct-17
69.	1NH15EC022	Greeshma. R	Alliance University - Bangalore	Workshop	Cansat Satellite Design Workshop	2-Nov-17	3-Nov-17
70.	1NH15EC031	Jayanth M K	Alliance University - Bangalore	Workshop	Cansat Satellite Design Workshop	2-Nov-17	3-Nov-17
71.	1NH15EC045	Manikanta.K	Alliance University - Bangalore	Workshop	Cansat Satellite Design Workshop	2-Nov-17	3-Nov-17
72.	1NH15EC063	Nishant	Alliance University - Bangalore	Workshop	Cansat Satellite Design Workshop	2-Nov-17	3-Nov-17

Criterion-4 Self-Assessment Report (SAR)

73.	1NH15EC076	Rachitha.M. R	Alliance University - Bangalore	Workshop	Cansat Satellite Design Workshop	2-Nov-17	3-Nov-17
74.	1NH15EC088	Saleh Junaid Ahmed	Alliance University - Bangalore	Workshop	Cansat Satellite Design Workshop	2-Nov-17	3-Nov-17
75.	1NH15EC116	Surendra Kumar	Alliance University - Bangalore	Workshop	Cansat Satellite Design Workshop	2-Nov-17	3-Nov-17
76.	1NH15EC120	Thribhuvan L	Alliance University - Bangalore	Workshop	Cansat Satellite Design Workshop	2-Nov-17	3-Nov-17
77.	1NH15EC125	Veda.J	Alliance University - Bangalore	Workshop	Cansat Satellite Design Workshop	2-Nov-17	3-Nov-17
78.	1NH15EC705	Chandana M	Alliance University - Bangalore	Workshop	Cansat Satellite Design Workshop	2-Nov-17	3-Nov-17
79.	1NH15EC732	Ramya G	Alliance University - Bangalore	Workshop	Cansat Satellite Design Workshop	2-Nov-17	3-Nov-17
80.	1NH16EC416	Naresh Babu	Alliance University - Bangalore	Workshop	Cansat Satellite Design Workshop	2-Nov-17	3-Nov-17
81.	1NH16EC429	Ullas M S	Alliance University - Bangalore	Workshop	Cansat Satellite Design Workshop	2-Nov-17	3-Nov-17
82.	1NH15EC023	Gurushree Bhat U	Alliance University - Bangalore	Workshop	CANSAT Satellite Workshop	2-Nov-17	3-Nov-17
83.	1NH15EC028	Hemanth Kumar.R	Alliance University - Bangalore	Workshop	CANSAT Satellite Workshop	2-Nov-17	3-Nov-17
84.	1NH15EC070	Venkata Sai Ganesh	Alliance University - Bangalore	Workshop	CANSAT Satellite Workshop	2-Nov-17	3-Nov-17

Criterion-4 Self-Assessment Report (SAR)

85.	1NH15EC071	Preeti. K. Mehtry	Alliance University - Bangalore	Workshop	CANSAT Satellite Workshop	2-Nov-17	3-Nov-17
86.	1NH15EC073	Punarva.A	Alliance University - Bangalore	Workshop	CANSAT Satellite Workshop	2-Nov-17	3-Nov-17
87.	1NH16EC705	Akshay.V	UVCE, Bengaluru	Technical Fest	Lazer Hawk	10-Nov-17	10-Nov-17
88.	1NH16EC713	Chirag S	UVCE, Bengaluru	Technical Fest	Lazer Hawk	10-Nov-17	10-Nov-17
89.	1NH16EC715	Gowri Sneha Priya S	UVCE, Bengaluru	Technical Fest	Lazer Hawk	10-Nov-17	10-Nov-17
90.	1NH16EC716	Gurram Venkata Nikesh	UVCE, Bengaluru	Technical Fest	Lazer Hawk	10-Nov-17	10-Nov-17
91.	1NH16EC717	Harshita.P	UVCE, Bengaluru	Technical Fest	Lazer Hawk	10-Nov-17	10-Nov-17
92.	1NH16EC724	M Priyadarshini	UVCE, Bengaluru	Technical Fest	Lazer Hawk	10-Nov-17	10-Nov-17
93.	1NH16EC729	Siva Nagamuni Reddy	UVCE, Bengaluru	Technical Fest	Lazer Hawk	10-Nov-17	10-Nov-17
94.	1NH16EC734	Nisha Anandu Naik	UVCE, Bengaluru	Technical Fest	Lazer Hawk	10-Nov-17	10-Nov-17
95.	1NH16EC744	Ramya.R	UVCE, Bengaluru	Technical Fest	Lazer Hawk	10-Nov-17	10-Nov-17
96.	1NH16EC748	S Shyam	UVCE, Bengaluru	Technical Fest	Lazer Hawk	10-Nov-17	10-Nov-17
97.	1NH16EC751	Smitha B S	UVCE, Bengaluru	Technical Fest	Lazer Hawk	10-Nov-17	10-Nov-17

Criterion-4 Self-Assessment Report (SAR)

98.	1NH16EC752	Swathi K	UVCE, Bengaluru	Technical Fest	Lazer Hawk	10-Nov-17	10-Nov-17
99.	1NH16EC757	Yuvashree R	UVCE, Bengaluru	Technical Fest	Lazer Hawk	10-Nov-17	10-Nov-17
100.	1NH16EC066	Nishu Dubey	UVCE, Bengaluru.	Technical Fest	Lazer Hawk	10-Nov-17	11-Nov-17
101.	1NH16EC074	Pavan Kumar	UVCE, Bengaluru.	Technical Fest	Lazer Hawk	10-Nov-17	11-Nov-17
102.	1NH16EC075	Pooja Shantaram Nayak	UVCE, Bengaluru.	Technical Fest	Lazer Hawk	10-Nov-17	11-Nov-17
103.	1NH16EC076	Prajwal.T. J	UVCE, Bengaluru.	Technical Fest	Lazer Hawk	10-Nov-17	11-Nov-17
104.	1NH16EC077	Pranay Reddy S	UVCE, Bengaluru.	Technical Fest	Lazer Hawk	10-Nov-17	11-Nov-17
105.	1NH16EC080	Preshika J M	UVCE, Bengaluru.	Technical Fest	Lazer Hawk	10-Nov-17	11-Nov-17
106.	1NH16EC081	Prithipa A	UVCE, Bengaluru.	Technical Fest	Lazer Hawk	10-Nov-17	11-Nov-17
107.	1NH16EC082	R. Pavan Raj	UVCE, Bengaluru.	Technical Fest	Lazer Hawk	10-Nov-17	11-Nov-17
108.	1NH16EC087	Sai Kiran	UVCE, Bengaluru.	Technical Fest	Lazer Hawk	10-Nov-17	11-Nov-17
109.	1NH16EC089	S P Saaju	UVCE, Bengaluru.	Technical Fest	Lazer Hawk	10-Nov-17	11-Nov-17
110.	1NH16EC091	Sam Leander	UVCE, Bengaluru.	Technical Fest	Lazer Hawk	10-Nov-17	11-Nov-17
111.	1NH16EC095	Shashank B	UVCE, Bengaluru.	Technical Fest	Lazer Hawk	10-Nov-17	11-Nov-17
112.	1NH16EC096	Shravin.R. Sekhar	UVCE, Bengaluru.	Technical Fest	Lazer Hawk	10-Nov-17	11-Nov-17
113.	1NH16EC097	Shripad Aithal	UVCE, Bengaluru.	Technical Fest	Lazer Hawk	10-Nov-17	11-Nov-17

Criterion-4 Self-Assessment Report (SAR)

114.	1NH16EC098	Siddesh Jalageri	UVCE, Bengaluru.	Technical Fest	Lazer Hawk	10-Nov-17	11-Nov-17
115.	1NH16EC101	Sindhu C R	UVCE, Bengaluru.	Technical Fest	Lazer Hawk	10-Nov-17	11-Nov-17
116.	1NH16EC103	Spoorthy.G	UVCE, Bengaluru.	Technical Fest	Lazer Hawk	10-Nov-17	11-Nov-17
117.	1NH16EC105	Sushma Chikkur	UVCE, Bengaluru.	Technical Fest	Lazer Hawk	10-Nov-17	11-Nov-17
118.	1NH16EC106	T.E. Habishek	UVCE, Bengaluru.	Technical Fest	Lazer Hawk	10-Nov-17	11-Nov-17
119.	1NH16EC107	P. Sridhar	UVCE, Bengaluru.	Technical Fest	Lazer Hawk	10-Nov-17	11-Nov-17
120.	1NH16EC115	Vijay Kumar C	UVCE, Bengaluru.	Technical Fest	Lazer Hawk	10-Nov-17	11-Nov-17
121.	1NH16EC116	Vijay S	UVCE, Bengaluru.	Technical Fest	Lazer Hawk	10-Nov-17	11-Nov-17
122.	1NH16EC118	Vishwanath Veeranna	UVCE, Bengaluru.	Technical Fest	Lazer Hawk	10-Nov-17	11-Nov-17
123.	1NH16EC120	Yathin S	UVCE, Bengaluru.	Technical Fest	Lazer Hawk	10-Nov-17	11-Nov-17
124.	1NH16EC121	Yathish	UVCE, Bengaluru.	Technical Fest	Lazer Hawk	10-Nov-17	11-Nov-17
125.	1NH16EC124	Yeshwanth.M	UVCE, Bengaluru.	Technical Fest	Lazer Hawk	10-Nov-17	11-Nov-17
126.	1NH17EC401	Akshay Gambhir Sadalagi	UVCE, Bengaluru.	Technical Fest	Lazer Hawk	10-Nov-17	11-Nov-17

Criterion-4 Self-Assessment Report (SAR)



127.	1NH17EC404	Akshay Sadalagi	UVCE, Bengaluru.	Technical Fest	Lazer Hawk	10-Nov-17	11-Nov-17
128.	1NH17EC410	Jyothi Chandrashekar	UVCE, Bengaluru.	Technical Fest	Lazer Hawk	10-Nov-17	11-Nov-17
129.	1NH17EC411	Monika T M	UVCE, Bengaluru.	Technical Fest	Lazer Hawk	10-Nov-17	11-Nov-17
130.	1NH17EC412	Sushmitha	UVCE, Bengaluru.	Technical Fest	Lazer Hawk	10-Nov-17	11-Nov-17
131.	1NH17EC426	Sachin . M	UVCE, Bengaluru.	Technical Fest	Lazer Hawk	10-Nov-17	11-Nov-17
132.	1NH17EC431	Shambuling V . Patil	UVCE, Bengaluru.	Technical Fest	Lazer Hawk	10-Nov-17	11-Nov-17
133.	1NH16EC070	Mahalakshmi P	UVCE, Bengaluru.	Technical Fest	Game of Coding	10-Nov-17	11-Nov-17
134.	1NH16EC083	Prem Kumar	UVCE, Bengaluru.	Technical Fest	Game of Coding	10-Nov-17	11-Nov-17
135.	1NH16EC084	Rakshitha N	UVCE, Bengaluru.	Technical Fest	Game of Coding	10-Nov-17	11-Nov-17
136.	1NH15EC010	Aparna.M	AICTE	Workshop	Smart India Hackthon-2018	11-Jan-18	11-Jan-18
137.	1NH15EC045	Manikanta.K	St. John's College and AMRIT	Conference	Developer Weekend	10-Feb-18	11-Feb-18
138.	1NH15EC028	Hemanth Kumar.R	Amrita College	Workshop	Developer Weekend (Python Programming)	11-Feb-18	11-Feb-18

Criterion-4 Self-Assessment Report (SAR)

139.	1NH16EC037	Kalamadi Sreelekha	NITTTE Meenakshi Institute of Technology	Technical Fest	Tech Quiz	8-Mar-18	9-Mar-18
140.	1NH16EC041	K. Venkata Mounish Reddy	NITTTE Meenakshi Institute of Technology	Technical Fest	Tech Quiz	8-Mar-18	9-Mar-18
141.	1NH16EC037	Kalamadi Sreelekha	NITTTE Meenakshi Institute of Technology	Technical Fest	Tech Quiz	8-Mar-18	9-Mar-18
142.	1NH16EC041	K. Venkata Mounish Reddy	NITTTE Meenakshi Institute of Technology	Technical Fest	Tech Quiz	8-Mar-18	9-Mar-18
143.	1NH16EC004	Afzal Hussain	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	24-Mar-18
144.	1NH16EC009	Anoop.A	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	23-Mar-18
145.	1NH16EC011	Arun.P	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	23-Mar-18
146.	1NH16EC015	Bhaskar Choudhury	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	23-Mar-18
147.	1NH16EC017	Kiran C A	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	24-Mar-18
148.	1NH16EC018	Aruna C	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	24-Mar-18
149.	1NH16EC020	Chethan S	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	24-Mar-18

Criterion-4 Self-Assessment Report (SAR)



150.	1NH16EC023	Deepak Ku. Pradhan	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	23-Mar-18
151.	1NH16EC024	Deepthi R	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	23-Mar-18
152.	1NH16EC027	Eldo Jose	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	23-Mar-18
153.	1NH16EC028	Ellinki Jahnavi	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	23-Mar-18
154.	1NH16EC029	Victor Abhilash	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia, SciBizTech Quiz	23-Mar-18	24-Mar-18
155.	1NH16EC030	G Avinash	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia, SciBizTech Quiz	23-Mar-18	24-Mar-18
156.	1NH16EC031	Girish Jattu Gouda	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia, SciBizTech Quiz	23-Mar-18	24-Mar-18
157.	1NH16EC032	Hari Prasad.R	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	24-Mar-18
158.	1NH16EC034	Jagadeesh.D	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia, SciBizTech Quiz	23-Mar-18	24-Mar-18
159.	1NH16EC035	Janani.B. R	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	23-Mar-18
160.	1NH16EC039	Kiran N	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	23-Mar-18

Criterion-4 Self-Assessment Report (SAR)

161.	1NH16EC040	Kishore N	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	23-Mar-18
162.	1NH16EC044	Lalithambha S M	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	23-Mar-18
163.	1NH16EC048	Madhu M Devamane	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	23-Mar-18
164.	1NH16EC049	Manjula.S	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	23-Mar-18
165.	1NH16EC050	Manjunath N	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	23-Mar-18
166.	1NH16EC053	Meghashree H M	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	23-Mar-18
167.	1NH16EC054	Meghana V	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	23-Mar-18
168.	1NH16EC056	Misbah Tabassum Aejaz	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	23-Mar-18
169.	1NH16EC057	Mithun.V	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	23-Mar-18
170.	1NH16EC058	Mohammed Anas	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	23-Mar-18
171.	1NH16EC059	Mohammed Farooq Pasha	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	23-Mar-18

Criterion-4 Self-Assessment Report (SAR)

172.	1NH16EC060	Mohit R	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	23-Mar-18
173.	1NH16EC063	Maheshwari N	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	23-Mar-18
174.	1NH16EC135	Akula Anil Bharath	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	23-Mar-18
175.	1NH16EC137	Anupoju Sa I Venkat Thrimurthy	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	23-Mar-18
176.	1NH16EC138	Ashish Kumar. S	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	23-Mar-18
177.	1NH17EC403	Bhavani. V	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	23-Mar-18
178.	1NH17EC412	Kiran. R	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	24-Mar-18
179.	1NH17EC423	Rajasha. T. A	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	23-Mar-18
180.	1NH17EC429	Supritha H. D	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	23-Mar-18
181.	1NH16EC004	Afzal Hussain	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	24-Mar-18
182.	1NH16EC009	Anoop.A	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	23-Mar-18

Criterion-4 Self-Assessment Report (SAR)

183.	1NH16EC011	Arun.P	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	23-Mar-18
184.	1NH16EC015	Bhaskar Choudhury	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	23-Mar-18
185.	1NH16EC017	Kiran C A	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	24-Mar-18
186.	1NH16EC018	Aruna C	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	24-Mar-18
187.	1NH16EC020	Chethan S	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	24-Mar-18
188.	1NH16EC023	Deepak Ku. Pradhan	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	23-Mar-18
189.	1NH16EC024	Deepthi R	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	23-Mar-18
190.	1NH16EC027	Eldo Jose	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	23-Mar-18

Criterion-4 Self-Assessment Report (SAR)

191.	1NH16EC028	Ellinki Jahnavi	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	23-Mar-18
192.	1NH16EC029	Victor Abhilash	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia, SciBizTech Quiz	23-Mar-18	24-Mar-18
193.	1NH16EC049	Manjula.S	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	23-Mar-18
194.	1NH16EC050	Manjunath N	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	23-Mar-18
195.	1NH16EC053	Meghashree H M	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	23-Mar-18
196.	1NH16EC054	Meghana V	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	23-Mar-18
197.	1NH16EC056	Misbah Tabassum Aejaaz	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	23-Mar-18
198.	1NH16EC057	Mithun.V	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	23-Mar-18

Criterion-4 Self-Assessment Report (SAR)

199.	1NH16EC058	Mohammed Anas	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	23-Mar-18
200.	1NH16EC059	Mohammed Farooqh Pasha	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	23-Mar-18
201.	1NH16EC060	Mohit R	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	23-Mar-18
202.	1NH16EC063	Maheshwari N	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	23-Mar-18
203.	1NH16EC135	Akula Anil Bharath	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	23-Mar-18	23-Mar-18
204.	1NH15EC050	Mohammed Musaveer	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Tech Quiz	23-Mar-18	24-Mar-18
205.	1NH15EC053	Monisha.M	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Tech Quiz	23-Mar-18	24-Mar-18
206.	1NH15EC057	Nalini.K	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Tech Quiz	23-Mar-18	24-Mar-18

Criterion-4 Self-Assessment Report (SAR)



207.	1NH15EC048	Megha.D.R	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Tech Quiz	23-Mar-18	24-Mar-18
208.	1NH16EC002	Abhishek Kumar Deshetti	PES University	Tech-fest	Epsilon	24-Mar-18	24-Mar-18
209.	1NH16EC007	Akshay Rao	PES University	Tech-fest	Epsilon	24-Mar-18	24-Mar-18
210.	1NH16EC010	Anusha H N	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Technical Quiz	24-Mar-18	24-Mar-18
211.	1NH16EC047	Madan Gowda.M	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	24-Mar-18	24-Mar-18
212.	1NH16EC139	Karthik. K. S	University Visveshwarya College of Engineering	Tech-fest - Impetus 18.0	Electrophilia	24-Mar-18	24-Mar-18
213.	1NH16EC002	Abhishek Kumar Deshetti	PES University	Tech-fest	Epsilon	24-Mar-18	24-Mar-18
214.	1NH16EC025	Dennis Vincent Paulraj	MVJ College of Engineerng	Technical Fest	Puzzle Champ VERTECHX8.0	2-Apr-18	3-Apr-18
215.	1NH16EC025	Dennis Vincent Paulraj	MVJ College of Engineerng, Bengaluru	Technical Fest	Puzzle Champ VERTECHX8.0	2-Apr-18	3-Apr-18
216.	1NH15EC413	Pavana M	Alliance University, Bangalore	Workshop	RC Aircraft Design	7-Apr-18	8-Apr-18

Criterion-4 Self-Assessment Report (SAR)



217.	1NH15EC430	Niveditha V	Alliance University, Bangalore	Workshop	RC Aircraft Design	7-Apr-18	8-Apr-18
218.	1NH15EC705	Chandana M	Alliance University, Bangalore	Workshop	RC Aircraft Design	7-Apr-18	8-Apr-18
219.	1NH15EC732	Ramya G	Alliance University, Bangalore	Workshop	RC Aircraft Design	7-Apr-18	8-Apr-18
220.	1NH16EC404	Hemavathi S	Alliance University, Bangalore	Workshop	RC Aircraft Design	7-Apr-18	8-Apr-18
221.	1NH16EC421	Rakshitha N	Alliance University, Bangalore	Workshop	RC Aircraft Design	7-Apr-18	8-Apr-18
222.	1NH15EC112	Sree Renukaakshitha	Alliance University, Bangalore	Workshop	RC Aircraft Design	7-Apr-18	8-Apr-18
223.	1NH15EC714	Jishma Asmi. V	Malnad College of Engineering, Hassan	Technical Fest	ENIGMA TECH FEST	12-Apr-18	12-Apr-18
224.	1NH14EC723	Nithya V	IETE, Bangalore Centre	Workshop	Internet of things	15-Apr-18	15-Apr-18
225.	1NH15EC003	B Achal	IETE, Bangalore Centre	Workshop	Internet of things	15-Apr-18	15-Apr-18
226.	1NH16EC415	Namitha Reddy V	IETE, Bangalore Centre	Workshop	Internet of things	15-Apr-18	15-Apr-18
227.	1NH16EC417	Padmini M E	IETE, Bangalore Centre	Workshop	Internet of things	15-Apr-18	15-Apr-18
228.	1NH16EC420	Priyanka P	IETE, Bangalore Centre	Workshop	Internet of things	15-Apr-18	15-Apr-18
229.	1NH16EC423	Ramitha B	IETE, Bangalore Centre	Workshop	Internet of things	15-Apr-18	15-Apr-18
230.	1NH16EC427	Shashikumar M R	IETE, Bangalore Centre	Workshop	Internet of things	15-Apr-18	15-Apr-18
231.	1NH16EC428	Sowmya P	IETE, Bangalore Centre	Workshop	Internet of things	15-Apr-18	15-Apr-18

Criterion-4 Self-Assessment Report (SAR)

232.	1NH15EC065	Obili Srinidhi	IETE, Bangalore	Workshop	IETE & C-DAC Joint Workshop on Internet of Things	15-Apr-18	15-Apr-18
233.	1NH15EC066	Pamisetty Udayabhanu	IETE, Bangalore	Workshop	IETE & C-DAC Joint Workshop on Internet of Things	15-Apr-18	15-Apr-18
234.	1NH15EC078	Radhika.B	IETE, Bangalore	Workshop	IETE & C-DAC Joint Workshop on Internet of Things	15-Apr-18	15-Apr-18
235.	1NH15EC079	Riya Dey	IETE, Bangalore	Workshop	IETE & C-DAC Joint Workshop on Internet of Things	15-Apr-18	15-Apr-18
236.	1NH15EC083	S P Rahul Kumar	IETE, Bangalore	Workshop	IETE & C-DAC Joint Workshop on Internet of Things	15-Apr-18	15-Apr-18
237.	1NH15EC088	Saleh Junaid Ahmed	IETE, Bangalore	Workshop	IETE & C-DAC Joint Workshop on Internet of Things	15-Apr-18	15-Apr-18
238.	1NH15EC129	Yakshika.A	IETE, Bangalore	Workshop	IETE & C-DAC Joint Workshop on Internet of Things	15-Apr-18	15-Apr-18
239.	1NH15EC748	Shuvam Pal	IETE, Bangalore	Workshop	IETE & C-DAC Joint Workshop on Internet of Things	15-Apr-18	15-Apr-18

Criterion-4 Self-Assessment Report (SAR)

240.	1NH15EC035	K.R. Amrutha	ISRO, VIJNANAPURA	Workshop	National Workshop on Popularisation of Remote Sensing	11-Aug-18	11-Aug-18
241.	1NH15EC053	Monisha.M	ISRO, VIJNANAPURA	Workshop	National Workshop on Popularisation of Remote Sensing	11-Aug-18	11-Aug-18

4.5.4 Students Publications**Table 4.5.4.1: Student Publications [2019-2020]**

Sl. No	Authors	Title of the Paper	Conference/ Journal Publication	Details of Conference or Publication
1	Gagana M R. Gouri Shneha Priya S. Harshitha P. Mounica E.	Battery management system using Texas Instruments launch pad boards	Conference	National conference on Control, Computation and communication NCCC-2020, Santhiram Engineering College, Nandyal. 13th June 2020; ISBN 978-81-945588-2-8.
2	Athira Ajayakumar K	Intelligent Character Recognition	Conference	International Conference On “Innovative Research in Engineering and Management and Sciences, NHCE Bengaluru. 19th to 21st Dec 2019
3	Divya Sagar Reddy, Madala Himaja, Bhaskar K, Aravind, Dhinakaran S.	A Hybrid Segmentation Approach to Diagnose Suspicious Pixel regions in Liver CT Images	Journal Publication	International Journal of Scientific Research in Computer Science, Engineering and Information Technology Volume 4 Issue 9 Nov-Dec-2019 ISSN: 2456-3307

Table 4.5.4.2: Student Publications [2018-2019]

Sl. No	Authors	Title of the Paper	Conference/ Journal Publication	Details of Conference or Details of the Publisher
1	Sai Prashanth, Habishak T. E., Saaju S. P.	Smart and Reliable Techniques for Blind Spot Detection	Publication	International Journal of Information and Computing Science, vol. 6, Issue 5, pp. 286-289, May 2019, DOI: 16.10089.IJICS.2019.V6I5.18.3091.
2	Avinash G. Mithun V. Madan Gowda	Implementation of D-PLL using Microwind	Publication	International Journal of Information and Computing Science, vol. 6, Issue 5, pp. 290-293, May 2019, DOI: 16.10089.IJICS.2019.V6I5.18.3092.
3	Denzel Abraham George Nikhil Riyaz Mithun V.	Low-Cost Electronic Power Supply System for Nanosatellite Bus	Publication	International Journal of Information and Computing Science, vol. 6, Issue 5, pp. 402-405, May 2019, DOI: 16.10089.IJICS.2019.V6I5.18.3116.
4	Mr. Mohit R Mr. Ashish Kumar S, Mr. Manjunath N	Implementation of DSA Algorithm using MATLAB	Publication	International Journal Of Information And Computing Science, Volume 6, Issue 5, May 2019, Page no. 300 -305, ISSN NO: 0972-1347
5	S P Rahul Kumar S Reshma Shruthi Rajamani	Channel Estimation in MU-MIMO Systems for Wireless Communication	Publication	International Journal of Management, Technology and Engineering, Volume IX, Issue VI, JUNE/2019, Page no. 1588 -1594, ISSN NO: 2249-7455

Table 4.5.4.3: Student Publications [2017-2018]

Sl. No	Authors	Title of the Paper	Conference/ Journal Publication	Details of Conference or Details of the Publisher
1	Akshay Kumar Nayaka Aaliya Ashfaq	Embedded based food quality detection with bio sensor technology	Publication	International Journal for Research in Applied Science & Engineering Technology, Volume 6, Issue V
2	S Divya Sonia Mahadev Suchithra S	An Android based wireless ECG monitoring system for cardiac arrhythmia	Publication	International Journal for Research in Applied Science & Engineering Technology, Volume 6, Issue IV
3	Sachin R Sachin R M Sanjay S Nayak	Design of two bit ALU using CMOS &GDI Logic architecture	Publication	International Journal for Research in Applied Science & Engineering Technology, Volume 6, Issue V
4	V Sowmya Priya, Soundarya M, Niketha	Passenger Bus alert system for easy navigation blind	Publication	International Journal for Research in Applied Science & Engineering Technology, Volume 6, Issue V
5	Rahul J Anand R Jagadeesh V S	Techniques for Pixel based Image Fusion of Real Image	Publication	International Journal for Research in Applied Science & Engineering Technology, Volume 6, Issue V

Criterion-4 Self-Assessment Report (SAR)

6	Pawan Kaushik, Deekshitha R, Chandana S M	VLSI implementation of OFDM Transmitter chain	Publication	International Conference on Electrical, Electronics and Communication Engineering- Volume 7, Issue 42018
7	Karthik K, Mahalakshmi T S, Manasa H R	VLSI implementation of AES encryption/decryption algorithm	Publication	Perspective in communication, Embedded- Systems and signal processing, Volume 2, Issue 2
8	Shereen John Dilip Kumar R K Shama Mohsin S	Human Pulse Monitoring and Alert system	Publication	International Journal for Research in Applied Science & Engineering Technology, Volume 6, Issue V
9	Meghana C, Keerthana R, Pallavi G A	Design and Development of GUI based Under Water Monitoring System	Publication	International Journal for Research in Applied Science & Engineering Technology, Volume 6, Issue V
10	Gaurav Kumar Gupta, Mohammed Asif, Abhijnan M	Assesment of noise reduction in ultra sound images of common caotit and brachial activities	Publication	International journal of Engineering Trends and Technology, Volume 59
11	Sowmya N, Yaduguri Sravani, Beulah James	Smart Reading Glasses: Conversion of Image Text into Speech	Publication	International Journal of creative Research Thoughts, Volume 6, Issue 2

Criterion-4 Self-Assessment Report (SAR)

12	Arun R, Bhavani R, Rethna Jennifer S	Flexible Compartments IOT Driven Pill-Box	Conference	International conference on NHSET 2018, New Horizon College of Engineering
13	Sharat S, Sonal S, Agnes Maria	Zigbee based wireless system	Publication	International Journal of Scientific Research in Computer Science, engineering and Information Technology, Volume 4, Issue 5
14	Srinivas Ravikanth	Micro controller controlled Buck converter	Conference	RTEICT-2018, Sri Venkateshwara College of Engineering
15	Sanjana K K, Sushmitha, Suraksha Choudhary	Sign Language Recognition using a Smart Hand Device with Sensor Combination	Publication	International Journal for Research in Applied Science & Engineering Technology, Volume 6, Issue IV
16	Alankrit Mishra, Monika Yadav, Malbik Singh	Smart Id Card based child security device	Publication	International Journal of Creative Research Thoughts, Volume 6, Issue 2
17	Akhil Ravishankar, Baba Kedarnath Sahu, Purushothaman E	Smart Mirror (With a Personal AI)	Publication	International Journal for Research in Applied Science & Engineering Technology, Volume 6, Issue V

Criterion-4 Self-Assessment Report (SAR)

18	Rohith Prasad K M, Harish P, Rigil Gracious, Kandati Praveen Kumar	IC Layout Design of Carry Lookahead Adder at 90mm Technology	Publication	International Journal for Research in Applied Science & Engineering Technology, Volume 6, Issue V
19	Riny Elizabeth Alex, Ruby Khan, Muheed Pasha	Charging Devices using Wireless transfer of solar power	Publication	International Journal for Science and Advance Research in Technology, E-Journal, Volume 4, Issue 4
20	Anu Reddy	Harnessing Energy from Piezo Sensors Through Foot Steps	Publication	International Journal for Research in Applied Science & Engineering Technology, Volume 6, Issue V

Table 4.5.4.4: Patents Filed by Students [2018-2019 & 2019-2020]

S. No	Date	Names of the Student	Title of the Patent
1	20.2.19	Mohammed Ghassan, Devashrutha S, Naveen K M, Dr. Sanjeev Sharma	Novel System and Method of GRZMOT Min
2	15.3.19	Denzel Abraham George, Bhavana Savanth Nikhil Riyaz, R. Hari Raj	Novel Apparatus, System and Method for a voice based tool to have better communication
3	15.3.19	Denzel Abraham George, Bhavana Savanth Nikhil Riyaz, R. Hari Raj	Novel Arrangement of Apparatus, System and Method using Artificial Intelligence (AI) techniques facilitates the fruitful interaction with uneducated users
4	15.3.19	Denzel Abraham George, Bhavana Savanth Nikhil Riyaz, R. Hari Raj	Novel Arrangement of Apparatus, System and Method for creating an efficient cloud platform where small and large enterprises can exchange resources and work together for mutual benefits
5	15.3.19	Denzel Abraham George, Bhavana Savanth Nikhil Riyaz, R. Hari Raj	Novel Arrangement of Apparatus, System and Method for creating an efficient cloud platform where all stakeholders of agricultural industry

Criterion-4 Self-Assessment Report (SAR)

6	15.3.19	Denzel Abraham George, Bhavana Savanth Nikhil Riyaz, R. Hari Raj	Novel Arrangement of Apparatus, System and Method to Provide Convenient E-Learning Platform to Reduce Student Dropout Rates and Enhance Job Opportunities
7	15.3.19	Denzel Abraham George, Bhavana Savanth Nikhil Riyaz, R. Hari Raj	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
8	15.3.19	Denzel Abraham George, Bhavana Savanth Nikhil Riyaz, R. Hari Raj	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 Related Information
9	15.3.19	Denzel Abraham George, Bhavana Savanth Nikhil Riyaz, R. Hari Raj	Novel Arrangement of Apparatus, System and Method as an integrated Farmer Information System (FIS)
10	28.11.19	Athira Ajayakumar K Denzel Abraham George, Bhavana Savanth Nikhil Riyaz, R. Hari Raj	Novel System, Design and Arrangement of 1U QubeSat (1UQS)

Criterion-4 Self-Assessment Report (SAR)

11	28.11.19	Athira Ajayakumar K Denzel Abraham George, Bhavana Savanth Nikhil Riyaz, R. Hari Raj	Novel System, Design and Making of Device Uses Neo Pixel Built-in Full Color Driving Lights Circular or Square PCB for TubeSat/CanSat/CubeSat
12	28.11.19	Athira Ajayakumar K Denzel Abraham George, Bhavana Savanth Nikhil Riyaz, R. Hari Raj	Novel System, Design and Arrangement of 3U QubeSat (3UQS)
13	28.11.19	Athira Ajayakumar K Denzel Abraham George, Bhavana Savanth Nikhil Riyaz, R. Hari Raj	Novel System, Design and Arrangement of 2U QubeSat (2UQS)
14	28.11.19	Athira Ajayakumar K Denzel Abraham George, Bhavana Savanth Nikhil Riyaz, R. Hari Raj	Novel System, Design and Methods of Circular Stack Can Satellite (CSCS)
15	28.11.19	Athira Ajayakumar K Denzel Abraham George, Bhavana Savanth Nikhil Riyaz, R. Hari Raj	Novel System, Design and Methods of Compact CanSat: Satellite in a CAN

Criterion-4 Self-Assessment Report (SAR)

16	28.11.19	Athira Ajayakumar K Denzel Abraham George, Bhavana Savanth Nikhil Riyaz, R. Hari Raj	Novel System, Design and Methods of Vertical Stack A-Nano CanSat (VSANCS) & Novel System, Design and Methods of A-Nano Pocket CubeSat (ANPCS)
17	28.11.19	Athira Ajayakumar K Denzel Abraham George, Bhavana Savanth Nikhil Riyaz, R. Hari Raj	Novel System, Design and Methods of Vertical Stack Rectangular Board CanSat (VSRBCS)
18	28.11.19	Athira Ajayakumar K Denzel Abraham George, Bhavana Savanth Nikhil Riyaz, R. Hari Raj	Novel System, Design and Methods of Compact Interchangeable Stack CanSat (CICS)
19	10.04.2020	Hariraj Rajkumar Durairaj Rajkumar	Novel System, Method, Idea and Design of Selective Disinfectant Spray Pathway (SDSP)
20	10.04.2020	Nikhil Riyaz	Novel System, Method and Design of Ambu Bag Ventilator System (ABVS)
21	11.05.2020	Hariraj Rajkumar	A Pocket Qube Satellite (PQ Sat) Device

4.5.5 Extra Curricular Activities

Table 4.5.5.1: Summary of achievement in sports activities (2017 – 18)

Sl. No	Name	USN	Event	Date	Tournament(S)	Achievements
1	J Ruth Sharon	INH17EC086	Basket Ball(W)	20 th to 22 nd Sep 2017	M.S Ramaiah	Runners
2	Vinay Bhandari Chirag S	1NH14EC155 1NH16EC713	Volleyball (M)	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	Devadan Cup Vtu(Bcz) Vtu(Iz) Kreedostav Azura 2018 Sai Lio Amc	Winners Winners Runners Winners Winners Winners Winners
3	Bhavana Savanth	1NH15EC011	Basketball(W)	4 th to 11 th Feb 2018 17 th to 19 th Feb 2018 19 th to 21 st Feb 2018 8 th to 10 th Mar 2018 12 th & 13 th Apr 2018 14 th to 16 th Apr 2018	Malleswaram Rv Momentum Spiel Azura 2018 Dr. Ait(Vtu) Bldacet(Vtu)	Runners Winners Winners Winners Runners Runners
4	Bharath M Achal	1NH14EC403 1NH15EC003	Kabaddi (M)	22 nd & 23 rd Mar 2018	Azura 2018	II Runner Up
5	Lingraj Jamkhandi	1NH16EC722	Foot Ball	22 nd & 23 rd Mar 2018	Vtu	II Runner Up

Table 4.5.5.2: Summary of achievement in sports activities (2018 – 19)

Sl. No	Name	USN	Event	Date	Tournament	Achievements
1	Chirag S	1NH16EC713	Volleyball(M)	11 th Sep 2018	St. John's Btl Kreedostava Spardha	Winners
2	Ritvik	1NH16EC725	Basketball(M)	14 th & 15 th Sep 2018	St. John's Vtu(Bcz) Vtu(Iz) Kreedostava Ms Ramaiah Spardha	Runners
3	Giridhar U	1NH17EC112	Kabaddi(M)	3 rd & 5 th Oct 2018	Spardha Infini	Winners
4	J Ruth Sharon (Played Vtu Nationals)	1NH17EC033	Basketball(W)	21 st to 24 th Sep 2018 22 nd to 25 th Sep 2018 3 rd & 4 th Oct 2018	Kreedostav Ms Ramaiah Court Wars Spardha Vtu(Nationals)	Winners Winners Winners

Table 4.5.5.3: Summary of achievement in sports activities (2019 – 20)

Sl. No	Name	USN	Event	Date	Tournament	Achievements
1.	Ritvik Msvv	1NH16EC725	Basketball (M)	28 th & 29 th Feb 2020	Devadan Cup	Winners
2.	J Ruth Sharon	1NH17EC033	Basketball (W)	25 th Jan to 3 rd Feb 2020 10 th To 15 th Feb 2020 22 nd To 24 th Feb 2020	Malleshwaram Cup Spiel Rvce	3 rd Place Runners Winners
3.	Chirag S	1NH16EC713	Volleyball (M)	1 st and 2 nd Feb 2020 23 rd and 24 th Feb 2020 5 th and 6 th Mar 2020 9 th and 1 st Mar 2020	Umang Rvce Vtu (Bcz) Vtu (Iz)	Runners Runners Runners II Runners
4.	Janardhana T	1NH17EC408	Volleyball (M)	1 st and 2 nd Feb 2020 23 rd and 24 th Feb 2020 5 th and 6 th Mar 2020 9 th and 1 st Mar 2020	Umang Rvce Vtu (Bcz) Vtu (Iz)	Runners Runners Runners II Runners
5.	Tanmaya Sh	1NH18EC112	Volleyball (W)	13 th to 15 th Mar 2020	Vtu(Bcz)	2 nd Runner Up
6.	Meghashree R	1NH16EC055	Volleyball (W)	13 th to 15 th Mar 2020	Vtu(Bcz)	2 nd Runner Up
7.	Sneha N S	1NH18EC106	Volleyball (W)	13 th to 15 th Mar 2020	Vtu(Bcz)	2 nd Runner Up
8.	Shivani Yadav	1NH18EC103	Volleyball (W)	13 th to 15 th Mar 2020	Vtu(Bcz)	2 nd Runner Up



Figure 4.5.5.1: Glimpses of Extra Curricular Activities

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

CRITERION 5

FACULTY INFORMATION AND CONTRIBUTIONS

CRITERION 5	FACULTY INFORMATION AND CONTRIBUTIONS	200
--------------------	--	------------

5.1 Student-Faculty Ratio (SFR) (20)

(To be calculated at Department Level)

No. of UG Programs in the Department (n) : **01**

No. of PG Programs in the Department (m) : **Nil**

No. of Students in UG 2nd Year = u1

No. of Students in UG 3rd Year = u2

No. of Students in UG 4th Year = u3

No. of Students in PG 1st Year = p1

No. of Students in PG 2nd Year = p2

No. of Students = Sanctioned Intake + Actual admitted lateral entry students

(The above data to be provided considering all the UG and PG programs of the department)

S= Number of Students in the Department = UG1+UG2+UG3+PG1+PG2

F = Total Number of Faculty Members in the Department (excluding first year faculty)

Student Faculty Ratio (SFR) = S / F

Table B.5.1.1 Student Faculty Ratio

Year	CAY (2019-20)	CAYm1 (2018-19)	CAYm2 (2017-18)
u1	193	213	212
u2	211	204	210
u3	202	209	191
UG (B. Tech. ECE)	606	626	613
p1	-	-	-
p2	-	-	-
PG (M. Tech.)	-	-	-

Total No. of Students in the Department (S)	606	626	613
No. of Faculty in the Department (F)	43	43	42
Student Faculty Ratio (SFR)	SFR1=14.09	SFR2=14.56	SFR3=14.60
Average SFR		SFR= 14.42	

Marks to be given proportionally from a maximum of 20 to a minimum of 10 for average SFR between 15:1 to 25:1, and zero for average SFR higher than 25:1. Marks distribution is given as below:

< = 15	-	20 Marks
< = 17	-	18 Marks
< = 19	-	16 Marks
< = 21	-	14 Marks
< = 23	-	12 Marks
< = 25	-	10 Marks
> 25.0	-	0 Marks

Note:

Minimum 75% should be Regular/ full time faculty and the remaining shall be Contractual Faculty as per AICTE norms and standards.

The contractual faculty (doing away with the terminology of visiting/adjunct faculty, whatsoever) who have taught for 2 consecutive semesters in the corresponding academic year on full time basis shall be considered for the purpose of calculation in the Student Faculty Ratio.

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

Table B.5.1.2 Regular & Contractual Faculty

	Total number of Regular faculty in the Department	Total number of Contractual faculty in the Department
CAY (2019-20)	43	-
CAYm1 (2018-19)	43	-
CAYm2 (2017-18)	42	-

5.2 Faculty Cadre Proportion (20)

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

F1: Number of Professors required = $1/9 \times$ Number of Faculty required to comply with 15:1 Student- Faculty ratio based on no. of students (N) as per 5.1.

F2: Number of Associate Professors required = $2/9 \times$ Number of Faculty required to comply with 15:1 Student-Faculty ratio based on no. of students (N) as per 5.1.

F3: Number of Assistant Professors required = $6/9 \times$ Number of Faculty required to comply with 15:1 Student-Faculty ratio based on no. of students (N) as per 5.1

Table B.5.2 Faculty Cadre Ratio

Year	Professors		Associate Professors		Assistant Professors	
	Required F1	Available	Required F2	Available	Required F3	Available
CAY (2019-20)	3	6	6	7	20	30
CAYm1 (2018-19)	3	6	6	7	20	30
CAYm2 (2017-18)	3	3	6	4	20	35
Average Numbers	RF1=3	AF1= 5	RF2=6	AF2=6	RF3=20	AF3=31.67

$$\text{Cadre Ratio} = \left(\left(\frac{AF1}{RF1} + \frac{AF2}{RF2} * 0.6 + \frac{AF3}{RF3} * 0.4 \right) \right) * 10$$

$$\begin{aligned} \text{Cadre Ratio Marks} &= ((5/3) + (6/6) * 0.6 + (32/20) * 0.4) * 10 \\ &= \mathbf{29.06 \text{ (limited to 20)}} \end{aligned}$$

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

- Case 1: AF1/RF1= 1; AF2/RF2 = 1; AF3/RF3 = 1;

Cadre proportion marks = $(1+0.6+0.4) \times 10 = 20$

- Case 2: AF1/RF1= 1; AF2/RF2 = 3/2; AF3/RF3 = 5/6;

Cadre proportion marks = $(1+0.9+0.3) \times 10 = \text{limited to } 20$

- Case 3: AF1/RF1=0; AF2/RF2=1/2; AF3/RF3=8/6;

Cadre proportion marks = $(0+0.3+0.53) \times 10=8.3$

5.3 Faculty Qualification (20)

$$FQ = 2.0 * [(10X + 4Y)/F]$$

Where, X is no. of regular faculty with Ph.D.,

Y is no. of regular faculty with M. Tech.,

F is no. of regular faculty required to comply 15:1 Faculty Student ratio

(No of faculty and no. of students required are to be calculated as per 5.1)

Table B.5.3 Faculty Qualification

	X	Y	F	FQ = 2.0 * [(10X + 4Y)/F]
CAY (2019-2020)	13	30	30	16.67
CAYm1 (2018-2019)	14	29	31	16.52
CAYm2 (2017-2018)	7	35	30	14
Average Assessment				15.73

5.4 Faculty Retention (10)

Item (% of faculty retained during the period of assessment keeping CAYm2 as base year)	Marks
>= 90% of required Faculty members retained during the period of assessment keeping CAYm2 as base year	10
>=75% of required Faculty members retained during the period of assessment keeping CAYm2 as base year	08
>= 60% of required Faculty members retained during the period of assessment keeping CAYm2 as base year	06
>= 50% of required Faculty members retained during the period of assessment keeping CAYm2 as base year	04
< 50% of required Faculty members retained during the period of assessment keeping CAYm2 as base year	0

Table B.5.4 Faculty Retention

Faculty Retention (FR)		
Description	CAY (2019-20)	CAYm1 (2018-19)
Number of Regular Faculty in the Department	42	42
Number of Faculty Retained	30	36
Percentage of Faculty retained	71	86
Average % of faculty retained	79	

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

(List the program specific criteria and the competencies (specialization, research publications, course developments etc.,) of faculty to correlate the program specific criteria and competencies.)

- The Department of Electronics and Communication Engineering is a versatile department, with numerous specializations like Semiconductor Technologies, IoT based Embedded systems, Next Generation Communication Systems, RF and power systems, Advanced Signal/Image processing.
- Faculty members articulate their domain specific knowledge to groom the students to excel in academics and prepare them to participate in various events like Smart India Hackathons, Robot Fabrication contest, Paper presentation, Project Presentation, etc.
- Faculty members show consistent progress in their domain by publishing their research works in renowned Journals and actively contributing their services to the Industries as consultancy works.
- The program specific criteria are correlated with competencies of Faculty members through their specialization along with research publications, book publication, course developments, and refereed journal papers for peer reviewed journals in specific domains as specified under the tables shown below.

Faculty Competencies in Correlation to PSC

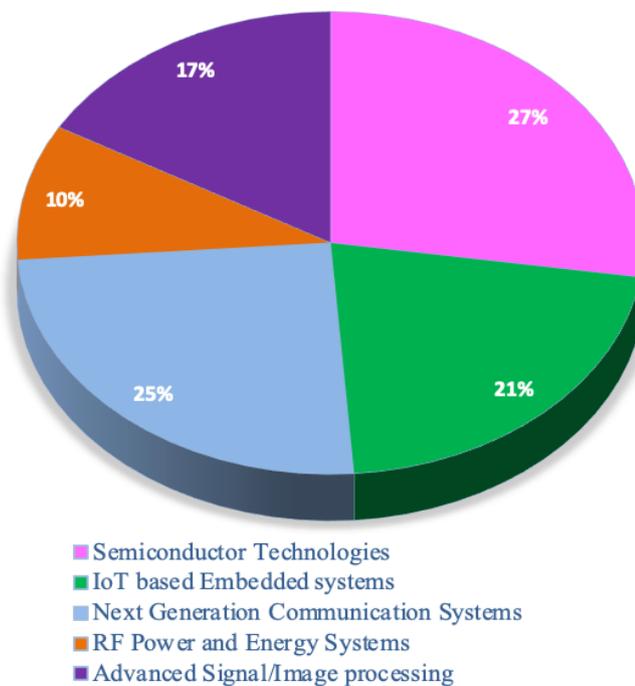


Figure B. 5.5.1 Faculty competencies in correlation to Specialization

Table B.5.5.1 Faculty competencies in correlation to Specialization

Engineering (Specialization Area)	Relevant Courses in the Curriculum	Competent Faculty
Semi-Conductor Technologies	<ol style="list-style-type: none"> 1. System Design using HDL 2. CMOS VLSI Design 3. VLSI Design Manufacturing 4. Low power VLSI Design 	Dr. Sanjeev Sharma Dr. Mohan Kumar Naik B Dr. Surendran. J Dr. Aravinda K Ms. Dharmambal V. Ms. Thanuja I. K. Ms. Nayana G. H. Ms. Rajani K. V. Ms. Aruna Madapura Soma
	<ol style="list-style-type: none"> 1. Digital Electronic Circuits 2. Linear Integrated Circuits 3. Analog Electronic Circuits 4. Network Analysis 	Ms. Monika Gupta Mr. Richard Lincoln Paulraj Ms. Divya Rajan Ms. Maheswari M.
	<ol style="list-style-type: none"> 1. Microelectronic Circuits 2. Advanced Semiconductors 3. Analog & Mixed mode VLSI Design 	Mr. Karthik C. V. Ms. Ramanamma Parepalli Mr. Rajiv Gopal Ms. Neethu Johny Mr. Deepak Kumar S N Ms. Mayur Shivamurthy Mr. Bhimasen Kulkarni
IoT based Embedded systems	<ol style="list-style-type: none"> 1. Microcontrollers 2. Embedded System Design 3. Embedded Linux 4. Artificial Intelligence and Cognitive Computing 5. Internet of Things 	Dr. Vasudha Srikumar Prof. Mani Laxman Aiyar Dr. Piruthiviraj.P Dr. Dhivya.M Dr. Rajesh.G Ms. Tessa Tomy
	<ol style="list-style-type: none"> 1. Control Systems 2. Industrial Automation 3. Python and R Programming 4. Automotive Electronics 5. Robotics 6. Neural Networks 7. Object Oriented Programming 	Dr. Gunapriya B Ms. Mamta B Savadatti Ms. Rajashri.Y.M Ms. Parul Wadhwa Ms. Shachi P Mr. Sachin V

Next Generation Communication Systems	<ol style="list-style-type: none"> 1. Analog Communication 2. Digital Communication 3. Information Theory & Coding 4. Optical Fiber Communication 	Dr. Aradhana Yadav Dr. Jayadeva T.S. Ms. Lispa Dash Mr. Ashutosh Srivastava Mr. Nanda Kumar K Mr. Rishikesh S T Ms. Neha Mr. Jagadish Rao K.
	<ol style="list-style-type: none"> 1. Cisco - Routing & Switching – 1 2. Cisco - Routing & Switching – 2 3. Network Security and Cryptography 4. Routing & Switching 5. Digital Switching Systems 6. Real Time Operating Systems 	Dr. Naveen H Dr. Reema Sharma Ms. Divya Sharma
RF Power and Energy Systems	<ol style="list-style-type: none"> 1. Engineering Electromagnetic 2. Antennas & Wave Propagation 3. Microwaves & Radar 4. Wireless & Mobile Communication 5. Satellite Communications 	Dr. Gurulakshmi A B Dr. Sivakumar Dr. Raghavendra Kulkarni Mr. Ashok K
	<ol style="list-style-type: none"> 1. Renewable Energy 	Dr. Nisha K C R
Advanced Signal/Image processing	<ol style="list-style-type: none"> 1. Signals and Systems 2. Digital Signal Processing 	Dr. Jayanthi M Ms. Ishani Mishra Mr. Puvirajan T Mr. Ugrasena Maharaj Ms. Smitha G.S.
	<ol style="list-style-type: none"> 1. Biomedical Signal and Image Processing 2. Multimedia Signal Processing and Coding 3. Image Processing 	Dr. Priyamvada Singh Dr. Karthikeyan. S Dr. Shreesha Kalkoor M Ms. Susmitha A Mr. Sagar D K Ms. Shilpa Kambe Mr. Vipin V

Table B.5.5.2 Faculty competencies in correlation to research publication

Sl. No	Name of the Faculty	Competency	Research Publications with respect to specialization
1.	Dr. Sanjeev Sharma	Semiconductor Technologies	1. FPGA Implementation and Optimization of Highly Linear Wideband Chip Generation for FMCW Radar Application using Fractional-N PLL
			2. An Optimization Design Approach for Arithmetic Logic Unit
			3. An algorithm for fault tolerance in FPGA
			4. Place and Route Algorithm Analysis for FPGA using KL algorithm
			5. Analysis of place and route algorithm for field programmable gate array (FPGA)
2.	Dr. Mohan Kumar Naik B	Semiconductor Technologies	1. Comparison Analysis of N- channel and P-channel SOI/Bulk FinFET
			2. Analytical Modeling and simulation of FinFET for Semiconductor memories
			3. An Average Power Estimation Technique for Integrated Circuit
			4. A CMOS Combinational Logic Gates Power Estimation Techniques
			5. Digital VLSI Circuit Low Power Estimation Technique
3.	Dr. Nisha K C R	Power Electronics and Renewable systems	1. A Transformer-less Current Source Inverter for Grid-Connected SPV System
			2. Review of Transformer less single stage single phase CSI for PV grid interface.
			3. Review on Torque Ripple Reduction Techniques of BLDC Motor
			4. DC link embedded impedance source inverter for photovoltaic system

			5. Multi-stage cascaded quasi Z-source inverter system for renewable energy applications.
4.	Dr. Priyamvada Singh	Signal/ Image & Video Processing	1. A survey of automatic video summarization techniques
			2. Frame clustering technique towards single video summarization
			3. Dominant Frame Extraction for Video indexing
			4. Design and implementation of an image processing model for the detection and analysis of diabetic nephropathy at early stage
			5. Personalized Summary Representation of Video Summaries
5.	Dr. Reema Sharma	Next Generation Communication Systems	1. Markov Chain based Priority Queueing Model for Packet Scheduling and Bandwidth Allocation
			2. Probabilistic Prediction based Scheduling for Delay Sensitive Traffic in Internet of Things
			3. Probabilistic Prediction-based Packet Scheduling Scheme in Internet of Things
			4. Design and Analysis of QoS-Aware Scheduling Schemes for IoT Applications
			5. A Systematic Survey on Compressed Sensing: Signal Acquisition and Reconstruction Schemes and Applications
6.	Dr. Jayadeva T S	Next Generation Communication Systems	1. Design of Sierpinski carpet Sierpinski fractal antenna by improving the performance parameters and reducing the antenna size
			2. High efficiency Doherty Power

			<p>Amplifier for the frequency 3.1 GHz to 3.75 GHz</p> <p>3. High efficiency Doherty Power Amplifier for the frequency 3.1 GHz to 3.75GHz</p> <p>4. A 70% GaN do herty power amplifier</p> <p>5. Modified do herty power amplifier for wider band</p>
7.	Dr. Sreesha Kalkoor M	Image Processing	<p>1. Design and implementation of an image processing model for the detection and analysis of diabetic nephropathy at early stage</p> <p>2. Exchange of data between a remote server and embedded clients</p> <p>3. A characterization of graphs with metric dimension two</p> <p>4. Execution of an image processing model for the analysis of diabetic nephropathy images</p> <p>5. Design and implementation of an image processing model for the analysis of diabetic nephropathy images</p>
8.	Dr. Piruthiviraj. P	Next Generation Communication Systems	<p>1. Blocking Performance & Analysis of Routing and Wavelength Assignment using Shortest Path Routing Algorithm in All-Optical network</p> <p>2. Real Time Multimedia Traffic Analysis and Implementation of IPV4 Based Optical Network using Routers</p> <p>3. Real Time QoS performance analysis for Multimedia Traffic in an Optical Network</p> <p>4. Wavelength Selectivity Adaptive shortest path algorithm using Optical Network</p>

			5. Real-time Design and Implementation of a Network for the analysis of Multimedia Traffic using CISCO Optical Routers
9.	Dr. Dhivya. M	IoT based Embedded Systems	1. Design and Implementation of Steering Based Headlight Control System Using CAN Bus
			2. Design and implementation of IoT based waste management system. Middle-East Journal of Scientific Research
			3. Designing an embedded system for the parameter Monitoring and control inside a greenhouse
			4. Aiding Visually Challenged Individual for Object Detection and Navigation Using Assistive Technology
			5. Design and Analysis of QoS-Aware Scheduling Schemes for IoT Applications
10.	Dr. Gunapriya B	Power Electronics	1. Speed Control of Three Phase Switched Reluctance Motor Using Particle Swarm Optimization
			2. Real-Time Implementation and Performance Evaluation of Brain Emotional Learning Developed for FPGA-Based PMSM Motor Drives
			3. Performance Enhancement of BLDC Drives in Electric Vehicles by Using Fuzzy Gain Scheduling PI Controller
			4. Power electronic drives and control technology status: brief review
			5. E-Metering and Fault Detection in Smart Water Distribution Systems using Wireless Network

11.	Dr. Gurulakshmi. A B	RF power and energy systems	1. Design of High Frequency Filters for RF Applications
			2. Design and Implementation of single Tune RF Mixer
			3. Design and Analysis of Four Way Power Divider for High Frequency Applications
			4. Analysis and Estimation of Crosstalk in Multi conductor Transmission Lines
			5. Electromagnetic Modeling of Multi conductor Transmission Lines in the Analysis of Crosstalk at the bents of PCB
12.	Dr. Jayanthi. M	Signal/ Image Processing	1. Optimization based Liver Contour Extraction of Abdominal CT Images
			2. Extraction and Classification of Liver Abnormality Based on Neutrosophic and SVM Classifier
			3. Segmentation of Liver Abnormality based on Label Connected Component Algorithm
			4. New Edge Preserving Hybrid Method for Better Enhancement of Liver CT Images
			5. Comparative study of different techniques used for medical image segmentation of liver from abdominal CT scan
13.	Dr. Naveen H	Next Generation Communication Systems	1. Performance Analysis of Biorthogonal Filter Design Using the Lifting based Scheme for Medical Image Transmission

			<ol style="list-style-type: none"> 2. Comparative Analysis of FFT, DWT and DTCDWT based OFDM System for Underwater Acoustic Communication 3. The Effective Transmission of Acquired Sensor Data with FFT, DWT and DTCWT in Different Channel Environment 4. Artificial Intelligence based Facial Recognition for Mood Charting among men on life style modification and its correlation with cortisol 5. Design of Underwater Acoustic Channel Model for OFDM communication system
14.	Dr. Aravinda K	Latest Semi-Conductor Technologies	<ol style="list-style-type: none"> 1. A faster phase frequency detector using transmission gate based latch for the reduced response time of the PLL 2 2. Frequency equation for the submicron CMOS ring oscillator using the first order characterization 3. Integer-N Charge Pump Phase locked loop for 2.4 GHz application with a novel design of Phase Frequency Detector 4. Analysis of deadbeat control for an Integer-N charge-pump PLL 5. Design of single-ended and differential Ring oscillators in submicron dimensions
15.	Ms. Dharmambal V	IoT and Renewable Energy Systems	<ol style="list-style-type: none"> 1. Smart ATM surveillance system 2. Piezo film based renewable energy system 3. Novel system and method for IOT

			<p>based herb detection system</p> <p>4. Novel system and method of powering bulb using piezo sensor and power management system with zero energy</p> <p>5. Predicting the Diet for balanced pH of Human body using Digital Pill</p>
16.	Ms. Susmitha A	Image Processing	<p>1. Automatic vehicle license plate detection using image processing techniques</p> <p>2. Comparative Analysis of Lossless Image Compression Algorithms</p> <p>3. Mechanism to Counteract Attacks in MANETS</p> <p>4. Implementation of Canny's Edge Detection Technique for Real World Images</p> <p>5. Performance Analysis of Average and Median Filters for De Noising of Digital Images</p>
17.	Mr. Madhukar B N	Signal Processing	<p>1. Lanczos re-sampling for the digital processing of remotely sensed images</p> <p>2. A duality theorem for the discrete sine transform (DST)</p> <p>3. A Duality Theorem for the Discrete Sine Transform-IV (DST-IV)</p> <p>4. A duality theorem for the infinite hartley transform</p> <p>5. Duality properties for the variants of the Discrete Wavelet Transform (DWT)</p>
18.	Ms. Ishani Mishra	Signal Processing	<p>1. A systematic Survey on Compressed Sensing: Signal Acquisition and Reconstruction</p> <p>2. Performance Analysis of Spatial and Adaptive Median Filters for noise removal of digital images</p>

			<ol style="list-style-type: none"> 3. Automated Vehicle License plate detection using image processing techniques 4. Performance Analysis of Multimedia Traffic in DiffServ Network 5. A Systematic Survey on Compressed Sensing: Signal Acquisition and Reconstruction Schemes and Applications
19.	Ms. Divya Sharma	Next Generation Communication Systems	<ol style="list-style-type: none"> 1. Performance Analysis of Multimedia Traffic in DiffServ Network 2. Performance Analysis of Spatial and Adaptive Median Filters for noise removal of digital images 3. Smart id-card based child safety - device 4. A detailed classification of routing attacks against RPL in internet of things 5. SS7 Network and Its Vulnerabilities: An Elementary Review
20.	Ms. Lipsa Dash	Next Generation Communication Systems	<ol style="list-style-type: none"> 1. Channel Estimation in MU-MIMO Systems for Wireless Communication 2. Performance evaluation of modulation schemes in FSO systems under different channel setting 3. Implementation of DSA algorithm using MATLAB 4. Blocking Performance & Analysis of Routing and Wavelength Assignment using Shortest Path Routing Algorithm in All-Optical network 5. Channel- Aware Trust System

21.	Ms. Monika Gupta	Latest Semiconductor Technologies	1. Design and Implementation of 16-bit Adder using Carry Select and Carry Save Mode
			2. Significant Performance Enhancement by Disruptive Technology
			3. A Study of Single Electron Transistor
			4. Fog Computing Pushing Intelligence to the Edge
			5. Double Data Rate Memories, Academic Science
22.	Ms. Maheswari M	Latest Semiconductor Technologies	1. SERF and Modified SERF Adders for Ultra Low Power Design Techniques
			2. Weighted rendezvous planning approach for network lifetime enhancement in wireless sensor networks
			3. Predicting the Diet for balanced pH of Human body using Digital PIL
			4. 8Transistor and Modified 8 Transistor Full Adders for Low Power Design
			5. Impedance Source Converter Based Real Time Water Quality Management System Using Green IoT
23.	Ms. Thanuja I K	IoT and Embedded Systems	1. Smart Bus alert system for easy navigation of the blind
			2. Home automation and Internet of Things
			3. KROTO finder- detection of damages in oil/gas pipes
			4. Text dependent speaker recognition on digital signal processor: implementation and optimization
24.	Ms. Divya Rajan	Latest Semi-Conductor Technologies	1. A survey on Bufferless Router Architectures
			2. Solar Powered Smart Ultrasonic

			Insect Repellent with DTMF 3. Digital Phase Locked Loop: An FPGA Implementation 4. Implementation of a DDR3 SDRAM Memory Controller 5. An FPGA based all Digital PLL
25.	Ms. Nayana G H	Latest Semi-Conductor Technologies	1. Implementation of a Vending machine using Programmable Logic Controller 2. VLSI implementation of AES encryption/decryption algorithm using FPGA 3. Smart reading glasses: conversion of image text into speech 4. FPGA implementation of forest fire detection system using colour models 5. Antenna selection techniques for MIMO communication systems
26.	Ms. Rajashri Y M	Next Generation Communication Systems	1. Robust Robot System for Pipeline Inspection 2. Performance of CBR on Node Overutilization 3. Driver Alerting System Using CAN Protocol 4. Secure Keying in Peer Network using Secret Sharing Techniques
27.	Ms. Neethu Johny	Latest Semi-Conductor Technologies	1. Implementation of Control Circuitry for Ultra-Low Power ROM 2. Study of variability issues on CMOS inverter 3. Mobile Phone Theft Detection Using Super capacitors 4. Design and Implementation of a 32-bit Floating Point Multiplier Using VHDL 5. Design of a Low Power Vedic Multiplier using BKG Reversible Logic Gate

28.	Dr. Rajesh. G	Signal Processing	1. Sarcomata disease detection and stratification based on contrast limited versatile histogram balance
			2. Liver cancer detection and classification based on optimum hierarchical feature fusion with PeSOA and PNN classifier
			3. Improved Despeckle Filtering Technique for Liver Cirrhosis US Images
			4. Abnormality Detection and Classification of Hepatic US Images
			5. Survey on Identification Tools for Hepatocellular Carcinoma- A Review
29.	Mr. Ashok K	Signal Processing, RF Power and Energy Systems	1. Joint Beamforming with Speed Sensitive Relay Selection for Future Wireless Generation MIMO Networks
			2. A Review on Beamforming Techniques for Full Duplex MIMO Relaying Networks
			3. ACNN Based Speech Emotion Recognition and Noise Suppression Using Modified Cuckoo Search Algorithm
			4. Speech Enhancement using Kalman Filter Tuned DNN Method
			5. Image Denoising via Self Learning based Image Decomposition using DWT
30.	Mr. Ugrasena Maharaj	Signal and Image Processing	1. Speech signal recognition using digital signal processing
			2. Smart blind stick
			3. ROI based advanced image compression technique for telemedicine system

31.	Mr. Bhimasen B Kulkarni	Latest Semi-Conductor Technologies	1. FPGA Implementation of Forest Fire Detection System using Colour Models
			2. Design and Implementation of Low Cost ECG Monitoring System and Analysis using Smart Device
			3. Android based Wireless ECG Monitoring System for Cardiac Arrhythmia
32.	Ms. Parul Wadhwa	IoT based Embedded Systems	1. Attendance system using android integrated biometric fingerprint recognition
			2. Internet of Things: Challenges and impact
			3. Sign Language Recognition Using a Smart Hand Device with Sensor Combination
			4. Fresh food supply chain management using IoT
			5. Implementation of Canny's Edge Detection Algorithm for Real World Images
33.	Ms. Sujitha Harish	Image Processing and Communication Systems	1. Performance Analysis of Image Compression Using Kalman DWT
			2. An Effective Real Time Solid Waste Management
			3. A New MAC with Relay Node Concept for Cluster Communication in Wireless Sensor Networks
34.	Ms. Aruna Madapura Somanna	Latest Semi-Conductor Technologies	1. Performance Comparison of 2-bit ALU using various logic architectures
			2. Review on battery data online monitoring system for EV
			3. Secured health information transmission
			4. Design of ARM7 processor core with constrains of power and area consumption using FSM modelling

			and random logic method
			5. A low power CAM with an Auxiliary Bit
35.	Mr. Mayur Shivamurthy Marinaik	Latest Semi-Conductor Technologies	<ol style="list-style-type: none"> 1. Design of Low Power 5-Bit Hybrid Flash ADC 2. Design of Low Power 4-Bit 400MS/s Standard Cell Based Flash ADC 3. Design of novel multiplexer based thermometer to binary code encoder for 4-bit flash ADC
36.	Mr. Ashutosh Srivastava	Next Generation Communication Systems	<ol style="list-style-type: none"> 1. Dual-band L-shaped SIW slot antenna 2. Swarm Detection and Beehive Monitoring System using Auditory and Microclimatic Analysis 3. A Concise Survey of Self-Tuning Methodologies for Proportional Integral Derivative Control system 4. Blocking Performance and Analysis of Routing and Wavelength Assignment Using Shortest Path Routing Algorithm in All-Optical Network
37.	Ms. Smita G S	Signal Processing	1. Hybrid Ambiguity detection method for CFG & ADM
38.	Ms. Rajani K V	Latest Semi-Conductor Technologies	<ol style="list-style-type: none"> 1. Embedded based Food Quality Detection with Sensor Technology 2. Performance Comparison of 2-bit ALU using various Logic Architectures 3. Implementation of low power high speed KOM algorithm for removal of noise using Gaussian kernel
39.	Mr. Rajiv Gopal	Signal processing	1. Carcinoma Detection Using Convolution Neural Networks

		and Semi-conductor Technologies	<ol style="list-style-type: none"> 2. Impact of Automation on the Test Insertion 3. Performance Comparison of 2-bit ALU using various Logic Architectures 4. Performance Analysis of Image Compression using Kalman DWT 5. Development of OFDM based Data Acquisition System from Underwater Acoustic Sensors
40.	Ms. Ramanamma Parepalli	Latest Semi-Conductor Technologies	<ol style="list-style-type: none"> 1. Automated Vehicle License plate detection using image processing techniques 2. Low power square and cube architectures using Vedic sutras 3. Implementation of a Vending machine using Programmable Logic Controller 4. Voice Recognition 5. Microcontroller Based Talking Energy Meter
41.	Mr. Richard Lincoln Paulraj	Signal processing and Semiconductor Technologies	<ol style="list-style-type: none"> 1. A Survey on Cat Swarm Optimization 2. Performance analysis of various adder circuits on 130nm technology 3. Automatic Access & Security based on Machine learning and SMTP 4. Automatic Movable Railway Platform with train Arrival Detection & Monitoring over IOT 5. A novel high resolution DOA estimation design algorithm of close sources signal for underwater conditions

42.	Mr. Karthik C V	Latest Semi-Conductor Technologies	1. Performance Comparison of 2-bit ALU using various Logic Architectures
			2. Design and implementation of low-power pipelined FFT processor
43.	Mr. Puvirajan. T	Latest Semi-Conductor Technologies	1. Performance Evaluation of Re-Configurable VLSI Architecture based on Finite Impulse Response Interpolation Filter
44.	Ms. Tessy Tomy	Next Generation Communication Systems	1. Periodic spectrum sensing framework for optimization in cognitive radio systems
45.	Ms. Mamta B Savadatti	Next Generation Communication Systems	1. Securing SS7 telecommunication network
			2. SS7 Network and Its Vulnerabilities: An Elementary Review
46.	Mr. Deepak Kumar S N	Latest Semi-Conductor Technologies	1. Hardware implementation of Zero Forcing Pre-coding MIMO OFDM system to reduce BER
			2. Design of Phase locked loop using 45nm technology

Table B. 5.5.3 Faculty competencies in correlation to Books/ Book Chapter Publications

SI No	Name of the Faculty	Competency	Book Publications with respect to specialization
1.	Dr. Sanjeev Sharma	Latest Semiconductor Technologies	A Channel-Aware Trust System to Alleviate the Negative Effects Caused by Sinkhole and Selective Forwarding Attacks in Wireless Sensor Networks; Kumar A., Paprzycki M., Gunjan V. (eds) ICDSMLA 2019. Lecture Notes in Electrical Engineering, vol 601. pp 1203-1217, Springer, Singapore
			“An Optimization Design Approach for Arithmetic Logic Unit” included as book chapter in Springer, 28 th June 2019, pp 707-716.
			“Missile Structured Wearable Antenna for

			Power Harvesting Application” included as book chapter in IGI Global Dissiminator of Knowledge. DOI: 10.4018/978-1-5225-9683-7.ch011-2019.
			“Antenna for Wireless Area Network and Bluetooth Application” included as book chapter in Springer,2018.
2.	Dr. Mohan Kumar Naik B	Latest Semiconductor Technologies	Design and Modeling of Different Types of SRAMs for Low-Power Applications. (Book chapter in soft computing and signal processing)
3.	Dr. Nisha K C R	Power Electronics & Renewable Systems	Multi cell Switched-Inductor and Switched Capacitor Reduced-Source DC-link Impedance –source Inverter for PV generation System, (Book chapter on Advanced Engineering Research and Applications)-2018
			Operational Analysis, Performance Evaluation and Simulation of Solar Cell Powered Embedded EZ-Source Inverter Fed Induction Motor(Book chapter, Part of the Springer Lecture Notes in Electrical Engineering book series (LNEE, volume 150)2013
			Embedded and Real Time Systems, Charulatha Publications, Chennai (2017)
			Microprocessors & Microcontrollers, Charulatha Publications, Chennai (2017)
4.	Dr. Dhivya M	IoT based Embedded Systems	Security Assistance System for Deaf and Dumb Using Gesture Recognition, LAP Publishers, 2015
			Cat Swarm Optimization: Theory, Practices & Applications, LAP LAMBERT Academic Publishing, Omni Scriptum, Germany 2019
5.	Ms. Ishani Mishra	Signal Processing	Published a book on Digital Signal Processing, Charulatha Publications, Chennai, ISBN:978-93-86532-72-5

Table B.5.5.4 Faculty competencies in correlation to the courses

SI. No	Name of the Faculty	Competency	E- Content Web Links
1.	Dr. Sanjeev Sharma	Latest Semi-Conductor Technologies	https://m.youtube.com/watch?v=a4VSZ-65EOY
2.	Dr. Piruthiviraj. P	Embedded Systems	https://www.youtube.com/watch?v=reeUB3v67lw
3.	Dr. Dhivya. M	IoT based Embedded Systems	https://www.youtube.com/channel/UCVXtkI5hqrqtCO7ninuUeFg?view_as=subscriber https://www.youtube.com/feed/my_videos
4.	Dr. Jayanthi M	Signal Processing	https://youtu.be/Zt7u4WAyQnk https://youtu.be/IHmwZPV0BK https://youtu.be/Epmy-7a49TU https://youtu.be/znbvwAeQ1F https://youtu.be/5BURUMfuI8 https://youtu.be/NuJ3p5udkzM https://youtu.be/aOo2DOoBdpQ https://youtu.be/vsS7GpnKVVo https://youtu.be/67MeCJ4nQkY https://youtu.be/5BURUMfuI8 https://www.slideshare.net/JayanthiSathishkumar/radar-236063738
5.	Dr. Naveen H	Next Generation Communication Systems	https://classroom.google.com/w/NTYyOTY0Nzg1MTda/t/all https://classroom.google.com/w/NTYzMDMwNjM3NDBa/t/all
6.	Dr. Aravinda K	Latest Semi-Conductor Technologies	https://www.slideshare.net/aravindakoithyar/analog-electronic-circuits-module-22 https://www.slideshare.net/aravi

			ndakoithyar/analog-electronic-circuits-module-23 https://www.slideshare.net/aravi-ndakoithyar/analog-electronic-circuits-module-3 https://www.slideshare.net/aravi-ndakoithyar/analog-electronic-circuits-module-4 https://www.slideshare.net/aravi-ndakoithyar/analog-electronic-circuits-module5 https://www.slideshare.net/aravi-ndakoithyar/system-design-using-hdl-module-1 https://www.slideshare.net/aravi-ndakoithyar/system-design-using-hdl-module-2 https://www.slideshare.net/aravi-ndakoithyar/system-design-using-hdl-module-3 https://www.slideshare.net/aravi-ndakoithyar/system-design-using-hdl-module-5
7.	Ms. Divya Sharma	Next Generation Communication Systems	https://www.youtube.com/watch?v=C9ZRcn5bO8I&list=PL89W16Ok9UAu9mS5F1j1CAgtu0gRrDCq
8.	Ms. Ishani Mishra	Signal Processing	https://youtu.be/MtEsiya2NAk https://youtu.be/CM-H2IN6LSU
9.	Ms. Lipsa Dash	RF Power and Energy Systems	https://www.youtube.com/watch?v=TmXhG78rTIs&t=107s https://www.youtube.com/watch?v=418wbxemqQM&t=411s https://www.youtube.com/watch?v=418wbxemqQM&t=411s

			https://www.youtube.com/watch?v=vlFAZDZyMxU&t=143s https://www.youtube.com/watch?v=zD_YEAtVOJQ&t=71s
10.	Ms. Monika Gupta	Latest Semi-Conductor Technologies	https://www.youtube.com/watch?v=Kcqer9aEG0o&authuser=0
11.	Mr. Ashok K	RF power & Energy Systems	https://youtu.be/SXuQDrcTbzE https://youtu.be/TOWbal2Qn0A https://youtu.be/sLCXYL5Dtiw
12.	Mr. Richard Lincoln Paulraj	Latest Semi-Conductor Technologies	https://youtu.be/imt4gopMc9o
13.	Mr. Rajiv Gopal	Latest Semi-Conductor Technologies	https://drive.google.com/file/d/1cjppb9brF8mZQsr17bs_Zsa5uyJ8sNUG/view?usp=sharing
13.	Mr. Karthick C V	IoT based Embedded systems and Semiconductor Technologies	https://www.youtube.com/channel/UC4HYWnM-mFK5ZPaFvriyNBg
14.	Mr. Puvirajan T	Signal Processing and communication	https://www.youtube.com/channel/UCD8yLxsdKuo6wnraBBmD5eg
15.	Ms. Mamta B Savadatti	IoT based Embedded Systems	https://drive.google.com/file/d/120D6lrQPxpZQOgwV0bjd_spHfmaR_j0L/view
16.	Ms. Tessy Tomy	Signal Processing	https://www.youtube.com/channel/UCWpN-Zt5QnMMiN1aIEqLlg/videos
17.	Mr. Deepak Kumar SN	Latest Semiconductor Technologies	https://www.slideshare.net/DeepakKumar1758/edit_my_uploads

Table B.5.5.5 Faculty competencies in correlation to reviewed/ editorial ship of journals

Sl. No	Name of the Faculty	Competency	Reviewed Journals with respect to specialization
1.	Dr. Sanjeev Sharma	Latest Semi-Conductor Technology	Global Research & Development Journals
			PhD Colloquium on Ethically Driven Innovation and Technology for Society, 2019
2.	Dr. Mohan Kumar Naik B	Latest Semi-Conductor Technology	Editorial Board Member of International Journal of Internet and Computer Security (GBS-IJICS)
			Editorial Board Member of "International Journal of Mobile Communication and Networking (IJMCN)
			Program Committee member and Reviewer for IEEE International Conference
3.	Dr. Nisha K C R	Power Electronics & Renewable systems	Program Committee member and Reviewer for Springer sponsored International Conference.
			IEEE Transactions on Industrial Electronics
			International Transactions on Electrical Energy systems
4.	Dr. Dhivya M	IoT based Embedded Systems	IEEE APEC Conference
			Elsevier Swarm and Evolutionary Computation
5.	Dr. Aravinda K	Latest Semi-Conductor Technology	International journal of Systems Assurance Engineering and Management (Springer)
			Journal of Franklin Institute, Elsevier.
			International Journal of Circuit

			Theory and Applications, Wiley.
			Circuits, Systems, and Signal Processing, Springer.
			IET Circuits, Devices & Systems.
6.	Mr. Ashok K	RF Power & Energy Systems	Reviewer of IEEE access journal
			Reviewer for IEEE International Conferences

Table B. 5.5.6 Faculty competencies in guidance of projects

S. No	Name of the Faculty	Competency	Project Guidance provided to students and made them to publish the works
1.	Dr. Sanjeev Sharma	Latest Semi-Conductor Technology	Smart and Reliable Techniques for Blind Spot Detection
2.	Dr. Aravinda K	Latest Semi-Conductor Technology	Implementation of D-PLL Using Microwind
			Low Cost Electronic Power Supply System for Nano satellite Bus
			Smart and Reliable Techniques for Blind Spot Detection
3.	Ms. Lipsa Dash	RF Power and Energy Systems	Implementation of DSA algorithm using MATLAB
			Channel Estimation in MU-MIMO Systems for Wireless Communication
4.	Ms. Monika Gupta	Latest Semi-Conductor Technologies	Raspberry Pi Mystic Mirror Using Alexa
5.	Mr. Richard Lincoln Paulraj	Latest Semi-Conductor Technologies	Automatic Detection of Potholes
6.	Mr. Karthick C V	IoT based Embedded systems and Semiconductor Technologies	Implementation of DSA algorithm using MATLAB

Table B. 5.5.7 Faculty competencies in correlation to Research Patents

Sl. No	Name of Authors	Patent details			
		Title of patent	Application No	Date of Publication	Publication Reference
1.	Dr. Sanjeev Sharma	Novel System and Method of BycEco-The Electric Bicycle	2019410465 15	15.11.19	E-2/3643/2019-CHE
2.	Mr. Mohammed Ghassan Mr. Devashrutha S Mr. Naveen K M Dr. Sanjeev Sharma Dr. Naveen H	Novel System and Method of GRZMOT Mine	2019410487 71	28.11.19	E-2/3821/2019-CHE
3.	Dr. Nisha K. C. R. Ms. Anitha. A Ms. Dharmambal. V Ms. Karthika M.	Novel Method and System of Graphene UCAP Powered Insulin Pump	2017410349 32	03.10.17	E-2/2930/2017-CHE
4.	Ms. Dharmambal. V Dr. Nisha. K. C. R Ms. Bhavana. C Mr. Anirudhdha. C	Novel System and Method of Powering Bulb Using Piezo-Sensor and Power Management System with Zero Energy	2017410419 85	24.5.19	The Patent Office Journal No. 21/2019 Dated 24/05/2019, P.No.22162
5.	Ms. Dharmambal. V Dr. Nisha. K. C. R Ms. Bhavana. C Mr. Anirudhdha. C	Novel System and Method for IoT Based Herb Detection System	2017410419 86	24.5.19	The Patent Office Journal No. 21/2019 Dated 24/05/2019, P.No.22163
6.	Mr. Denzel Abraham George Mr. Tarun Sai Reddy Mr. Shyam	Novel System, Design and Methods of Circular Stack Can Satellite	2019410464 96	15-11-19	E-2/3624/2019-CHE

	Mr. Hariraj Rajkumar Mr. Sainath Vamshi Mr. Sanketh S Huddar Mr. Nikhil Riyaz Ms. Athira Ajayakumar Dr. Nisha K C R Mr. Ashwin Shankar Reddy Mr. Vishwa Gopal Mr. Sriram Gupta K Ms. Bhavana Savanth, Mr. Jaiteg Singh Mr. Joshua Tom Jaccob Dr. Mohankumar. S	(CSCS)			
7.	Mr. Hariraj Rajkumar, Mr. Sainath G V Mr. Sanketh S H Mr. Nikhil R Ms. Athira A K Dr. Nisha K C R Mr. Denzel A G Mr. Tarun S T Mr. Shyam S, Mr. Ashwin S R Mr. Vishwa Gopal Mr. Sriram G K Ms. Bhavana Savanth Mr. Jaiteg Singh Mr. Joshua T J Dr. Mohankumar S	Novel System, Design and Methods of Compact CanSat: Satellite in a CAN	2019410464 97	15/11/19	E- 2/3625/201 9-CHE

5.6 Innovations by 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, significance of results, effective presentation and reflective critique Teaching Effectiveness and innovation can be achieved by practicing best way to create, delineate and transfer the knowledge from Faculty members to the students. These activities may include innovations not limited to, use of ICT, course delivery methods, assessment, evaluation, inclusive class rooms and Industry sponsored Laboratories that lead to effective, efficient and engaging Teaching learning process. Innovation by faculty in teaching and learning are expected to satisfy the following criteria:

- *Availability of course related resources on Institute website*
- *Availability of course related resources for peer review and critique*
- *Availability of course related resources to be reproducible and developed further by other scholars*

The goal or objective of Innovative teaching:

- 1) To increase the interest of students**
- 2) For involving the students actively in educational work**
- 3) To develop the creativity of the students**
- 4) Experimenting new methods and strategies by which we can ensure improvement of student engagement, motivation and attainment of course outcomes.**

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, significance of results, effective presentation and reflective critique.

Teaching Effectiveness and innovation can be achieved by practicing best way to create, delineate and transfer the knowledge from Faculty members to the students. These activities may include innovations not limited to, use of ICT, course delivery methods, assessment, evaluation, inclusive class rooms and Industry sponsored Laboratories that lead to effective, efficient and engaging Teaching learning processes. Innovation by faculty in teaching and learning are expected to satisfy the following criteria:

- Availability of course related resources on Institute website
- Availability of course related resources for peer review and critique
- Availability of course related resources to be reproducible and developed further by other scholars

The department/institution stick to appropriate processes for making the contributions available to the public, getting them reviewed and ensures the future development. The above objective can be achieved by setting statement of clear goals, efficient preparation, use of appropriate methods, and significance of results, effective presentation and reflective critique.

Table B. 5.6 Innovations by faculty in teaching and learning

Sl. No	Facilities	Remark
1.	Smart Classroom	<p>The institution class rooms are equipped with interactive smart boards. Smart boards make learning more dynamic since it facilitates different form of presenting information. In Smart classes all interactive modules like videos and presentations are used. This visually attractive method of teaching becomes appealing to students. In fact, smart classes help students to easily relate the concepts with the animated visuals. Here the audio-visual senses of students are targeted and it helps the students to grab the information effectively.</p> <div style="text-align: center;">  <p>Fig. 5.6.1 Smart Board</p> </div>

		 <p style="text-align: center;">Fig.5.6.2 Sample image of classroom with smart board</p>
2.	Theory cum laboratory courses	Demonstration method when combined with a well-directed discussion is a successful teaching technique. The Department curriculum is framed in such a way that the courses include both theory and laboratory components. Theory cum laboratory courses ensures students understanding the concepts effectively through theory classes and laboratory sessions.
3.	Online courses	Faculty members and students undergo online courses from the sources like Coursera, Edx, NPTEL, Spoken tutorial, etc. in their area of interest. This helps them to enrich their knowledge on current trends and also to equip themselves with inter-domain expertise. They are certified by the National and International universities and are motivated towards lifelong learning. Online courses also provide forum for discussion among the experts and students worldwide.
4.	Google classroom	Google Classroom is an application designed to enhance the learning experience which is incorporated in our teaching learning process. It helps to interact with students 24 X 7, by posting technical contents, notes, and assignments and also facilitates to conduct and evaluate online quizzes. The tools offer opportunities for collaboration in real time and the ability to work remotely.
5.	Innovative assignments and Real-time problems	Assignments are given based on the real-time engineering problems, to help students to understand and come out with the solutions. Group assignments are also given to improve the self-learning and team work of students.
6.	Technical presentation	Students are encouraged to give presentation on any technical topic in their area of interest which will serve for knowledge

		transfer and to overcome stage fear. It will also improve their communication skills which is significant in their career growth.
7.	Weekend Activities	Co-curricular and extracurricular activities are conducted every weekend to motivate the students and to improve problem solving capabilities, leadership abilities in multidisciplinary, co-operation in team work, consciousness in professional ethics and administering critical situations. These activities include Webinar, Aptitude Training, Social Welfare Camp, Problem solving, Entrepreneurship Development Programs, Critical Thinking, Group Discussion, etc.
8.	Industrial Visit / Trainings	Industrial visits and trainings are organized for students to bridge the gap between theoretical learning and practical training in a real-life environment. Students understand the industrial practices and organizational hierarchy during industrial visits. Industrial visits provide opportunities for active/interactive learning experiences outside classroom environment in addition to usual classroom learning.
9.	Student's club	Students are motivated to present a topic of their own interest for 5 minutes during class hours for improving communication skills and to overcome stage fear.
10.	Project Based Learning	The Department frames its curriculum in such a way that students acquire the skills to design and create complex Electronics systems through various activities including projects. Such projects often force students to use multiple learning techniques to succeed, which includes research, logical deduction, and iterative learning (trial and error). Since these projects are usually too large and complex for one student to do alone, project-based learning also tends to encourage teamwork. Project exhibitions are conducted in the department every year to enrich the project developing skills of the students.
11.	Value Added Courses	Certification courses are conducted by department to give key knowledge to students in a specific field. It improves the employability skills and promote professional and life-oriented skills of the students.
12.	Industry Sponsored Lab –	<ul style="list-style-type: none"> • Cisco Networking Academy • Quest Global • Schneider Electric

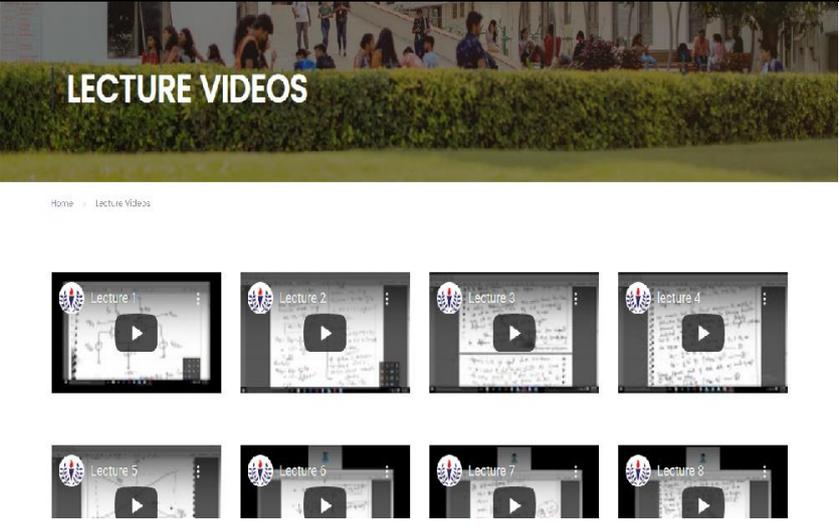
	Centre of Excellence	<ul style="list-style-type: none"> • SAP Next Gen Lab • HPE Vertica CoE • VMware IT Academy
13.	Nodal centre for E-Learning	IIRS Outreach Programme, MHRD-IIC
14.	Lecture Videos	 <p>Fig. 5.6.3 Sample screen shot of the Lecture Videos in the website</p>
15	Digital Library	 <p>Fig 5.6.4 A sample screen shot of the Digital Library link</p>

Table B. 5.6.2 Innovative Practices by Faculty

Sl.No.	Name of the Faculty	Innovative Teaching Methods	Subject
1.	Dr. Sanjeev Sharma	Flipped Classroom	HDL
2.	Dr. Aravinda K.	Activity Based Learning using MURAL Tool	Analog Electronic Circuits
3.	Dr. Nisha K C R	Flipped Classroom	Embedded Systems
4.	Dr. Dhivya M	Group Tutorial	Control Systems
5.	Dr. Gurulakshmi A B	Think, pair, share	Basic Electronics
6.	Ms. Ishani Mishra	Collaborative Learning	Digital Signal Processing
7.	Mr. Ashok K	Peer Group Learning	Microelectronic Circuits
8.	Dr. Rajesh G	Activity based learning	Linear Integrated Circuits
9.	Ms. Rajashri Y R	Project based Learning	Object Oriented Programming
10.	Ms. Neethu Johny	Real Time Simulation based Learning	Analog Electronic Circuits

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: 3Points
- Participation >5 days Faculty/ Faculty development program: 5points

Table B 5.7.1 Faculty as participants in Faculty development/training activities/STTPs

Sl. No	Name of the Faculty	Max 5 per Faculty		
		CAY m1	CAY m2	CAY m3
		(18-19)	(17-18)	(16-17)
1	Dr Sanjeev Sharma	3	-	-
2	Dr. Mohan Kumar Naik B	-	-	3
3	Dr. Nisha K C R	5	5	3
4	Dr. Priyamvada Singh	5	-	-
5	Dr. Jayanthi M	5	0	-
6	Dr. Reema Sharma	5	3	-
7	Dr. Piruthiviraj P	5	-	-
8	Dr. Naveen H	5	5	-
9	Dr. Aradhna Yadav	-	3	5
10	Dr. Jayadeva T S	3	-	-
11	Dr. Karthikeyan S	-	3	5
12	Dr. Ananth A.G.	-	-	5
13	Dr. Aravinda K	5	3	5
14	Ms. Divya Sharma	5	3	-
15	Ms. Ishani Mishra	5	3	3
16	Ms. Dharmambal V	3	3	3
17	Ms. Lipsa Dash	5	3	3
18	Ms. Susmitha A	5	3	3
19	Ms. Thanuja I K	3	3	3
20	Ms. Divya Rajan	5	5	3
21	Ms. Monika Gupta	3	5	5
22	Ms. Neethu Johny	5	3	5
23	Ms. Nayana G H	5	3	3
24	Ms. Maheswari M	5	3	3
25	Mr. Jagadish Rao K	5	3	-
26	Mr. Ashutosh Srivastava	3	3	3
27	Ms. Rajani K V	5	3	

28	Mr. Bhimasen B Kulkarni	3	3	5
29	Ms. Parul Wadhwa	-	3	3
30	Mr. Mayur Shivamurthy Marinaik	-	3	3
31	Ms. Ramanamma Parepalli	5	-	-
32	Mr. Karthik C V	-	3	-
33	Mr. Rajiv Gopal	3	5	-
34	Ms Sree Ramani P	-	-	3
35	Ms. Simi Ranjith	-	-	5
36	Mr. Madhukar B N	-	-	5
37	Ms. Sheeba Kumari	-	-	3
38	Ms. Aiswarya Prasad	-	-	3
39	Ms. Apeksha A Prabhu	-	-	3
40	Ms. Ishita Banerjee	-	-	3
41	Ms. Sumathi S	-	-	3
42	Ms. Anu Puri	-	-	3
43	Ms. Shilpa Kambe	-	3	-
44	Mr. UgrasenaMaharaj	-	3	5
45	Ms. Smitha G. S	-	3	-
46	Ms. Shachi P	-	3	-
47	Mr Sachin V	-	5	-
	SUM	114	102	110
	RF= Number of Faculty required to comply with 20:1 student faculty ratio 20:1	30	31	30
	Assessment=3X(SUM/0.5RF) (Marks limited to 20)	$3*(114/0.5*30)$ =22.80	$3*(102/0.5*31)$ =19.74	$3*(110/0.5*30)$ =22
	Average assessment over three years (Marks limited to 20)	21.51		

Table B 5.7.2 Consolidated count of Faculty participations

S. No	Details	CAY m1 (2018-2019)	CAY m2 (2017-2018)	CAY m3 (2016-2017)	Total
1	Workshop	28	40	7	75
2	FDP/Seminar/STTPs	16	24	29	69
Total Attendees		44	64	36	144

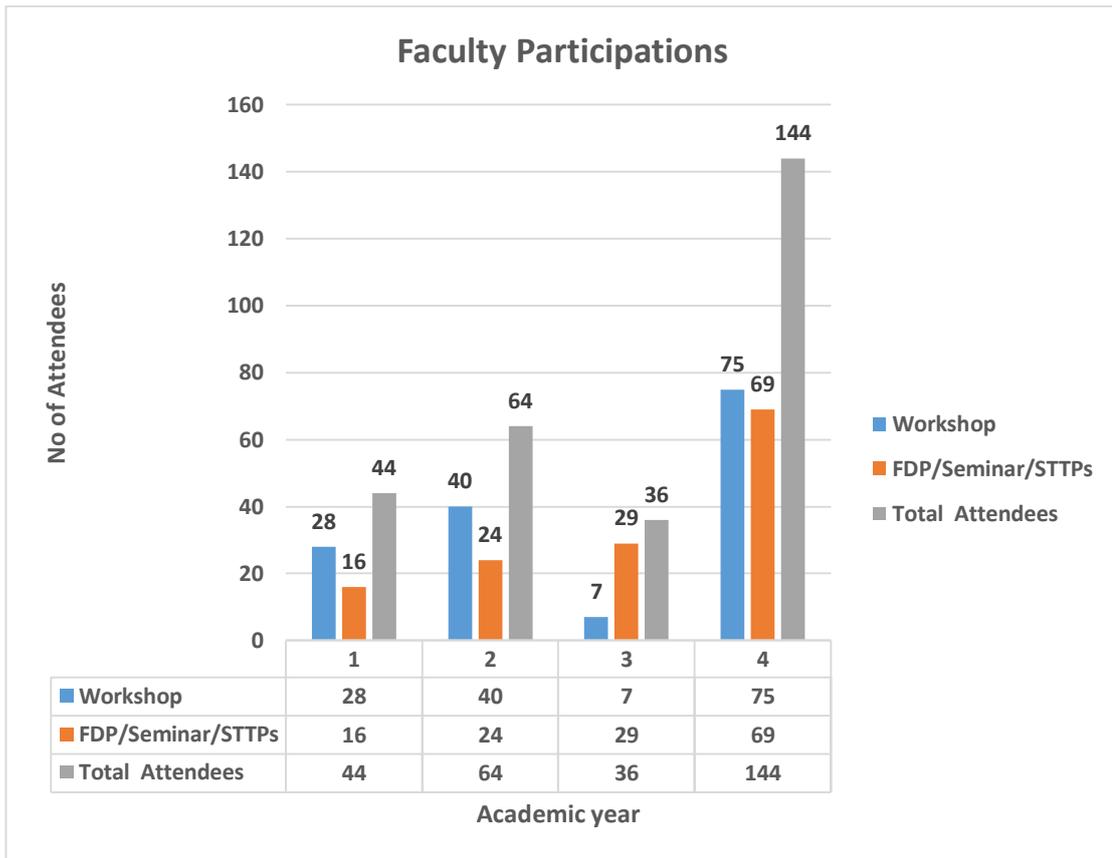


Figure B.5.7.1 Consolidated Count of Faculty Participations

5.8 Research and Development:

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.

Table B.5.8.1. a. Consolidated List of Faculty Publications

Year	Journals/conference
2019-20	33
2018-19	32
2017-18	44
Total	109

Table B 5.8.1. b. Number of Publications per faculty

Name of the Faculty	2019-20	2018-19	2017-18	Total Number of Publication
Dr. Sanjeev Sharma	9	4	-	13
Dr. Mohan Kumar Naik B	3	1	1	5
Dr. Nisha K. C. R.	3	3	5	11
Dr. Priyamvada Singh	-	1	-	1
Dr. Jayadeva T.S.	-	1	-	1
Dr. Shreesha Kalkoor M	-	1	-	1
Dr. Jayanthi M.	1	2	1	4
Dr. Reema Sharma	4	2	-	6

Dr. Piruthiviraj.P	1	1	-	2
Dr. Dhivya.M	3	-	-	3
Dr. Gurulakshmi A. B	2	-	-	2
Dr. Naveen H.	4	5	2	11
Dr. Aravinda K.	2	4	2	8
Dr. Rajesh. G	2	-	-	2
Ms. Divya Sharma	1	2	2	5
Ms. Ishani Mishra	1	3	3	7
Ms. Dharmambal V.	1	3	2	6
Ms. Lipsa Dash	4	1	4	9
Ms. Susmitha A.	3	1	3	7
Ms. Thanuja I. K.	-	2	2	4
Ms. Divya Rajan	1	1	2	4
Ms. Monika Gupta	1	2	4	7
Ms. Neethu Johnny	1	4	1	6
Ms. Nayana G. H.	-	3	3	6
Ms. Maheswari M.	-	3	4	7
Ms. Rajani K. V.	-	1	1	2
Mr. Bhimasen B Kulkarni	-	1	2	3
Ms. Rajashri. Y.M	1	-	-	1
Mr. Richard Lincoln Paulraj	2	-	-	2
Ms. Ramanamma Parepalli	1	3	4	8
Mr. Karthik C. V.	4	-	-	4
Mr. Rajiv Gopal	4	-	1	5

Mr. Ashutosh Srivastava	-	1	-	1
Ms. Parul Wadhwa	-	-	4	4
Mr. Ugrasena Maharaj	-	-	1	1
Ms. Mayur Shivamurthy Marinaik	-	-	1	1

Academic Year: 2019-20

Total no. of Publication (2019-2020) = 33

Table B 5.8.1. c. Publications for academic year 2019-2020

Sl. No	Authors	Title	Name of the Journal/ Conference	DOI /Web Link	Web of Science/ Scopus/ UGC care
1.	Ms. Jyotsna S. Gawai Dr. Sanjeev Sharma Dr. Dhoble S. B.	UWA Channel for Data Communication of UWASN using OFDM	International Conference on Innovative Research in Engineering, Management and Sciences ICIREMS-2019	http://ijsr.cseit.com/paper/v4i9.pdf	UGC CARE
2.	Mr. Naseemuddin Ansari Mr. Sharma V. K. Dr. Sanjeev Sharma	Direction of Arrival Estimation using modified MUSIC Algorithm in FMCW Radar Application	International Conference on Innovative Research in Engineering, Management and Sciences ICIREMS-2019	http://ijsr.cseit.com/paper/v4i9.pdf	UGC CARE
3.	Mr. Jitesh R. Shinde Dr. Sanjeev Sharma Ms. Lipsa Dash	An Optimization Design Approach for Arithmetic Logic Unit	ICICCT 2019: ICICCT 2019 – System Reliability, Quality Control, Safety,	https://link.springer.com/chapter/10.1007/978-981-	SCOPUS

			Maintenance and Management	13-8461-5_81	
4.	Mr. Noor Basha K. Mr. Manjunath Dr. Mohan Kumar Naik B Mr. Ashok Kumar P. S. Mr. Venkatesh P Mr. Kempanna M	Analysis and Forecast of Heart Syndrome by Intelligent Retrieval Approach	Intelligent Computing and Innovation on Data Science. Lecture Notes in Networks and Systems, Springer	doi.org/10.1007/978-981-15-3284-9_57	SCOPUS
5.	Dr. Mohan Kumar Naik B. Ms. Vijayalakshmi V.	Analytical Modelling and Simulation of FinFET for Semi-conductor memories	International Conference on Innovative Research in Engineering, Management and Sciences ICIREMS-2019	http://ijsrcseit.com/paper/v4i9.pdf	UGC CARE
6.	Ms. Surya Prabha Dr. Nisha K C R	A Transformer-less Current Source Inverter for Grid-Connected SPV System	2019 IEEE International WIE Conference on Electrical and Computer Engineering (WIECON-ECE)	https://ieeexplore.ieee.org/document/9019959	SCOPUS
7.	Ms. Karthika M Dr. Nisha K C R	Review on Torque Ripple Reduction Techniques of BLDC Motor	2020 International Conference on Inventive Computation Technologies (ICICT)	https://ieeexplore.ieee.org/abstract/document/9112523	SCOPUS
8.	Dr. Nisha KCR	Review of Transformer Less Single stage single phase CSI for PV grid Interface	Technical Volume 34 Indian Engineering Congress	-	UGC

9.	Dr. Jayanthi M Mr. Divya Sagar Reddy Ms. Madala Himaja, Mr. Bhaskar K Mr. Aravind Mr. Dhinakaran S	A Hybrid Segmentation Approach to Diagnose Suspicious Pixel regions in Liver CT Images	International Conference on Innovative Research in Engineering, Management and Sciences ICIREMS-2019	http://ijsrcseit.com/paper/v4i9.pdf	UGC CARE
10.	Dr. Reema Sharma Dr. Dhivya M. Dr. Sanjeev Sharma	Design and Analysis of QoS-aware Scheduling Schemes for IoT Applications	International Conference on Innovative Research in Engineering, Management and Sciences ICIREMS-2019	http://ijsrcseit.com/paper/v4i9.pdf	SCOPUS
11.	Dr. Dhivya M. Dr. Reema Sharma Dr. Sanjeev Sharma Mr. Richard Paul Lincoln	A Survey on Cat Swarm Optimization	International Conference on Innovative Research in Engineering, Management and Sciences ICIREMS-2019	http://ijsrcseit.com/paper/v4i9.pdf	SCOPUS
12.	Dr. Gurulakshmi A.B. Dr. Sureshkumar N.	Design of High Frequency Filters for RF Applications	International Conference on Innovative Research in Engineering, Management and Sciences ICIREMS-2019	http://ijsrcseit.com/paper/v4i9.pdf	UGC CARE
13.	Dr. Gurulakshmi A.B. Dr. Sureshkumar N. Dr. Pavalarajan S.	Signal Integrity Analysis and Design of Signal Traces for High Speed PCBs	International Conference on Innovative Research in Engineering, Management and Sciences ICIREMS-2019	http://ijsrcseit.com/paper/v4i9.pdf	SCOPUS

14.	Dr. Naveen H Mr. Rajiv Gopal Mr. Karthik C V	Design of High Speed Algorithm for Image Denoising and Feature Extraction Using DWT	International Conference on Innovative Research in Engineering, Management and Sciences ICIREMS-2019	http://ijsrcseit.com/paper/v4i9.pdf	UGC CARE
15.	Dr. Aravinda K Dr. Sanjeev Sharma	Design of single-ended and differential Ring oscillators in submicron dimensions	International Conference on Innovative Research in Engineering, Management and Sciences ICIREMS-2019	http://ijsrcseit.com/paper/v4i9.pdf	SCOPUS
16.	Dr. Aravinda K	Integer-N charge pump phase locked loop for 2.4 GHz application with a novel design of phase frequency detector	IET Circuits, Devices & Systems	DOI: 10.1049/iet-cds.2019.0189	WEB OF SCIENCE
17.	Ms. Dharmambal V Mr. Vikram N	Zero Energy Fed Piezo Film based Renewable Energy System using MPPT and Current Control Technique	International Conference on Innovative Research in Engineering, Management and Sciences ICIREMS-2019	http://ijsrcseit.com/paper/v4i9.pdf	UGC CARE
18.	Ms. Divya Sharma Dr. Sanjay Jain Dr. Reema Sharma	A Comprehensive Review of	International Conference on Innovative	http://ijsrcseit.com	SCOPUS

		Routing Protocols for Internet of Things	Research in Engineering, Management and Sciences ICIREMS-2019	/paper/v4 i9.pdf	
19.	Ms. Ishani Mishra Dr. Reema Sharma Dr. Sanjay Jain	A Systematic Survey on Compressed Sensing: Signal Acquisition and Reconstruction Schemes and Applications	International Conference on Innovative Research in Engineering, Management and Sciences ICIREMS-2019	http://ijsrcseit.com/paper/v4i9.pdf	SCOPUS
20.	Ms. Susmitha. A Ms. Sunanda. A	Recognition and Extraction of Rain Drops in a Rainy Image for Visual Quality Enhancement	International Conference on Innovative Research in Engineering, Management and Sciences ICIREMS-2019	http://ijsrcseit.com/paper/v4i9.pdf	UGC CARE
21.	Ms. Lipsa Dash	Performance Evaluation of Modulation Schemes in FSO Systems under Different Channel Setting	International Conference on Innovative Research in Engineering, Management and Sciences ICIREMS-2019	http://ijsrcseit.com/paper/v4i9.pdf	UGC CARE
22.	Ms. Alamuru Susmitha Ms. Lipsa Dash Dr. Sanjeev Sharma	CTS: A Channel-Aware Trust System to Alleviate the Negative Effects Caused by Sinkhole and Selective	Lecture Notes in Electrical Engineering,	https://link.springer.com/chapter/10.1007/978-981-15-1420-3_132	SCOPUS

		Forwarding Attacks in Wireless Sensor Networks			
23.	Ms. Susmitha A. Ms. Lipsa Dash Ms. Sunanda A	Recognition and Extraction of Rain Drops in an Image Using Hough Transform	Advances in Intelligent Computing and Communication	https://link.springer.com/chapter/10.1007/978-981-15-2774-6_13	SCOPUS
24.	Ms. Monika Gupta Dr. Sanjeev Sharma	Design and Implementation of 16-bit Carry Select Adder and Carry Save Adder using Cadence Tool	International Conference on Innovative Research in Engineering, Management and Sciences ICIREMS-2019	http://ijsrcseit.com/paper/v4i9.pdf	SCOPUS
25.	Ms. Neethu Johny Ms. Divya Rajan	Design and Implementation of a Multiply Accumulate (MAC) Unit	International Conference on Innovative Research in Engineering, Management and Sciences ICIREMS-2019	http://ijsrcseit.com/paper/v4i9.pdf	UGC CARE
26.	Ms. Rajashri Y M Dr. Piruthiviraj P Mr. Abhay Kumar Y C	A Probabilistic Technique to Data Transmission setback using Ant Colony Optimization	International Conference on Innovative Research in Engineering, Management and Sciences ICIREMS-2019	http://ijsrcseit.com/paper/v4i9.pdf	SCOPUS
27.	Dr. Rajesh G Ms. Saroja Boda	Sarcomata Disease Detection and Stratification Based On	International Conference On “Innovative Research in Engineering,	http://ijsrcseit.com/paper/v4i9.pdf	UGC CARE

		Contrast Limited Versatile Histogram Balance	Management and Sciences” (ICIREMS – 2019)		
28.	Dr. Rajesh G Ms. Gagana M Ms. Gowri R. Ms. Sneha Priya Ms. Harshita Ms. Mounika	Battery Management System Using Texas Instruments Launch Pad Boards	National Conference On Control, Computation and Communications NCCCC – 2020	-	UGC
29.	Mr. Karthik C V Dr. Naveen H Mr. Rajiv Gopal	Impact of Automation on the Test Insertion	International Conference on Innovative Research in Engineering, Management and Sciences ICIREMS-2019	http://ijsr.cseit.com/paper/v4i9.pdf	UGC CARE
30.	Mr. Rajiv Gopal Dr. Naveen H Mr. Karthik C V	Carcinoma Detection using Convolution Neural Networks	International Conference on Innovative Research in Engineering, Management and Sciences ICIREMS-2019	http://ijsr.cseit.com/paper/v4i9.pdf	UGC CARE
31.	Mr. Rajiv Gopal Dr. Naveen H Mr. Karthik C V	Comparison study of CMOS and GDI Logic Architectures using 2-bit ALU	International Conference on Innovative Research in Engineering, Management and Sciences ICIREMS-2019	http://ijsr.cseit.com/paper/v4i9.pdf	UGC CARE
32.	Ms. Ramanamma Parepalli Dr. Mohankumar Naik B.	Microcontroller Based Talking Energy Meter	International Conference on Innovative Research in Engineering, Management and	http://ijsr.cseit.com/paper/v4i9.pdf	UGC CARE

			Sciences ICIREMS-2019		
33.	Mr. Richard Lincoln Paulraj Dr. Sanjeev Sharma Dr. Dhivya M	Performance Analysis of Various Adder Circuits on Technology 1 30nm	International Conference on Innovative Research in Engineering, Management and Sciences ICIREMS-2019	http://ijsrcseit.com/paper/v4i9.pdf	SCOPUS

Academic Year: 2018-19

Total no. of Publication (2018-2019) = 32

Table B 5.8.1. d. Publications for academic year 2018-2019

Sl. No	Authors	Title	Name of the Journal/ Conference	DOI /Web Link	Web of Science/ Scopus/ UGC care
1.	Ms. Vijayalakshmi Dr. Mohan Kumar Naik B	Design and Modelling of Different Types of SRAMs for Low-Power Applications	Soft Computing and Signal Processing. Advances in Intelligent Systems and Computing	doi.org/10.1007/978-981-13-3393-4_47	SCOPUS
2.	Dr. Reema Sharma Ms. Divya Sharma Ms. Ishani Mishra Dr. Sanjeev Sharma Ms. Rama M.	Performance Analysis of Multimedia Traffic in DiffServ Network	Journal of Emerging Technologies and Innovative Research	http://www.jetir.org/papers/JETIRCE06012.pdf	UGC
3.	Dr. Piruthiviraj P. Mr. Ashutosh Srivasta	Blocking Performance & Analysis of Routing and Wavelength Assignment using Shortest	IEEE International Conference on "Intelligent Techniques in Control, Optimization,	10.1109/INCOS45849.2019.8951375	SCOPUS

		Path Routing Algorithm in All-Optical network	and Signal Processing " (INCOS -'19)		
4.	Dr. Shreesha Kalkoor M Dr. Priyamvada Singh Dr. Jayadeva T S Ms. Rajani K V	Design and Implementation of an Image Processing Model for the Detection and Analysis of Diabetic Nephropathy at Early Stage	International Journal of Emerging Technologies and Innovative Research	http://www.jetir.org/papers/JETIR1812C14.pdf	UGC
5.	Dr. Jayanthi M. Dr. Kanmani B.	Optimization Based Liver Contour Extraction of Abdominal CT Images	International Journal of Electrical and Computer Engineering	10.11591/ijece.v8i6	SCOPUS
6.	Dr. Jayanthi M.	Extraction and Classification of Liver Abnormality Based on Neutrosophic and SVM Classifier	Progress in Advanced Computing and Intelligent Engineering. Advances in Intelligent Systems and Computing	doi.org/10.1007/978-981-13-1708-8_25	SCOPUS
7.	Dr. Aravinda K Mr. Madhu Babu K S Mr. Avinash G Mr. Mithun V Mr. Madan Gowda M	Implementation of D-PLL using Microwind	International Journal of Information and Computing Science	http://ijics.com/gallery/46-may-1136.pdf	UGC CARE
8.	Dr. Aravinda K Mr. Madhu Babu K S	Integer-N Charge Pump Phase Locked Loop with an Improved Design for The Reduction of Current	International Journal of Research and Analytical Reviews	https://ijrar.com/uploads/conference/ijrar_54.pdf	UGC CARE

		Mismatch			
9.	Mr. Mukti Biswas Kar Dr. Aravinda K Mr. Denzel Abraham George Mr. Nikhil Riyaz Mr. Mithun V	Low-Cost Electronic Power Supply System for Nanosatellite Bus	International Journal of Information and Computing Science	http://www.ijics.com/gallery/70-may-1160.pdf	UGC CARE
10.	Mr. Sai Prashanth Mr. Habishek T E Mr. Saaju S P Dr. Aravinda K Dr. Sanjeev Sharma	Smart and Reliable Techniques for Blind Spot Detection	International Journal of Information and Computing Science	http://ijics.com/gallery/45-may-1135.pdf	UGC CARE
11	Ms. Dharmambal Dr. Nisha KCR Ms. Maheswari M. Mr. Anirudhdha C Mr. Veeresh	Impedance Source Converter Based Real Time Water Quality Management System Using Green IoT	IOSR Journal of Engineering	http://iosrjen.org/Papers/vol9_issue5/Series-1/K0905017381.pdf	EBSCO
12	Mr. Anirudhdha C Ms. Dharmambal Dr. Nisha KCR Mr. Ramesh Nayak B Mr. Ganesh M S Mr. Siddarth S Metri	Use of Human Ergonomics in Power Harnessing	Journal of Engineering Research and Application	http://www.ijera.com/papers/vol8no11/p3/C0811031018.pdf	EBSCO
13.	Ms. Maheswari. M Dr Nisha KCR Ms. Dharmambal V	Predicting the Diet for balanced pH of Human body using Digital Pill	International Journal of Research in Engineering, IT and Social Sciences	http://indusedu.org/pdfs/IJREISS/IJREISS_3297_90046.pdf	UGC
14.	Ms. Maheswari M. Ms..Thanuja I. K	8 Transistor and Modified 8 Transistor Full Adders for Low Power Design	IJISET - International Journal of Innovative Science, Engineering & Technology	http://ijiset.com/vol6/v6s5/IJISET_V6_I5_13.pdf	UGC CARE

15.	Ms. Lipsa Dash Mr. Karthik CV Mr. Madhu Babu KS Mr. Mohit R Mr. Ashish Kumar S Mr. Manjunath N	Implementation of DSA Algorithm using MATLAB	International Journal of Information and Computing Science	http://www.ijics.com/gallery/48-may-1138.pdf	UGC CARE
16.	Ms. Susmitha.A Ms. Ishani Mishra Ms. Rama.P	Automatic Vehicle License Plate Detection Using Image Processing Techniques	International Journal of Research and Analytical Reviews	https://ijrar.com/uploads/conference/ijrar_54.pdf	UGC CARE
17.	Ms. Ishani Mishra Dr. Reema Sharma Ms. Divya Sharma Dr. Sanjeev Sharma Ms. Ramanamma Parepalli	Performance Analysis of Spatial and Adaptive Median Filters for noise removal of Digital Images	Journal of Emerging Technologies and Innovative Research	http://www.jetir.org/papers/JETIR1904265.pdf	UGC
18.	Ms. Divya Rajan	A Survey on Bufferless Router Architectures	International Journal for Science and Advance Research in Technology	http://ijsart.com/Content/PDFDocuments/IJSARTV5I632814.pdf	UGC
19.	Ms. Nayana G H Mr. Karthik K Ms. Mahalakshmi TS Ms. Manasa H R	VLSI implementation of AES Encryption/Decryption Algorithm using FPGA	Perspectives in Communication, Embedded-Systems and Signal-Processing	http://www.pices-journal.com/downloads/V2I2-PICES0011.pdf	DNB-GERMAN NATIONAL LIBRARY

20.	Ms. Nayana G H Ms. Neethu Johnny	Mobile Phone Theft Detection Using Super-capacitors	International Journal of Research in Engineering, IT and Social Sciences	http://www.indusedu.org/pdfs/IJREISS/IJREISS_3461_25981.pdf	UGC
21	Ms. Neethu Johny Ms. Nayana G H	Study of variability issues on CMOS inverter	IOSR Journal of Engineering	http://www.iosrjen.org/Papers/vol9_issue7/Series-1/J0907015964.pdf	UGC
22	Ms. Neethu Johny Mr. Madhubabu K S Ms. Preshika J M Ms. Prithipa A Ms. Rakshitha N	Design and Implementation of a 32-bit Floating Point Multiplier Using VHDL	International Journal of Information and Computing Science	http://www.ijics.com/gallery/69-may-1159.pdf	UGC CARE
23	Ms. Riya Dey Mr. Pamisetty Udayabhanu Ms. Neethu Johnny	Implementation of Control Circuitry for Ultra-Low Power ROM	IOSR Journal of Electronics and Communication Engineering	http://www.iosrjournals.org/iosr-jece/papers/Vol.%2014%20Issue%204/Series-1/E1404012738.pdf	UGC
24	Ms. Monika Gupta Mr. Amarjith A M Mr. Girivardhan K Mr. Maurya Reddy Y	Raspberry PI mystic mirror using Alexa	Journal of Emerging Technologies and Innovative Research	http://www.jetir.org/papers/JETIR1905M43.pdf	UGC CARE

25	Ms. Monika Gupta Dr. Sanjeev Sharma	Significant Performance Enhancement by Disruptive Technology	Journal of Emerging Technologies and Innovative Research	http://www.jetir.org/papers/JETIR1906I58.pdf	UGC CARE
26	Ms. Monika Gupta Ms. Yamini B. Ms. Varsha. GR	Design of Mosquito Repellent Circuit	Journal of Emerging Technologies and Innovative Research	http://www.jetir.org/papers/JETIR1904620.pdf	UGC
27	Mr. Chetan Huchegowda Ms. Indumathi G Dr. Naveen H	Performance Analysis of Biorthogonal Filter Design Using the Lifting Based Scheme for Medical Image Transmission	International Journal of Computer Aided Engineering and Technology	https://www.inderscience.com/info/ingeneral/orthcoming.php?jcode=IJC AET	SCOPUS
28	Dr. Naveen H. Dr. Sreerama Reddy G.M.	Comparative Analysis of FFT, DWT and DTCDWT based OFDM System for Underwater Acoustic Communication	Journal of Advanced Research in Dynamical and Control Systems	https://www.jardcs.org/backissues/abstract.php?archiveid=5477#	SCOPUS
29	Dr. Naveen H Mr. Chetan H Mr. Bhimsen Kulkarni Mr. Sudatta Mohanty Mr. Druva Kumar S Dr. Sreerama Reddy G M	The Effective Transmission of Acquired Sensor data with FFT, DWT and DTCWT in Different Channel Environment	International Journal of Recent Technology and Engineering	https://www.ijrte.org/wp-content/uploads/papers/v8i2S3/B11360782S319.pdf	SCOPUS

30	Mr. Ravish Gowda Mr. Bharath V Poojary Mr. Manoj Sharma Mr. Kiran Prakash Dr. Naveen Gowda Mr. Chetan H	Artificial Intelligence based facial recognition for Mood Charting among men on life style modification and its correlation with cortisol	Asian Journal of Psychiatry	doi: 10.1016/j.ajp.2019.05.017	SCI
31	Dr. Naveen H Mr. Chetan H Mr. Sudatta Mohanty Mr. Sangmesh Melinmani Dr. Sreerama Reddy G M	Design of Underwater Acoustic Channel Model for OFDM Communication System	International Journal of Innovative Technology and Exploring Engineering	https://www.ijitee.org/wp-content/uploads/papers/v8i6s4/F11090486S419.pdf	SCOPUS
32	Ms. Sujitha S Ms. Tanuja I K	A new Mac with traffic aware relay node deployment for cluster Communication in wireless sensor networks	Journal of Emerging Technologies and Innovative Research	http://www.jetir.org/papers/JETIR1901b08.pdf	UGC

Academic Year: 2017-18

Total no. of Publication (2017-2018) – 43

Table B 5.8.1. d. Publications for academic year 2017-2018

SI. No	Authors	Title	Name of the Journal/ Conference	DOI / Web Link	Web of Science/ Scopus/ UGC care
1.	Ms. A Anitha Dr. Nisha KCR	UCAP based Dynamic Voltage Restorer using Impedance Source Inverter	International Journal of Electronics, Electrical and Computational System	-	UGC
2.	Dr. Nisha KCR Ms. Dharmambal V Ms. Maheswari M Mr. Nikhil Riyaz	UCAP Powered Insulin Pump	Jour of Adv Research in Dynamical & Control Systems	https://www.jardcs.org/backissues/abstract.php?archiveid=4486	SCOPUS
3.	Ms. Karthika M Dr. Nisha KCR	Analysis of Mathematical Modelling of PV Module	Journal of Emerging Technologies and Innovative Research	http://www.jetir.org/papers/JETIR1806119.pdf	UGC
4.	Mr. Anirudhdha C Ms. Dharmambal V Dr. Nisha KCR Mr. Ramesh Nayak B Mr. Ganesh M S Mr. Siddarth S Metri	Use of Human Ergonomics in Power Harnessing	Journal of Engineering Research and Application	http://www.ijera.com/papers/vol8no11/p3/C0811031018.pdf	UGC
5.	Mr. Chethan N Dr. Nisha KCR	Identification and Classification of Retinal	3rd IEEE International Conference on Recent Trends in	https://ieeexplore.ieee.org/document/901259	SCOPUS

		Lesions for Early Detection of Diabetic Retinopathy using Fundal Image	Electronics, Information & Communication Technology (RTEICT)	1/authors#authors	
6.	Dr. Mohan Kumar Naik B.	An Average Power Estimation Technique for Integrated Circuits	IOSR journal of vlsi and signal processing	http://www.iosrjournals.org/iosr-jvlsi/papers/vol7-issue5/Version-1/D0705012729.pdf	UGC
7.	Dr. Aravinda K Dr. Ramesh TK	Frequency Equation for the sub-micron CMOS ring oscillator Using First Order Characterization	Journals of Semiconductors	https://iopscience.iop.org/article/10.1088/1674-4926/39/5/055001	SCI
8.	Dr. Aravinda K Dr. Ramesh TK	A Faster Phase Frequency Detector using Transmission gate based latch for the reduced response time of the PLL	International Journal of Circuit Theory and Applications	https://doi.org/10.1002/cta.2449	SCI
9.	Ms. Jayanthi M	Extraction and classification of liver abnormality based on neutrosophic and SVM classifier	International conference on Advanced computing and Intelligent Engineering	https://doi.org/10.1007/978-981-13-1708-8_25	SCOPUS

10.	Ms. Alankrit Mishra Ms. Monika Yadav Ms. Malbika Singh Ms. Divya Sharma	Smart ID card based child security device	International Journal of Creative Research Thoughts (IJCRT)	http://www.ijcrt.org/papers/IJCRT1812837.pdf	UGC
11.	Ms. Ishani Mishra Ms. Krishna Priya S Ms. Kashmitha D	Partial Face Recognition	International Journal of Creative Research Thoughts	http://www.ijcrt.org/viewfull.php?&p_id=IJCRT1813021	UGC
12.	Ms. Ishani Mishra Mr. Abhijnan Mitra Mr. Gaurav Kumar Gupta Mr. Mohammed	Noise reduction and segmentation of common carotid artery in ultrasound Image and Measurement of Intima media thickness	International Journal of Engineering Trends and Technology	http://ijettjournal.org/archive/ijett-v59p205	SCOPUS
13.	Ms. Lipsa Dash Ms. Agnes Maria James Ms. Sharat Sajjan, Ms. Sonal Ganesh Hegde	Remote Monitoring and Control of Wireless Sensor Network Using Zigbee	International Journal of Scientific Research in Computer Science, Engineering and Information Technology	http://ijsrcseit.com/paper/CSEIT184526.pdf	UGC CARE
14.	Ms. Lipsa Dash Mr. Arun R Ms. Bhavani R Ms. Rethna Jennifer S	Flexible compartments IoT driven smart pill-box	International Journal of Scientific Research in Computer Science, Engineering and	http://ijsrcseit.com/paper/CSEIT184527.pdf	UGC CARE

			Information Technology		
15.	Ms. Ishani Mishra Ms. Sushmitha A Ms. Divya Sharma	Comparative Analysis of Lossless Image Compression Algorithm	Journal of Emerging Technologies and Innovative Research	http://www.jetir.org/view?paper=JETIR1806626	UGC CARE
16.	Ms. Susmitha. A Ms. Ishani Mishra Ms. Divya Sharma Ms. Parul Wadhwa Ms. Lipsa Dash	Implementation of Canny's Edge Detection Technique for Real World Images	International Journal of Engineering Trends and Technology	http://www.ijettjournal.org/archive/ijett-v48p232	SCOPUS
17.	Ms. Susmitha. A Ms. Lipsa Dash	Mechanism to Counteract Attacks in MANETS	International Journal of Scientific Research in Computer Science, Engineering and Information Technology	http://ijsrescit.com/CS/EIT183575	UGC CARE
18.	Mr. Om Pamith Ms. Thanuja I.K Ms. Maheswari M	Home Automation and Internet of Things	Open Access International Journal of Science & Engineering	Http://Oajse.Com/Volumearicles/Fulltextpdf/251_7.Home_Automation_And_Internet_Of_Things.Pdf	UGC

19.	Ms. Sowmya Priya.V Ms. Soundarya.M Ms. Niketha.V Ms. Thanuja I K	Smart bus alert system for easy navigation of the blind	International Journal for Research in Applied Science & Engineering Technology (IJRASET)	https://www.ijraset.com/fileservice.php?FID=17202	UGC
20.	Mr. Ugrasena Maharaj Ms. Asha K S	Speech Signal Recognition Using Digital Signal Processing	International Journal for Research in Applied Science & Engineering Technology (IJRASET)	http://www.ijcrt.org/papers/IJCRT1892768.pdf	UGC
21.	Ms. Neethu Johny Ms. Mayur S M	Design and Implementation of a Low Power Vedic Multiplier	International Journal for Research in Applied Science & Engineering Technology (IJRASET)	https://www.ijraset.com/fileservice.php?FID=16596	UGC
22.	Mr. Bhimasen B Kulkarani	An Android based wireless ECG monitoring system for cardiac Arrhythmia	International Journal for Research in Applied Science & Engineering Technology(IJRASET)	https://www.ijraset.com/print-certificate.php?member=16661	UGC
23.	Mr. Bhimasen B Kulkarni Mr. Pranjal Pokharel Mr. Parbej Khan Mr. Vinay Bhandari	Design and implementation of low cost ECG monitoring system and analysis using smart device	International Journal for Research in Applied Science & Engineering Technology	https://www.scribd.com/document/382156790/	UGC

24.	Ms. Parul Wadhwa	Attendance system using android integrated biometric finger print Recognition	International Research Journal of Engineering and Technology	https://issuu.com/irjet/docs/irjet-v4i6197	UGC
25.	Ms. Parul Wadhwa Ms. Sanjana K K Ms. Sushmitha M Ms. Suraksha Chaudhary	Sign language recognition using a smart hand device with sensor combination	International Journal for research in applied science and engineering Technology (IJRASET)	http://ijraset.com/files/serve.php?FID=16762	UGC
26.	Ms. Parul Wadhwa Ms. Rama P	Fresh food supply chain management using IOT	International Journal for Science and Advance Research in Technology	http://www.oaijse.com/VolumeArticles/FullTextPDF/210_29.FRESH_FOOD_SUPPLY_CHAIN_MANAGEMENT_USING_IoT.pdf	UGC CARE
27.	Dr. Naveen H Dr. Sreerama Reddy G M Mr. Chetan H	High speed OFDM based image transmission system for remotely operated under water vehicle	International Journal of Pure and Applied Mathematics	https://acadpubl.eu/jsi/2017-117-20-22/articles/20/87.pdf	SCOPUS
28.	Ms. S Sujitha Mr. Chetan H	Performance analysis of image	Journal of Advanced Research in	https://www.jardcs.org/backissue	UGC

	Dr. Naveen H Dr. Indumathi G Mr. Rajiv Gopal	compression using Kalman DWT	Dynamical and Control Systems	s/abstract.p hp?archivei d=2655	
29.	Ms. Divya Rajan	Digital Phase Locked Loop - FPGA Implementation	International Journal for Science and Advance Research in Technology	http://ijsart.com/Home/IssueDetail?id=23326	UGC
30.	Mr. Prahlada Reddy Mr. Pavan Kumar Mr. Amruth Raju Ms. Divya Rajan	Solar powered smart ultrasonic insect repellent with DTMF and manual control for agriculture	International Journal for research in applied science and engineering Technology (IJRASET)	https://www.scribd.com/document/383698878/	UGC
31.	Mr. Pawan Kaushik Ms. Monika Gupta Ms. Chandana S M Ms. Deekshita R	VLSI implementation of OFDM transmitter chain	International Journal of Electrical, Electronics & Computer systems	-	UGC
32.	Mr. Naveen B Imagoudanavar Ms. Monika Gupta	Double Data Rate Memories	IJCRT		UGC
33.	Mr. Nanda Gopal Naik Ms. Monika Gupta Ms. Pabbathi Sravani Ms. Reine D Ms. Monica S.	Plant disease detection using Digital Image Processing	International Journal for research in applied science and engineering Technology (IJRASET)	-	UGC

34.	Ms. Monika Gupta	Disruptive technology for significant performance enhancement	International Journal for Research in Applied Science & Engineering Technology (IJRASET)	https://www.ijraset.com/fileservice.php?FID=18174	UGC
35.	Ms. Nayana G H Mr. Bhimasen B Kulkarni	FPGA Implementation of Forest Fire Detection System using colour modules	International Journal for Research in Applied Science & Engineering Technology (IJRASET)	https://www.ijraset.com/fileservice.php?FID=16751	UGC
36.	Ms. Nayana G H Ms. Sowmya. N Ms. Yaduguri Sravani Ms. Beulah James	Smart reading glasses: Conversion of image text into speech	International Journal of Creative Research Thoughts	-	UGC CARE
37.	Mr. Mayur SM Ms. Neethu Johny	Design of low power vedic multipler using BKG Reversible Logic Gate	International Journal for Research in Applied Science & Engineering Technology (IJRASET)	https://www.ijraset.com/fileservice.php?FID=18099	UGC
38.	Ms. Maheswari M Ms Shereen John Mr. Dilip Kumar RK Ms. Shama Mohsin	Human pulse monitoring and Alert system	International Journal for Research in Applied Science & Engineering Technology (IJRASET)	https://www.ijraset.com/fileservice.php?FID=17233	UGC
39.	Ms. Maheswari M	Charging Devices using Wireless	International Journal for Science and	-	UGC

		Transfer of solar power	Advance Research in Technology		
40.	Ms. Ramanamma Parepalli	Image Compression Using Raspberry Pi	International Research Journal of Engineering and Technology	https://issuu.com/irjet/docs/irjet-v4i6229	UGC
41.	Ms. Ramanamma Parepalli	Low power square and cube Architectures using Vedic sutras	International Journal of Engineering Research and General Science	http://oaji.net/articles/2017/786-1499337831.pdf	UGC
42.	Ms. Ramanamma Parepalli Ms. Nayana GH	Implementation of A Vending Machine Using Programmable Logic Controller	International Journal for Research in Applied Science & Engineering Technology (IJRASET)	https://www.ijraset.com/fileserve.php?FID=18064	UGC
43.	Ms. Rajani KV Ms Aaliya Ashfaq Mr. Akshay Kumar Mr. Nayaka R	Embedded based food Quality detection with sensor Technology	International Journal for Research in Applied Science & Engineering Technology (IJRASET)	https://www.ijraset.com/fileserve.php?FID=16968	UGC
44.	Mr. Sachin Veeranna Mr. Pratik Manmohan Shankar Mr. Rahul Kale Mr. Nitin Rangaswamy	Smart Highway Real Time Monitoring system	International Journal for Research in Applied Science & Engineering Technology (IJRASET)	https://www.ijraset.com/fileserve.php?FID=17475	UGC

Book / Book Chapter-2019-2020/2018-19/2017-18

Table B 5.8.1. e. Book/Book Chapter Publications

SI. No	Name of Faculty	Title of the Book/ Book Chapter	Book / Book Chapter	Book Publication Details	Date of Publication
1.	Dr. Nisha K C R	Embedded and Real Time Systems	Book	Charulatha Publications, Chennai	2017
2.	Dr. Nisha K C R	Microprocessors & Microcontrollers	Book	Charulatha Publications, Chennai	2017
3.	Ms. Ishani Mishra Ms. Divya Sharma Ms. Parul Wadhwa Ms. Ramanamma Parepalli	Digital Signal Processing	Book	Charulatha Publications, Chennai	February 2018, ISBN:978-93-86532-72-5
4.	Dr. Nisha K C R	Multi cell Switched-Inductor and Switched Capacitor Reduced-Source DC-link Impedance –source Inverter for PV generation System	Book Chapter	Advanced Engineering Research and Applications	2018 ISBN:978-93-87374-54-6
5.	Ms. Vijayalakshmi V. Dr. Mohan Kumar Naik B.	Design and Modelling of Different Types of SRAMs for Low-Power Applications	Book Chapter	Springer, Singapore	February 2019, ISBN: 978-981-13-3392-7
6.	Dr. Dhivya M.	Cat Swarm Optimization: Theory, Practices & Applications	Book	Lambert Publishers, Germany	June 2019 ISBN:

					978-620-0-22425-5
7.	Mr. Jitesh R. Shinde, Dr. Sanjeev Sharma Ms. Lipsa Dash	An Optimization Design Approach for Arithmetic Logic Unit	Book Chapter	Springer, Singapore	June 2019, ISBN: 978-981-13-8460-8
8.	Ms. Susmitha A Ms. Lipsa Dash Ms. Sunanda A.	Recognition and Extraction of Rain Drops in an Image Using Hough Transform	Book Chapter	Springer, Singapore	January 2020, ISBN: 978-981-15-2773-9
9.	Ms. Susmitha A Ms. Lipsa Dash, Dr. Sanjeev Sharma	CTS: A Channel-Aware Trust System to Alleviate the Negative Effects Caused by Sinkhole and Selective Forwarding Attacks in Wireless Sensor Networks	Book Chapter	Springer, Singapore	May 2020 ISBN: 978-981-15-1419-7
10.	Mr. Noor Basha Mr. Manjunath K. Dr. Mohan Kumar Naik B. Mr. Ashok Kumar P. S. Mr. Venkatesh P. Mr. Kempanna M.	Analysis and Forecast of Heart Syndrome by Intelligent Retrieval Approach	Book Chapter	Springer, Singapore	May 2020, ISBN: 978-981-15-3283-2
11.	Dr. Sanjeev Sharma	Missile Structured Wearable Antenna for Power Harvesting Application	Book Chapter	IGI Global	May 2020

Table B 5.8.1. f. Ph.D. Guided during the assessment Period

S. No	Faculty Name	Student Name	Research Area	Research Title	Year of Registration	University Name	Year of Completion
1.	Dr. Mohan Kumar Naik B	Mr. Suresh, 21615013	Image processing	Analysis of color, Shape and Texture features of Images using the Content based Image Retrieval(CBIR) approach	2015	JJTU, Rajasthan	2019
		Mr. Shashi Kumar, 20915031	Image processing	Content Based Image Retrieval.	2015	JJTU, Rajasthan	2019
		Ms. Vijayalakshmi 5VZ15PEJ08	VLSI	Modelling and Analysis of Bulk Fin FET Devices for SRAM Cell and DRAM Cell at 22nm Technology Node.	2014	VTU	Completed Comprehensive viva (2020)
		Ms. Umarani 1NH16PEJ03	VLSI	Design and Implementation of Configurable Logic Block for FPGA using Asynchronous Architecture.	2016	VTU	Course work completed
		Ms. Prathibha, 1NH16PEJ08	FPGA	Programmable High Performance Input Output Blocks(IOB) On FPGA	2016	VTU	Course work in progress
		Ms. Sumana Achar, 1NH17PES03	ASIC	Sequential Power Optimization Technique for Asic Design Using High Level Synthesis	2017	VTU	Course work completed
		Ms. Ramanamma Parepalli, 1NH19PEC01	VLSI	Low Latency Router Microarchitecture for On-Chip Networks	2019	VTU	Course work in progress
2.	Dr. Nisha KCR	Ms. Dharmambal V. 1NH16MEJ01	Power Electronics	PV Powered switched inductor impedance-source multilevel cascaded inverter system	2015	VTU	Course work completed
		Ms. Jaya Suryaprabha, 1NH17PEA12	Power electronics	Development of high efficiency grid-tied current source inverter (CSD) for PV System	2016	VTU	Comprehensive Viva completed
		Ms. Karthika M, 1NH17PEA11	Renewable Energy	High Efficiency Inverter fed BLDC drive for Solar Pump Applications	2016	VTU	Comprehensive Viva completed

		Ms. Anitha A, 1NH17PES01	Power Systems	Implementation of ultra-capacitor based dynamic voltage restorer using impedance source inverter for improving power quality of the grid	2016	VTU	Coursework completed. Applied for Comprehensive Viva
--	--	--------------------------	---------------	--	------	-----	--

Table B 5.8.1. g. Ph.D. awarded during the assessment Period

S.No	Faculty Name	Guide Name	Research Area	Research Title	Year of Registration	University Name	Year of Completion
1.	Dr. Reema Sharma	Dr. Navin Kumar, Associate Professor, Amrita School of Engineering, Bangalore	Data Communication and Networking	Modeling and analysis of Dynamic Packet Scheduling Scheme in Internet of Things	2010	VTU	2017
2.	Dr. Jayanthi M.	Dr. Kanmani B, Department of Tele-communication, BMS College of Engineering	Biomedical Image Processing	Interactive segmentation techniques for the visualization of abdominal CT images	2010	VTU	2019
3.	Dr. Naveen H.	Dr. Sreerama Reddy G.M. Principal, CMRIT, Kolar	Underwater communication	Low Power and High Speed MB-OFDM Communication system for underwater acoustic network DTCdWT	2013	VTU	2020

5.8.2 Sponsored Research (20)

Funded research from outside:

(Provide a list with Project Title, Funding Agency, Amount and Duration)

Funding Amount (Cumulative during CAYm1, CAYm2 and CAYm3):

Amount > 50 Lakh – 20 Marks,

Amount > 40 and < 50 Lakh – 15 Marks,

Amount > 30 and < 40 Lakh – 10 Marks,

Amount > 15 and <30 Lakh – 5 Marks,

Amount < 15 Lakh – 0 Marks -NIL

Table B. 8.2 Sponsored Research Projects

SI No	Financial Year	Name of the Faculty (Principal Investigator)	Name of the Funding Agency	Title of the Project	Sanctioned Order No.	Sanctioned Date	Amount Received (In Rupees)	Amount Received (In Words)
1	2016-2017	Ms. Sushmitha A Ms. Ishani Mishra Dr. Mohan Kumar Naik	7D plus Fun corner, Madurai	Motion file Extraction	MFE/2015-16/003	02.04.2016	Rs. 3,20,000	Rupees Three Lakhs Twenty Thousand only
2.	2016-2017	Dr. Nisha K.C.R. Ms. Dharmambal V.	KSCST	UCAP Powered Insulin Pump	40S_BE_06 33	27.03.2017	Rs. 6,500	Rupees Six Thousand Five Hundred only
3	2017-2018	Dr. Nisha K.C.R.	IEI	Investigations Along with Design, Development and Testing on Use of Current Source Inverter (CSI) (1kw, 440 V) for Grid Connected Solar PV for Residential/ Apartment Applications	DR2019002 -Ref. R.6/2/DR/2 018-19/RDDR20 18002	22.6.2018	Rs. 35,000/-	Rupees Thirty-Five Thousand only
4		Dr. Nisha K.C.R.	VGST-RGS	Investigations on use of Current Source Inverters (CSI) for Grid connected solar PV for Residential/ Apartment applications.	KSTePS / VGST – RGS / F / GRD No. 730 / 2017 – 18	27.8.2018	Rs. 5,00,000/-	Rupees Five Lakhs only
5	2018-2019	Dr. Gopalakrishnan K Dr. Nisha K.C.R. Mr. Sudip Kar	ITCA, UNISEC, DRL, TSC	Development of “Single Card Satellite-Bus (SiCS-B)”: 10 cm x10 cm (Timeline: 18 Months). Indo-Israel	ITCA-UNISEC/Oct/07- 2018-19	23-10-2018	Rs. 25,00,000/ -	Rupees Twenty-Five Lakhs only

				Joint Development				
6		Dr. Gopalakrishnan K. Dr. Nisha K.C.R. Mr. Sudip Kar	ITCA, UNISEC, DRL, TSC	Design and Development of CubeSat 2U; ADSB including Launch Cost; Indo-Israel Joint Development under UNISEC India, ITCA Consortium	ITCA-UNISEC/Oct/09- 2018-19	26-10-2018	Rs. 30,00,000/-	Rupees Thirty Lakhs only

Total Amount 63,61,500/- (Rupees Sixty-Three Lakhs Sixty-One Thousand Five Hundred only)

5.8.3 Development activities (15)

Provide details:

- ❖ **Product Development**
- ❖ **Research laboratories**
- ❖ **Instructional materials**
- ❖ **Working models/charts/monograms etc.**

i) Product Development:

Table B 5.8.3 i) a. Innovative Projects for the academic year 2019-2020.

SI. No.	Title of the Project	Name of the Student	Guide Name
1	Modular Satellite	1NH16EC748 Shyam S 1NH16EC705 Akshay V 1NH16EC759 Shashank Rao 1NH16EC758 Praveen S	Dr. Nisha KCR

2	Safe Ride -Detection of humps and potholes	1NH17EC421 Raghu R 1NH17CS066 Namratha LB 1NH16ME753 Sudha Rani Thakur	Dr. Sanjeev Sharma
3	Health Monitoring Wearable Gloves	1NH16EC708 Anju Gopinath 1NH16EC707 Anita Chauhan 1NH16EC740 Pooja P Chouhan	Ms Ishani Mishra
4	Advanced IoT Solution to Monitor Underpass Water Level Management System	1NH16EC007 Akshay Rao 1NH16EC086 Rushab 1NH16EC097 Shripad Aithal 1NH16EC101 Sindu C R	Dr Jayanthi M
5	IOT Based Accident Intensity Detection Intensity Reporting Using Cloud Server	1NH16EC703 Abhishek Pattajoshi 1NH16EC727 Mansoor Elahi 1NH16EC728 Mohammed Zeeshan Ali 1NH16EC741 R Praveen Kumar	Ms Lipsa Dash

Table B 5.8.3 i) b. Innovative Projects for the academic year 2018-2019.

Sl. No.	Title of the Project	Name of the Student	Guide Name
1	Development of underwater ROV for drowned human body detection	1NH16EC413 Mohan Kumar 1NH16EC401 Dilip Kumar 1NH15EC724 Prasanna Kumar	Dr Naveen H
2	Design and development of a Pest detection system for plants	1NH15EC705 Chandana M 1NH14EC406 Gayathri V 1NH16EC416 Naresh Babu	Mr Jagadish Rao

3	Modular Satellite bus	1NH15EC062 Nikal Riyaz 1NH15EC019 Denzel 1NH15EC049 Mithun	Dr. Aravinda K
4	Design of Microstrip antenna for 5G applications	1NH15EC006 Akshitha K S 1NH15EC032 Jayanth S 1NH15EC011 Swathi R	Ms Ishani Mishra
5	Lake water monitoring system	1NH15EC011 Bhavana Savanth 1NH15EC741 Sanjana Ranjan 1NH15EC102 Shubha A	Dr Mohan Kumar Naik B

Table B 5.8.3 i) c. Innovative Projects for the academic year 2017-2018

Sl. No.	Title of the Project	Name of the Student	Guide Name
1	Advanced foot step power generation system	1NH14EC017 Anu Reddy 1NH14EC142 Varsha A 1NH14EC126 Sirisha S	Dr. Nisha K.C.R.
2	Wireless Transfer of Solar Power for charging mobile devices in a vehicle	1NH14EC106 Rini Elizabeth Alex 1NH14EC108 Ruby Khan 1NH14EC081 Muheed Pasha	Ms. Maheshwari M
3	Plant disease detection using digital image processing and GSM	1NH14EC083 Nanda Gopal Naik 1NH14EC089 Sravani P	Ms. Monika Gupta

		1NH14EC111 S Monica 1NH14EC104 Reine D B	
4	IOT based in-patients monitoring system and post hospital health care system (wireless wearable)	1NH14EC713 Jennifer M V 1NH15EC428 Lavanya B 1NH15EC404 Deepa T N	Mr. Ugrasena Maharaj
5	An Android based wireless ECG monitoring system for cardiac arrhythmia	1NH14EC110 Divya S 1NH14EC127 Sonia Mahadev 1NH14EC133 Suchithra S	Mr. Bhimasen B Kulkarni

ii) Research and Development Laboratory:

The Electronics and Communication sector is a key player in the research and one of the most needed globalized industries. The demand for electronics hardware development and commercialization of the product is expected to reach its peak in the year 2020. In order to progressively increase the value addition in electronic product development, a sustained R&D programme in the electronics and communication sector is essential for the use of the faculty members and student community.

In order to promote a vibrant and sustainable environment for R&D laboratory, domains are identified as the respective divisions under this Group listed below.

Divisions under R&D:

- Semiconductor Technologies
- IoT based Embedded systems
- Next Generation Communication Systems
- RF Power and Energy Systems
- Advanced Signal/Image processing

Table B 5.8.3 ii) a. Hardware and Software Facilities Research and Development Laboratory

Domain	Hardware Components	Software Components
Semiconductor Technologies	Spartan 6 (Xilinx FPGA Kit)	Pspice -ORCAD Version 9.1/17.2 lite, Xilinx Version 12.1, Cadence Students Bundle -3
	Xilinx Spartan 3E Kit Bays 2 100k	
IoT Based Embedded Systems	ARM Development Board & Launch Pad	Code Composer Studio Version 5.5, MASM 6.11, Lab view 7.1, Arduino-IDE 1.6.7, Python 2.7, IDE -MSP 430/TI Version-3, Proteus Version 6 Lite
	MSP430 Development Board	
	Cortex M4 Kit	
	MSP 430 Launch Pad	
	8051 Microcontroller Board/ Interfacing modules	
Energy Systems	8086 Micro-Processor Kit	Lab view 7.1
	Triggering Modules, Isolation Transform, Power Scope	
Advance Signal and Image Processing	Induction Motor, Power Meter 150W	MATLAB Version – 2019a MATLAB Version-2007
	TMS320C6713 DSP Training kit	
Next Generation Communication Systems	TMS320C6748 DSP Training kit	Design Spark Lab view 7.1
	Spectrum Analyser-6Ghz	
	Function Generator-20MHz, Digital Storage Oscilloscope 50MHz, LCR Meter	
	Advanced Fiber Optics Communication Trainer Kit, QPSK & DPSK Modulation & Demodulation Kit	
	Data Communication Trainer Set	
	LAN Trainer Set	
TCP/IP Trainer Kit		

iii) Instructional materials:

The faculty members have prepared video lectures and manual for the laboratory course and uploaded in college website.

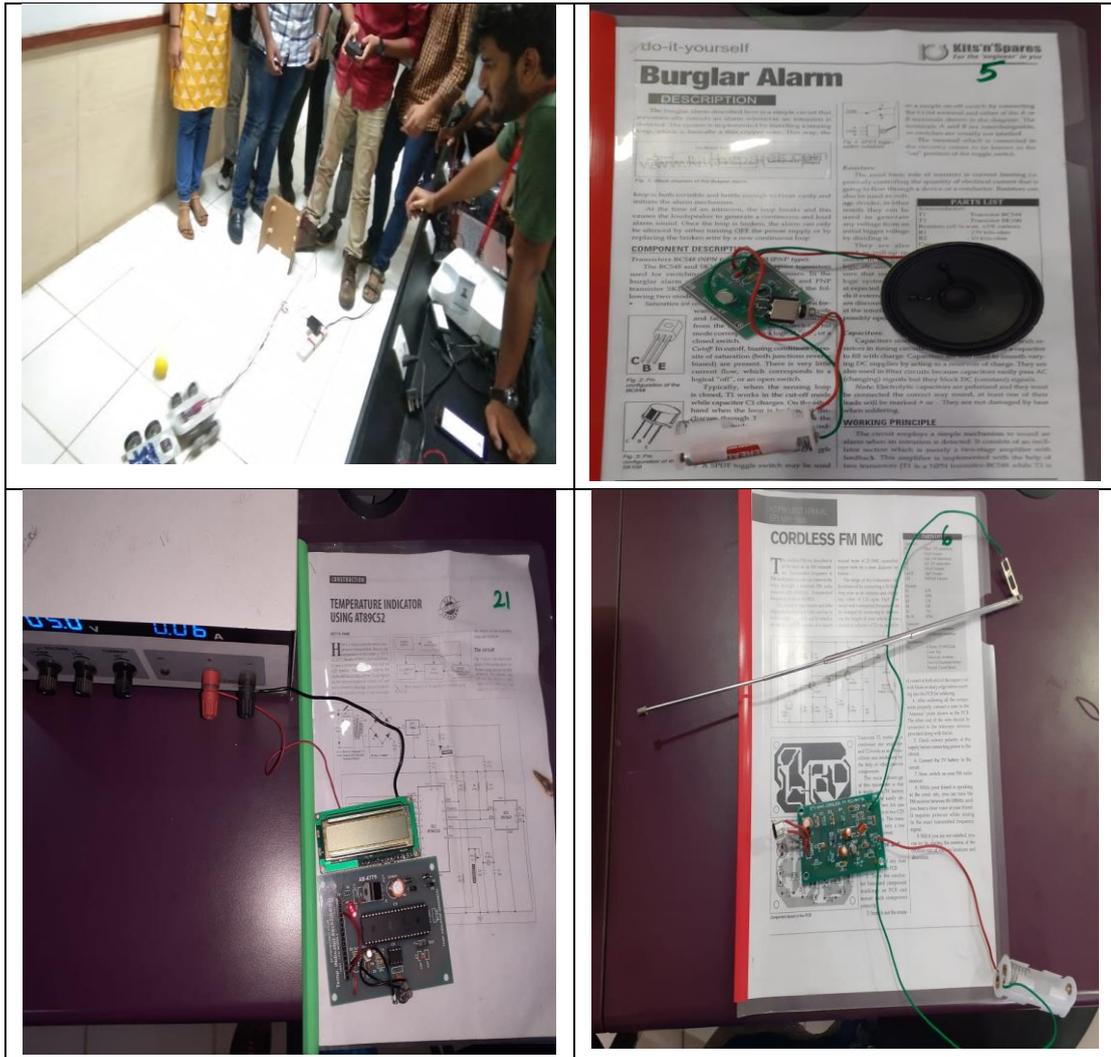
Table B 5.8.3 iii) Instructional Materials by faculty members

S.No	Name of the Faculty	Instructional Materials	Weblink
1	Ms. Ishani Mishra, Dr. Jayanthi M	19ECL48 Digital Signal Processing Laboratory	http://newhorizonindia.edu/newengineering/dsp-lab-19ecl48/
2	Dr. Piruthiviraj P Ms. Mamta Savadatti Dr. Rajesh G	ECE62L Embedded System Design Laboratory	https://drive.google.com/file/d/120D6lrQPxpZQOgwV0bjd_spHfmaR_j0L/view
3	Dr. Aravinda K Mr. Rajiv Gopal, Dr. Gurulakshmi A. B Ms. Monika Gupta Mr. Richard Lincoln Paulraj	System Design Using HDL	http://newhorizonindia.edu/newengineering/system-design-using-hdl/
4	Ms. Lipsa Dash, Mr. Ashok K Ms. Tessy Tomy	ECE61L Digital Communication Lab	https://drive.google.com/drive/folders/11ULOWCTMqYfllXonjx1UQe_BYrPd_HTS
5	Dr. Reema Sharma Dr. Naveen H Ms. Divya Sharma	NHOP09,12, 16 Hands on Configurations	http://newhorizonindia.edu/newengineering/nhop09-hands-on-configurations/ http://newhorizonindia.edu/newengineering/nhop12-hands-on-configurations/ https://drive.google.com/file/d/1iqtSKKwEWzk1AeKU5vGFBfYtNVXy6l66/view

iv) Working models /charts /monograms etc.

Working models are available in all labs to understand the basic concepts in Engineering. Lab Instruction Charts, Equipment’s part charts and conversion factor charts are available in all labs to understand the working principle of each equipment.

A gist of Sample working Models developed by our students is exhibited at various competitions held inside and outside college premises.







CHARTS /DISPLAYS IN LABORATORIES

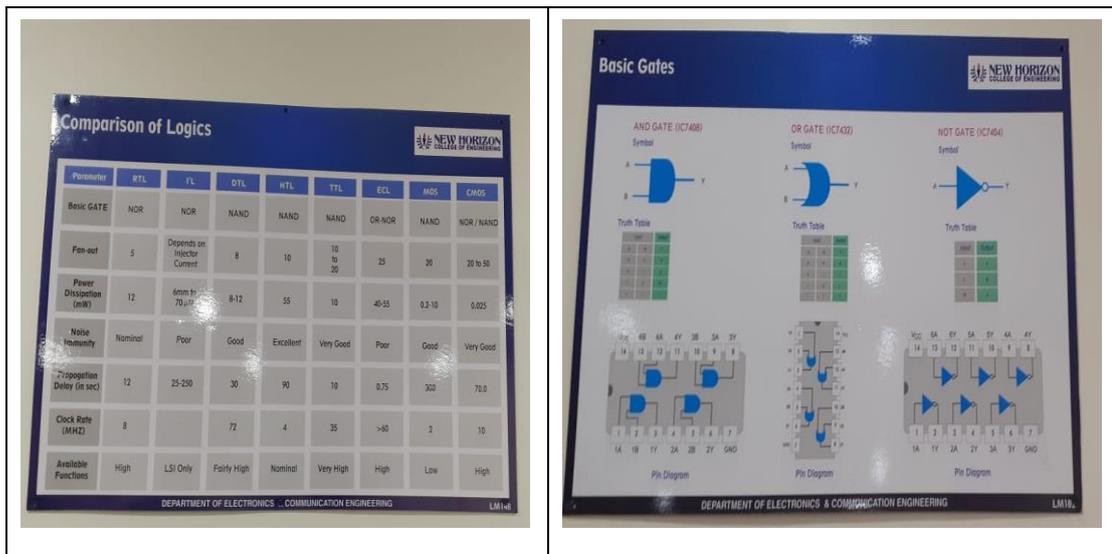


Figure 5.8.3 iv) Digital Laboratory Charts



Figure 5.8.3 iv) VLSI Laboratory Charts

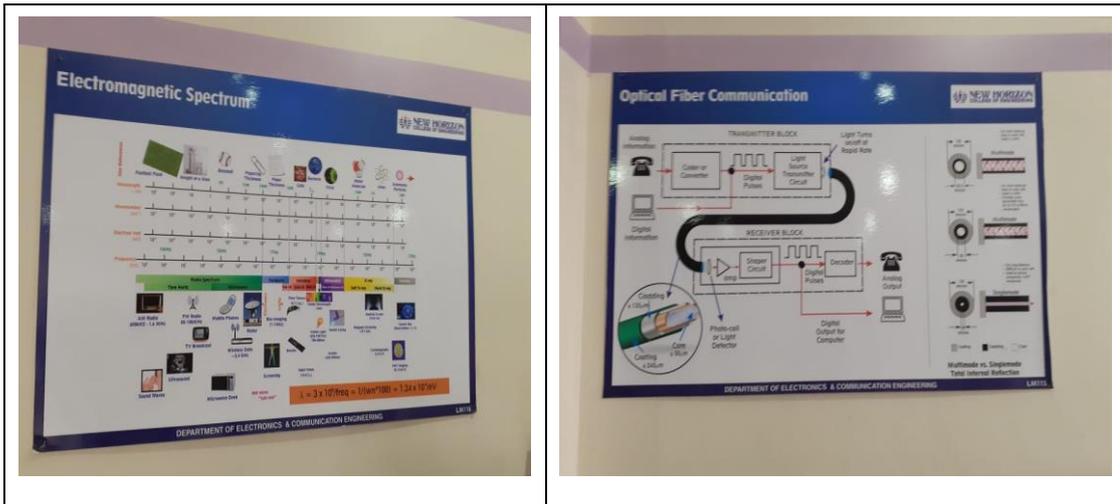


Figure 5.8.3 iv) Communication Laboratory Charts

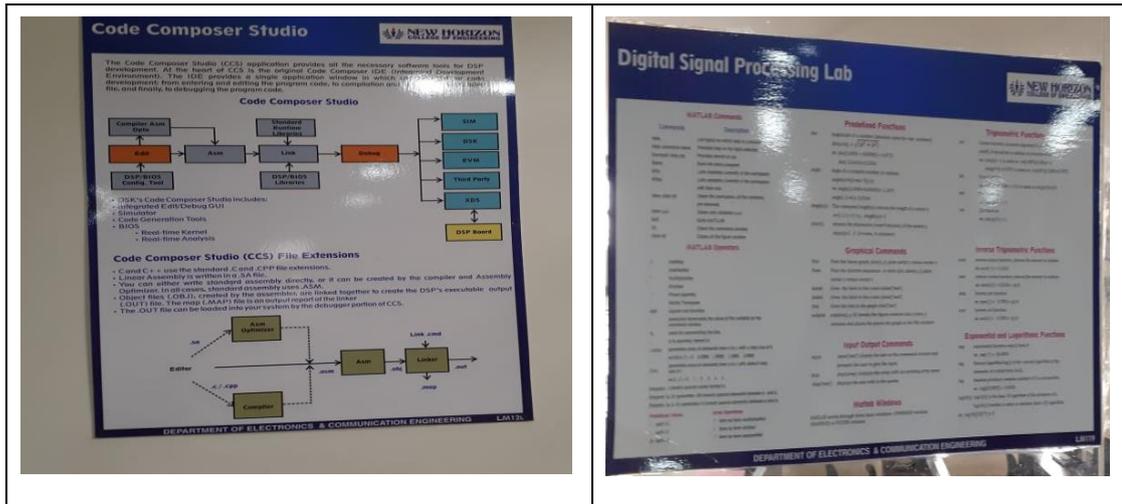


Figure 5.8.3 iv) Digital Signal Processing Laboratory Charts

5.8.4 Consultancy (from Industry) (20)

(Provide a list with Project Title, Funding Agency, Amount and Duration)

Funding Amount (Cumulative during CAYm1, CAYm2 and CAYm3):

- Amount >10 Lakh 20 Marks,
- Amount <10 and > 8 Lakh 15 Marks,
- Amount < 8 and > 6 Lakh 10 Marks,
- Amount < 6 and > 4 Lakh 5 Marks,
- Amount < 4 and > 2 Lakh 2 Marks,
- Amount < 2 Lakh 0 Mark

Table B.5.8.4 Consultancy

SI No	Financial Year	Name of the Faculty (Chief Consultant)	Client Organization	Title of the Consultancy Project	Amount Received (In Rupees)	Amount Received (In Words)
1.	2016-2017	Dr. Elumalai R. Dr. Mahesh K Dr. Nisha. K.C.R.	Lakshmi Enterprises	Energy Studies	Rs. 50,000/-	Rupees Fifty Thousand Only
2.		Dr. Shridhar Kurse Dr. Nisha K.C.R.	Lakshmi Transport	Testing and Validation	Rs. 75,000/-	Rupees Seventy-Five Thousand Only

3.		Dr. Elumalai R. Dr. Mahesh K Dr. Nisha K.C.R	Venkatesh-wara Garments	Testing and Evaluation & Energy Studies	Rs. 20,000/-	Rupees Twenty Thousand Only
1.	2017-2018	Dr. Nisha K.C.R.	Nancy Johnson	Testing and Validation	Rs. 30,000/-	Rupees Thirty Thousand Only
2.		Ms. Lipsa Dash	Srinivasa Enterprises	Testing and Validation	Rs. 50,000/-	Rupees Fifty Thousand Only
3.		Ms. Lipsa Dash	Ether Global Services	Testing and Validation	Rs. 1,00,000/-	Rupees One Lakh Only
4.		Ms. Lipsa Dash	Veerabhdare shwara Enterprises	Testing and Validation	Rs. 50,000/-	Rupees Fifty Thousand Only
1.	2018-19	Dr. Aravinda. K	Edu-Saksham	Content Development	Rs. 10,000/-	Rupees Ten Thousand only
2.		Ms. Nayana G H	Edu-Saksham	Content Development	Rs. 5,000/-	Rupees Five Thousand only
3.		Dr. Nisha K.C.R.	Nancy Johnson	Testing and Validation	Rs. 30,000/-	Rupees Thirty Thousand Only
4.		Dr. Nisha K.C.R.	Fun World	Motion Capture Files	Rs. 50,000/-	Rupees Fifty Thousand Only
5.		Dr. Nisha K.C.R.	Fun World	Motion Capture Files	Rs. 50,000/-	Rupees Fifty Thousand Only
6.		Dr. Nisha K.C.R.	Fun World	Motion Capture Files	Rs. 50,000/-	Rupees Fifty Thousand Only

7.		Dr. Nisha K.C.R.	Fun World	Motion Capture Files	Rs. 50,000/-	Rupees Fifty Thousand Only
8.		Dr. Sanjeev Sharma, Prof. Lipsa	Srinivasa Enterprises	Testing and Validation	Rs. 40,000/-	Rupees Forty Thousand Only
9.		Dr. Reema Sharma	Ganesh Textiles	Testing and Validation	Rs. 25,000/-	Rupees Twenty-Five Thousand Only
10.		Dr. Reema Sharma	Ganesh Textiles		Rs. 25,000/-	Rupees Twenty-Five Thousand Only
11.		Dr. Reema Sharma	Ganesh Textiles		Rs. 25,000/-	Rupees Twenty-Five Thousand Only
12.		Dr. Sanjeev Sharma & Ms. Lipsa Dash	Veerabhdare shwara Enterprises	Testing and Validation	Rs. 1,00,000 /-	Rupees One Lakh Only
13.		Dr. Sanjeev Sharma & Ms. Lipsa Dash	Veerabhdare shwara Enterprises	Testing and Validation	Rs. 50,000/-	Rupees Fifty Thousand Only
14.		Dr. Gopalakrishnan K Dr. Nisha K.C.R. Dr. Sudip Kar	UNISEC, 7DPlus Tech Co, DRL	“Space Lab for Satellite Aptitude Test(SAT) On Wheels” 25 July 2018, 7DPLUS Technology Company & 75 Students Satellite Consortium of ITCA/UNIS	Rs. 5,00,000 /-	Rupees Five Lakhs Only

				EC (2 Years Project)		
15.		Dr. Gopalakrishnan K Dr. Nisha K.C.R. Dr. Sudip Kar	ITCA, UNISEC, Planet Aerospace DRL, TSC	Hands-on Educational Program for Technical Advancement : HEPTA-SAT Training Kit as Classroom Satellite (Engineering Model Prototype for testing)2U+ ADSB with D'vine Research labs ITCA Consortium/ UNISEC India (2 years' project)	Rs. 3,00,000 /-	Rupees Three Lakhs Only

Year	Amount
2016-2017	1,45,000/-
2017-2018	2,30,000/-
2018-2019	13,10,000/-
TOTAL AMOUNT	16,85,000/-

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 university 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:

- a. Assess and promote excellence in the teaching/learning process.
- b. Meet the educational needs of students and community by continually
- c. monitoring instructional performance.
- d. Provide a constructive framework for evaluating faculty performance by identifying areas of strength and areas for improvement in classroom instruction.
- e. Provide a basis for professional growth and development.

Faculty Performance Appraisal and Development System.

Performance Rating Scale:

Basic Criteria for Appraisal System:

Teaching Based Appraisal:

1. Percentage of Assigned Classes taken.
2. PBL projects supervised.
3. Swayam / NPTEL course in Blended mode.

4. Innovation in teaching pedagogy.
5. Number of Guest Lectures/Workshops/Seminar organized for the students.
6. Designing of new courses / Revision of courses.
7. Extra activities carried out with regard to slow and fast learners.
8. MOOC courses completed.
9. Proper maintenance of Course Files as per the prescribed list of contents.
10. Attainment of Course Outcomes (COs).
11. Awards/ Recognitions received for excellence in teaching/ research/ students' projects.

Research Based Appraisal:

1. Papers published in SCOPUS Indexed Approved journals.
2. Outside Consultancies completed during the assessment period.
3. Conference organized by the school during the assessment period.
4. Papers presented at Conferences, Seminars, Workshops, Symposia, Trade Journals (National/International).
5. Membership of Chapters such IEEE, Institute of Engineers etc.
6. Funded Research Projects handled as Principle Investigator (PI) or as Co-PI during the Membership of Chapters Patents granted in the school
7. Initiatives and Outreach activities.
8. Conduct of Training Programs(FDP/Workshop) should be the Organizer.

NEW HORIZON COLLEGE OF ENGINEERING
ANNUAL SELF APPRAISAL OF TEACHING STAFF

Academic Year: 2018 - 19

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 possess 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

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

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

25	20	15	10	5
<input type="checkbox"/>				
Outstanding	Very Good	Good	Fair	Poor

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

15	12	9	6	3
<input type="checkbox"/>				
Outstanding	Very Good	Good	Fair	Poor

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

5	4	3	2	1	
<input type="text"/>					
Outstanding	Very Good	Good	Fair	Poor	NA

4. Participation in co-curricular activities

5	4	3	2	1
<input type="text"/>				
Outstanding	Very Good	Good	Fair	Poor

(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

10	8	6	4	2
<input type="text"/>				
Outstanding	Very Good	Good	Fair	Poor

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

25	20	15	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Outstanding	Very Good	Good	NA

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 HRMS. 15 points for minimum 02 external programs.

25	20	15	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Outstanding	Very Good	Good	NA

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

25	20	15	
<input style="width: 100%; height: 30px;" type="text"/>			
Outstanding	Very Good	Good	NA

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

5	4	3	2	1
<input style="width: 100%; height: 30px;" type="text"/>				
Outstanding	Very Good	Good	Fair	Poor

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

5	4	3	2	1
<input style="width: 100%; height: 30px;" type="text"/>				
Outstanding	Very Good	Good	Fair	Poor

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

5	4	3	2	1
<input style="width: 100%; height: 30px;" type="text"/>				
Outstanding	Very Good	Good	Fair	Poor

12. **Degree of integrity, efficiency, effectiveness& dedication shown during the course of discharging assigned responsibilities:**

5	4	3	2	1
<input style="width: 100%; height: 30px;" type="text"/>				
Outstanding	Very Good	Good	Fair	Poor

PART ‘E’

Formula Used: (Grand Result % * 5) / 100

(Result Conversion Scale: 100% - 5, 80% - 4, 60% - 3, 40% - 2, 20% - 1, 0% - 0)

ODD Semester						
	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”

- ❖ Total points awarded to staff: (D1)
- (Points Obtained / Maximum Points *5)
- ❖ 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 is 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. Underutilization 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 organization 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 on all dissenting matters will be final & binding on employees. No further query or representations on the subject will be entertained at later stage.

Implementation of FPADS:

- Registration Fees for Conferences/ Workshops/Faculty Development Programs, Industrial Training Programs.
- Increments are provided based upon the performance scale of the faculty members.
- Counselling Session are provided for faculty in-terms of performance improvisation, skill development and personal development

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= 9marks)

Table B.5.10.1 Consolidated Hour Details for Visiting /Adjunct Faculty

Academic Year	Number of Hours
2019-20	50
2018-19	51
2017-18	50

Academic Year 2017-18

Total Hours Engaged: 50 Hours

Table B.5.10.2 Visiting Faculty Session Details for the Academic Year 2017-2018

Sl. No	Name of the Industrial Expert	Company/ Organization	Designation	Topic/ Subject	Contribution to Curriculum	Sem	Hours engaged	Date
1	Mr. Lakshmi Narasimha I N	Product Manager	Schemazen Tek Pvt Ltd	Product Development Cycle; from concepts to commercialization	Industrial product development-created a general awareness	V	2	17-08-2017
2	Mr. Damodara M S	Entuple Technologies	Business Manager	Electronic System Design and IoT	Mini project Guidance and prototype development	V	2	24-08-2017
3	Mr. Damodara M S	Entuple Technologies	Business Manager	Electronic System Design Manufacturing Road map and Opportuni-	Hands on session and workshop in system design	III	2	24-08-2017

				ties for young graduates				
4	Dr. Prithviraj	Pondichery Engineering College	Former Principal (Retd)	Satellite Communication	Delivered Theoretical session for the subject Satellite Communication	VII	2	07-09-2017
5	Mr. Vinoth P	Cisco System	Senior Software Engineer	Introduction to IoT- The Cognitive Era	Project guidance in Implementation of UoT based prototypes	VII	2	12-09-2017
6	Mr. Arun	Harman India	System Design Engineer	Signals and Systems	Delivered Theoretical session for the subject Signals & Systems	III	2	28-10-2017
7	Mr. Bharat Gebise	Tata ELXI	Software Developer	Microcontrollers	Delivered a session for project guidance in embedded systems and microcontrollers	V	2	28-10-2017
8	Ms. Shanthi N	Live Wire-A division of CADD centre, CHENNAI	Senior Engineer	Digital Electronics Circuits	Delivered Theoretical session for the subject Digital Electronics	III	2	30-10-2017
9	D Suresh	Renesas Electronics	System Analyst	Analog Communication	Delivered Theoretical session for the subject Analog Communication	V	2	31-10-2017
10	Mr. Harish Kumar Villuri	Intel Technologies	Component Design Engineer	VLSI design	Delivered Theoretical session for the subject CMOS VLSI Design	V	2	31-10-2017
11	Mr. Praveen Kumar	Harman International Pvt Ltd	Software Engineer	Information Theory and Coding	Delivered Theoretical session for the subject Information Theory and Coding	V	2	02-11-2017
12	Ms. Bhavana	Robert Bosch, India	Associate Software Engineer	Campus to Corporate Transition	General Talk- Create a bridge in the gap between	III	2	10-11-2017

Criterion-5 Self-Assessment Report (SAR)

	Chandrashekhar				campus and Industry			
13	Mr. Akshara Murali	Freneustech Pvt Ltd	Design Engineer	Oscillators and Feedback	Delivered Theoretical session for the subject Electronic Devices and Circuits	III	2	17-11-2017
14	Mr. Akshara Murali	Freneustech Pvt Ltd	Design Engineer	Waveform Synthesis and transient response	Delivered Theoretical session for the subject System Design using HDL	III	2	17-11-2017
15	Mr. Ravindra	NTTF, Bangalore	Retired Trainer	Introduction to Mobile Communication	Delivered Theoretical session for the subject Analog communication	IV	1.5	10-02-2018
16	Mr. Raveendranath K R	Lekha Wireless Technologies	Director-FPGA & RF Hardware Group	Trends in Communication System Design	Industrial oriented talk- Research Trends	VIII	1.5	22-02-2018
17	Dr. Prithviraj	Govt of Puducherry	Corporate social responsibility	Smart City	Guidance for hackathon and projects with real time case studies	VI	1.5	14-03-2018
18	Mr. Niranjani H S	Complus systems	Director-Engineering	Electromagnetic interference and Compatibility	Industrial oriented talk- Research Trends	VIII	1.5	15-03-2018
19	Mr. Shivananda Koteswar	Media Tek	General Manager	Digital Signal Processing	Delivered Theoretical session for the subject Digital signal Processing	IV	1	09-04-2018
20	Kulbhushan Bhaji Patariya	Ada, Bangalore	Scientist	Application of embedded system in air borne applications	Guidance for hackathon and projects with real time case studies	VI	2	11-04-2018
21	Mr. Srinivasan Pitchai	MOS IC Solutions	Managing Director	Current Mirrors and differential amplifiers	Delivered Theoretical session for the	VI	2	12-04-2018

					subject Micro Electronic Circuits			
22	Mr. Sunder Murthy	LS Control Systems	Proprietor	ARM Cortex M4	Delivered Theoretical session for the subject microcontrollers	VI	3	13-04-2018
23	Mr. Shashikanth Patil	Wipro Technology	Senior Project Engineer	FPGA Implementation	Delivered Theoretical session for the subject system design using HDL	IV	2	16-04-2018
24	Mr. Nageswara rao P, Mr. Arijit Das	BEL, Bangalore	Deputy manager & Deputy Engineer	Microwave active devices	Delivered Theoretical session for the subject Microwave active devices	VII	2	17-04-2018
25	Ms. Dhana Selvi D	Ada, Bangalore	Project Engineer	555 Timer and its applications, ELD 1502 & ICL8038	Delivered Theoretical session for the subject Linear Integrated Circuits	IV	2	20-04-2018
26	Dr. Vishwas Lakkndi	Smarten Spaces	Principal architect	Building the internet of things; core protocols and standards	Delivered a technical talk followed by hands on session on project guidance using IoT	VI	2	21-04-2018

Academic Year 2018-19

Total Hours Engaged: 51 Hours

Table B. 5.10.3 Visiting Faculty Session Details for the Academic Year 2018-2019

Sl. No	Name of the Industrial Expert	Company/ Organization	Designation	Topic/ Subject	Contribution to Curriculum	Sem	Hours engaged	Date
1	Mr. Shriram. S	Intel Technologies	Hardware Design Engineer	Hardware Design flow for Chip Design	Delivered Theoretical session for the subject CMOS VLSI Design	V	2	11-08-2018
2	Mr. Shriram S	Intel Technologies	Hardware Design Engineer	Art of Electronics	General talk about product development in electronics- steps and process flow	III	2	11-08-2018

3	Ms. Neha Bharti	Altran Technologies	ASIC Design Engineer	Pathway to semi-conductor Industry	General talk on career opportunities in semiconductor industry	VII	2	18-08-2018
4	Mr. Harish Kumar Villuri	Intel Technologies	Component Design Engineer	CMOS VLSI Design (Timing Analysis)	Delivered Theoretical session for the subject CMOS VLSI Design	V	3	20-09-2018
5	Mr. Akshatha Pai	Sirena Technologies	Project Manager	Robotics; History, Current trends, future	General talk on current trends in robotics	V	3	22-09-2018
6	Mr. A Athif Shan	ABE Semiconductor Designs	Chairman/ Managing Director	Multi core architecture and communication	Delivered Theoretical session for the subject Microprocessor & Microcontrollers	V	3	13-10-2018
7	Mr. Sunder Murthy	LS Control Systems	Proprietor	Micro controller (Module 5, Interfacing)	Delivered Theoretical session for the subject Microcontrollers	V	3	13-10-2018
8	Mr. Prafulla ShyamKant Galphade	Invecas Technologies	Principal Member technical staff	Digital Electronic Circuits (Module 5)	Delivered Theoretical session for the subject Digital Electronic Circuits	III	3	17-10-2018
9	Mr. Bipin Malhan	Invecas Technologies	Managing Director	Career growth in electronics Industry	General talk about recent innovations and developments in electronics Industry	VII	3	24-10-2018
10	Mr. Arun Krishnan	Harman India	Senior Product Development Engineer	Network Analysis (Module 5: Waveform Synthesis)	Delivered Theoretical session for the subject Network Analysis	III	3	25-10-2018
11	D Suresh	Renesas Electronics	System Analyst	Wireless and mobile communication	Delivered Theoretical session for the subject Wireless Mobile Communication	VII	3	03-11-2018

12	Ms. Poornima Mohanachandran	Ekalakshya	CEO	Analog Electronics Product Development	Delivered Theoretical session for the subject Electronic Devices and Circuits	III	3	07-11-2018
13	Mr. Arun Krishnan	Harman India	Senior Product Development Engineer	Signals and Systems (Module 5)	Delivered Theoretical session for the subject Signals & Systems	III	3	14-11-2018
14	Ms Jayachandran Aradhya	Silicon Microsystem, Bangalore	Chief Executive	Antenna Design	Delivered Theoretical session for the subject Antenna & Wave Propagation	VII	3	14-11-2018
15	Mr. Shriram S	Intel Technologies	Hardware Design Engineer	VLSI-transistor to transformation	General talk in recent advancements in VLSI	IV	3	09-02-2019
16	Mr. Muralitharan	Emids technologies	IOS Developer	Exception Handling	Delivered Theoretical session for the subject Object Oriented Programming	VI	3	04-04-2019
17	Mr. Shashikanth Patil	Wipro Technology	Senior Project Engineer	Synthesis on FPGA	Delivered Theoretical session for the subject System design using HDL	IV	3	13-04-2019
18	Mr. Sarang Suresh Akotkar, Mr. Kumaran Sethu Raman	Intel Technology	R & D Engineer	DSP Processor & Digital Filters	Delivered Theoretical session for the subject Digital Signal Processing	IV	3	16-04-2019

Academic Year 2019-20

Total Hours Engaged: 50 Hours

Table B.5.10.4 Visiting Faculty Session Details for the Academic Year 2019-2020

Sl. No	Name of the Industrial Expert	Company/ Organization	Designation	Topic /Subject	Contribution to Curriculum	Sem	Hours engaged	Date
1	Ms. Tabassun V Mulla	Invecas Technologies	Hardware Design Engineer	Timing Analysis in MOS circuits	Delivered Theoretical session for the subject CMOS VLSI Design	V	3	23-08-2019
2	Mr. Prafulla Shyam Kant Galphade	Cadence design systems	Senior Member of Technical staff	Sequential Circuits	Delivered Theoretical session for the subject Microprocessor & Micro controllers	III	3	23-08-2019
3	Mr. Harish Kumar Villuri	Intel Technologies	Component Design Engineer	CMOS VLSI Design (Timing Analysis)	Delivered Theoretical session for the subject CMOS VLSI Design	V	3	20-09-2019
4	Mr. Sunder Murthy	LS Control Systems	Proprietor	Micro controller (Module 5, Interfacing)	Delivered Theoretical session for the subject Microcontrollers	V	3	13-10-2019
5	Mr. A Athif Shan	ABE Semiconduct or Designs	Chairman/ Managing Director	Multi core architecture and communication	Delivered Theoretical session for the subject Microprocessor & Microcontrollers	V	3	13-10-2019
6	Mr. Prafulla Shyam Kant Galphade	Invecas Technologies	Principal Member technical staff	Digital Electronic Circuits (Module 5)	Delivered Theoretical session for the subject Digital Electronic Circuits	III	3	17-10-2019
7	Mr. Vaishak Sundaresh	Freelance Corporate trainer	Senior Principal Program Manager	Programmi ng with data structures using C	Delivered Theoretical session for the subject Network Analysis	V	3	23-10-2019
8	Mr. Arun Krishnan	Harman India	Senior Product	Network Analysis (Module 5:	Delivered Theoretical session for the	III	3	25-10-2019

			Developme nt Engineer	Waveform Synthesis)	subject Network Analysis			
9	Ms. Poornima Mohanacha ndran	Ekalakshya	CEO	Analog Electronics Product Developme nt	Delivered Theoretical session for the subject Electronic Devices and Circuits	III	3	07-11-2019
10	Mr. Gobala Kichenan Ganeshan	IBM India Pvt. Ltd	NA	Microcontr oller and its significanc e in real world	Delivered Theoretical session for the subject Digital Electronic Circuits	V	3	11-11-2019
11	Mr. Arun Krishnan	Harman India	Senior Product Developme nt Engineer	Signals and Systems (Module 5)	Delivered Theoretical session for the subject Signals & Systems	III	3	14-11-2019
12	Ms Jayachandran Aradhya	Silicon Microsystem , Bangalore	Chief Executive	Antenna Design	Delivered Theoretical session for the subject Antenna & Wave Propagation	VII	3	14-11-2019
13	Mr. Prafulla Shyam Kant Galphade	Cadence design systems	Program Manager	FPGA	Delivered Theoretical session for the subject Microcontrollers	IV	3	25-01-2020
14	Mr. Galphade Prafulla	Cadence Design Systems, Bangalore	Founder and CEO	FPGA	Delivered Theoretical session for the subject Antenna & Wave Propagation	IV	2	03-02-2020
15	Mr. Praveen Kumar	Ekagga technology and services pvt Ltd	Senior Principal Program Manager	ARM programming (assembly C programming on android devices)	Delivered Theoretical session for the subject Signals & Systems	VI	3	10-02-2020

16	Mr. Praveen Kumar	Ekagga Technology & Services Pvt Ltd.	Senior Principal Program Manager	Arm Programming on Android Devices	Delivered Theoretical session for the subject Electronic Devices and Circuits	VI	3	15-02-2020
17	Mr. Jyotirmoy Koner	Bharat Electronics Ltd, Bangalore	Founder & CEO	Microwave Active & Passive Devices	Delivered Theoretical session for the subject Wireless Mobile Communication	VI	3	20-02-2020

CRITERION 5	FACULTY INFORMATION AND CONTRIBUTIONS	200
--------------------	--	------------

CUMULATIVE FACULTY INFORMATION

ACADEMIC YEAR: 2019-2020

Table B.5 a) Cumulative Faculty Information for Academic Year 2019-2020

Name of the Faculty Member	Qualification			Association with the Institution	Designation	Date on which Designated as Professor/Associate Professor	Date of Joining the Institution	Department	Specialization	Academic Research			Currently Associated (Y/N)	Nature of Association
	Degree (highest degree)	University	Year of Attaining Higher Qualification							Research Paper	Ph.D. Guidance	Faculty Receiving Ph.D.		
Dr. Sanjeev Sharma	Ph.D.	Rashtrasant Tukadoji Maharaj Nagpur University	2016	Yes	Professor & Head	16-07-2018	16-07-2018	ECE	VLSI Design & Embedded Systems	50	-	-	Yes	Regular
Dr. Mohan Kumar Naik B	Ph.D.	Singhania University	2014	Yes	Professor	01-08-2018	21-07-2014	ECE	VLSI Design & Embedded Systems	22	5	-	Yes	Regular
Dr. Nisha K. C. R.	Ph.D.	Sathyabama University	2015	Yes	Professor	01-08-2017	28-01-2015	ECE	Power Electronics & Renewable System	31+6 Patents	4	-	Yes	Regular

Criterion-5 Self-Assessment Report (SAR)

Dr. Vasundha Srikumar	Ph.D.	Visvesvaraya Technological University	2016	Yes	Professor	17-06-2017	17-06-2017	ECE	ECE Science	34+5 Patents	-	-	Yes	Regular
Dr.Sivakumar	Ph.D.	Karunya University	2011	Yes	Professor	17-06-2017	17-06-2017	ECE	VLSI Design	25	-	-	Yes	Regular
Dr. Kesar Singh S	Ph.D.	Amity University	2018	No	Professor	16-07-2018	16-07-2018	ECE	Power systems	25	-	-	15-06-2020	Regular
Dr. Priyamvada Singh	Ph.D.	Visvesvaraya Technological University	2018	No	Associate Professor	03-12-2018	01-08-2018	ECE	VLSI Design & Embedded Systems	10	-	-	15-06-2020	Regular
Dr. Jayanthi M.	Ph.D.	Visvesvaraya Technological University	2019	Yes	Associate Professor	01-08-2019	25-07-2016	ECE	Biomedical Signal and Image Processing	14	-	-	Yes	Regular
Dr. Reema Sharma	Ph.D.	Visvesvaraya Technological University	2018	Yes	Associate Professor	15-01-2018	17-08-2017	ECE	Data Communication and Networking	20	-	-	Yes	Regular
Dr. Piruthiviraj.P	Ph.D.	Visvesvaraya Technological University	2018	Yes	Associate Professor	16-01-2019	16-01-2019	ECE	Optical Communication & Networking	15	-	-	Yes	Regular
Dr. Dhivya.M	Ph.D.	Anna University	2013	Yes	Associate Professor	17-07-2019	17-07-2019	ECE	Electrical Engineering	50+2 Patents	-	-	Yes	Regular

Criterion-5 Self-Assessment Report (SAR)

Dr. Gunapriya B	Ph.D.	Anna University	2018	Yes	Associate Professor	17-07-2018	17-07-2018	ECE	Digital Control	21+3 Paten s	-	-	Yes	Regular
Dr. Gurulakshmi A. B	Ph.D.	Anna University	2018	Yes	Associate Professor	05-08-2019	05-08-2019	ECE	EMI/EMC	17	-	-	Yes	Regular
Dr. Naveen H.	Ph.D.	Visvesvaraya Technological University	2020	Yes	Associate Professor	02-03-2020	26-07-2017	ECE	Underwater Communication & Embedded Systems	12	-	Yes	Yes	Regular
Dr. Aravinda K.	M. Tech	Visvesvaraya Technological University	2010	Yes	Senior Assistant Professor		04-06-2007	ECE	VLSI	13	-	-	Yes	Regular
Ms. Divya Sharma	M. Tech	Uttarakhand Technical University	2010	No	Senior Assistant Professor		25-07-2012	ECE	Computer Science (Networking)	16	-	-	15-06-2020	Regular
Ms. Ishani Mishra	M. Tech	Biju Patnaik University of Technology	2008	Yes	Senior Assistant Professor		25-07-2012	ECE	Image Processing	17	-	-	Yes	Regular
Ms. Dharmambal V.	M.S.	BITS Pilani	2009	Yes	Senior Assistant Professor		01-08-2012	ECE	Software Systems	14	-	-	Yes	Regular
Ms. Lipsa Dash	M. Tech	Biju Patnaik University of Technology	2012	Yes	Senior Assistant Professor		03-09-2012	ECE	Electronics and Telecommuni-	13	-	-	Yes	Regular

									ation Engineering					
Ms. Susmitha A.	M. Tech	Jawaharlal Nehru Technological University Hyderabad	2009	Yes	Senior Assistant Professor		24-07-2013	ECE	Digital Systems	12	-	-	Yes	Regular
Ms. Thanuja I. K.	M. Tech	Visvesvaraya Technological University	2015	Yes	Assistant Professor		21-07-2014	ECE	Digital Communication	4	-	-	Yes	Regular
Ms. Divya Rajan	M. Tech	Karunya University	2010	Yes	Assistant Professor		20-07-2015	ECE	Applied Electronics	6	-	-	Yes	Regular
Ms. Monika Gupta	M. Tech	Malaviya National Institute of Technology	2011	Yes	Assistant Professor		20-07-2015	ECE	VLSI Design	11	-	-	Yes	Regular
Ms. Neethu Johny	M. Tech	Anna University	2013	Yes	Assistant Professor		20-07-2015	ECE	VLSI Design	11	-	-	Yes	Regular
Ms. Nayana G. H.	M. Tech	Visvesvaraya Technological University	2016	Yes	Assistant Professor		27-07-2015	ECE	VLSI Design & Embedded Systems	10	-	-	Yes	Regular
Ms. Maheswari M.	M.E.	Anna University of Technology, Madurai	2013	Yes	Assistant Professor		23-01-2017	ECE	VLSI Design	10	-	-	Yes	Regular
Ms. Rajani K. V.	M. Tech	Visvesvaraya Technological University	2014	Yes	Assistant Professor		26-07-2017	ECE	VLSI Design & Embedded Systems	3	-	-	Yes	Regular

Criterion-5 Self-Assessment Report (SAR)

Ms. Mamta B Savadatti	M. Tech	Visvesvaraya Technological University	2018	Yes	Assistant Professor		01-08-2018	ECE	Communication Systems	2	-	-	Yes	Regular
Mr. Bhimasesan Kulkarni	M. Tech	Visvesvaraya Technological University	2015	No	Assistant Professor		21-07-2014	ECE	Signal processing	4	-	-	15-06-2020	Regular
Ms. Rajashri.Y.M	M. Tech	Visvesvaraya Technological University	2012	Yes	Assistant Professor		16-01-2019	ECE	Digital Communication and Networking	5	-	-	Yes	Regular
Dr. Rajesh.G	M.E.	Sathyabama University	2010	Yes	Assistant Professor		27-07-2019	ECE	Signal Processing	14	-	-	Yes	Regular
Mr. Richard Lincoln Paulraj	M. Tech	Visvesvaraya Technological University	2011	Yes	Assistant Professor		17-07-2019	ECE	VLSI Design & Embedded Systems	6	-	-	Yes	Regular
Mr. Sagar D K	M. Tech	Vellore Institute of Technology	2014	Yes	Assistant Professor		25-07-2016	ECE	VLSI Design	4	-	-	Yes	Regular
Ms. Ramanamma Parepalli	M. Tech	Visvesvaraya Technological University	2015	Yes	Assistant Professor		27-01-2016	ECE	VLSI Design & Embedded Systems	8	-	-	Yes	Regular
Mr. Karthik C. V.	M. Tech	Visvesvaraya Technological University	2014	Yes	Assistant Professor		25-07-2016	ECE	Electronics	6	-	-	Yes	Regular

Criterion-5 Self-Assessment Report (SAR)

Mr. Rajiv Gopal	M. Tech	GITAM University	2014	Yes	Assistant Professor		26-07-2017	ECE	VLSI Design	7	-	-	Yes	Regular
Ms. Tessy Tomy	M. Tech	Sathyabama University	2016	Yes	Assistant Professor		17-07-2019	ECE	Embedded Systems	1	-	-	Yes	Regular
Ms. Shilpa Kambe	M. Tech	Rashtrasant Tukadoji Maharaj Nagpur University	2016	Yes	Assistant Professor		01-02-2016	ECE	Electronics Engineering	2	-	-	Yes	Regular
Mr. Vipin V K	M. Tech	Vellore Institute of Technology	2014	Yes	Assistant Professor		26-07-2017	ECE	VLSI Design	3	-	-	Yes	Regular
Mr. Nanda Kumar K	M. Tech	Sathyabama University	2008	Yes	Assistant Professor		26-07-2017	ECE	VLSI Design	4	-	-	Yes	Regular
Mr. Rishikesh S T	M. Tech	Rashtrasant Tukadoji Maharaj Nagpur University	2014	Yes	Assistant Professor		25-07-2016	ECE	VLSI Design	4	-	-	Yes	Regular
Mr. Ashok.K	M. Tech	Kerala Technological University	2013	Yes	Assistant Professor		20-08-2019	ECE	Applied Electronics	11	-	-	Yes	Regular
Ms. Neha	M. Tech	Rashtrasant Tukadoji Maharaj Nagpur University	2015	Yes	Assistant Professor		01-02-2016	ECE	Communication Engineering	3	-	-	Yes	Regular

ACADEMIC YEAR: 2018-2019

Table B.5 b) Cumulative Faculty Information for Academic Year 2018-2019

Name of the Faculty Member	Qualification			Association with the Institution	Designation	Date on which Designated as Professor/Associate Professor	Date of Joining the Institution	Department	Specialization	Academic Research			Currently Associated (Y/N)	Nature of Association
	Degree (highest degree)	University	Year of Attaining Higher Qualification							Research Paper	Ph.D. Guidance	Faculty Receiving Ph.D.		
Dr. Sanjeev Sharma	Ph.D.	Rashtrasant Tukadoji Maharaj Nagpur University	2016	Yes	Professor & Head	16-07-2018	16-07-2018	ECE	VLSI Design & Embedded Systems	41	-	-	Yes	Regular
Dr. Mohan Kumar Naik B	Ph.D.	Singhania University	2014	Yes	Professor	01-08-2018	21-07-2014	ECE	VLSI Design & Embedded Systems	19	5	-	Yes	Regular
Dr. Nisha K. C. R.	Ph.D.	Sathyabama University	2015	Yes	Professor	01-08-2017	28-01-2015	ECE	Power Electronics & Renewable System	28+5 Patents	4	-	Yes	Regular
Dr. Vasundha Srikumar	Ph.D.	Visvesvaraya Technological University	2016	Yes	Professor	17-06-2017	17-06-2017	ECE	ECE Science	30	-	-	Yes	Regular

Criterion-5 Self-Assessment Report (SAR)

Dr.Sivakumar	Ph.D.	Karunya University	2011	Yes	Professor	17-06-2017	17-06-2017	ECE	VLSI Design	25	-	-	Yes	Regular
Dr. Kesar Singh S	Ph.D.	Amity University	2018	Yes	Professor	16-07-2018	16-07-2018	ECE	Power systems	25	-	-	Yes	Regular
Dr.Priyamvada Singh	Ph.D.	Visvesvaraya Technological University	2018	Yes	Associate Professor	03-12-2018	01-08-2018	ECE	VLSI Design & Embedded Systems	10	-	-	Yes	Regular
Dr. Jayanthi M.	Ph.D.	Visvesvaraya Technological University	2019	Yes	Associate Professor	01-08-2019	25-07-2016	ECE	Biomedical Signal and Image Processing	13	-	Yes	Yes	Regular
Dr. Reema Sharma	Ph.D.	Visvesvaraya Technological University	2018	Yes	Associate Professor	15-01-2018	17-08-2017	ECE	Data Communication and Networking	16	-	-	Yes	Regular
Dr.Piruthiviraj.P	Ph.D.	Visvesvaraya Technological University	2018	Yes	Associate Professor	16-01-2019	16-01-2019	ECE	Optical Communication & Networking	14	-	-	Yes	Regular
Dr. Gunapriya B	Ph.D.	Anna University	2018	Yes	Associate Professor	17-07-2018	17-07-2018	ECE	Digital Control	17	-	-	Yes	Regular
Dr.Jayadeva T.S.	Ph.D.	Visvesvaraya Technological University	2017	No	Associate Professor	30-07-2018	30-07-2018	ECE	RF & Microwave	5	-	-	04-05-2019	Regular

Criterion-5 Self-Assessment Report (SAR)

Dr.S.Karthikeyan	Ph.D.	Mewar University	2013	No	Associate Professor	15-07-2013	15-07-2013	ECE	Intelligent Controllers for Power Electronics	10	-	-	04-05-2019	Regular
Dr.Shreesha Kalkoor M	Ph.D.	Sunrise University	2018	No	Associate Professor	16-07-2018	16-07-2018	ECE	Electronics	5	-	-	04-05-2019	Regular
Dr. Surendran J	Ph.D.	Annamalai University	2013	No	Associate Professor	25-07-2016	25-07-2016	ECE	Image Processing	10	-	-	04-05-2019	Regular
Dr.Raghavendra Kulkarni	Ph.D.	Mewar University	2016	No	Associate Professor	21-07-2014	21-07-2014	ECE	Control and Instrumentation	10	-	-	04-05-2019	Regular
Dr.Naveen H.	M.Tech	Visvesvaraya Technological University	2011	Yes	Assistant Professor	02-03-2020	26-07-2017	ECE	Underwater Communication & Embedded Systems	8	-	-	Yes	Regular
Dr. Aravinda K.	M.Tech	Visvesvaraya Technological University	2010	Yes	Senior Assistant Professor		04-06-2007	ECE	VLSI	11	-	-	Yes	Regular
Ms. Divya Sharma	M.Tech	Uttarakhand Technical University	2010	Yes	Senior Assistant Professor		25-07-2012	ECE	Computer Science (Networking)	15	-	-	Yes	Regular
Ms. Ishani Mishra	M.Tech	Biju Patnaik University of Technology	2008	Yes	Senior Assistant Professor		25-07-2012	ECE	Image Processing	16	-	-	Yes	Regular

Criterion-5 Self-Assessment Report (SAR)

Ms. Dharmambal V.	M.S.	BITS Pilani	2009	Yes	Senior Assistant Professor		01-08-2012	ECE	Software Systems	13	-	-	Yes	Regular
Ms. Lipsa Dash	M.Tech	Biju Patnaik University of Technology	2012	Yes	Senior Assistant Professor		03-09-2012	ECE	Electronics and Telecommunication Engineering	9	-	-	Yes	Regular
Ms. Susmitha A.	M.Tech	Jawaharlal Nehru Technological University Hyderabad	2009	Yes	Senior Assistant Professor		24-07-2013	ECE	Digital Systems	9	-	-	Yes	Regular
Ms. Thanuja I. K.	M.Tech	Visvesvaraya Technological University	2015	Yes	Assistant Professor		21-07-2014	ECE	Digital Communication	2	-	-	Yes	Regular
Ms. Divya Rajan	M.Tech	Karunya University	2010	Yes	Assistant Professor		20-07-2015	ECE	Applied Electronics	5	-	-	Yes	Regular
Ms. Monika Gupta	M.Tech	Malaviya National Institute of Technology	2011	Yes	Assistant Professor		20-07-2015	ECE	VLSI Design	10	-	-	Yes	Regular
Ms. Neethu Johny	M.Tech	Anna University	2013	Yes	Assistant Professor		20-07-2015	ECE	VLSI Design	10	-	-	Yes	Regular
Ms. Nayana G. H.	M.Tech	Visvesvaraya Technological University	2016	Yes	Assistant Professor		27-07-2015	ECE	VLSI Design & Embedded Systems	10	-	-	Yes	Regular

Criterion-5 Self-Assessment Report (SAR)

Ms. Maheswari M.	M.E.	Anna University of Technology, Madurai	2013	Yes	Assistant Professor		23-01-2017	ECE	VLSI Design	10	-	-	Yes	Regular
Ms. Rajani K. V.	M.Tech	Visvesvaraya Technological University	2014	Yes	Assistant Professor		26-07-2017	ECE	VLSI Design & Embedded Systems	3	-	-	Yes	Regular
Ms.Mamta B Savadatti	M.Tech	Visvesvaraya Technological University	2018	Yes	Assistant Professor		01-08-2018	ECE	Communication Systems	2	-	-	Yes	Regular
Mr. Bhimasen Kulkarni	M.Tech	Visvesvaraya Technological University	2015	Yes	Assistant Professor		21-07-2014	ECE	Signal processing	4	-	-	Yes	Regular
Ms.Rajashri. Y.M	M.Tech	Visvesvaraya Technological University	2012	Yes	Assistant Professor		16-01-2019	ECE	Digital Communication and Networking	4	-	-	Yes	Regular
Mr. Sagar D K	M.Tech	Vellore Institute of Technology	2014	Yes	Assistant Professor		25-07-2016	ECE	VLSI Design	4	-	-	Yes	Regular
Ms. Ramanamma M.	M.Tech	Visvesvaraya Technological University	2015	Yes	Assistant Professor		27-01-2016	ECE	VLSI Design & Embedded Systems	7	-	-	Yes	Regular
Mr. Karthik C. V.	M.Tech	Visvesvaraya Technological University	2014	Yes	Assistant Professor		25-07-2016	ECE	Electronics	2	-	-	Yes	Regular

Criterion-5 Self-Assessment Report (SAR)

Mr. Rajiv Gopal	M.Tech	GITAM University	2014	Yes	Assistant Professor		26-07-2017	ECE	VLSI Design	3	-	-	Yes	Regular
Ms. Shilpa Kambe	M.Tech	Rashtrasant Tukadoji Maharaj Nagpur University	2016	Yes	Assistant Professor		01-02-2016	ECE	Electronics Engineering	2	-	-	Yes	Regular
Mr. Vipin V K	M.Tech	Vellore Institute of Technology	2014	Yes	Assistant Professor		26-07-2017	ECE	VLSI Design	3	-	-	Yes	Regular
Mr. Nanda Kumar K	M.Tech	Sathyabama University	2008	Yes	Assistant Professor		26-07-2017	ECE	VLSI Design	4	-	-	Yes	Regular
Mr. Rishikesh S T	M.Tech	Rashtrasant Tukadoji Maharaj Nagpur University	2014	Yes	Assistant Professor		25-07-2016	ECE	VLSI Design	4	-	-	Yes	Regular
Ms. Neha	M.Tech	Rashtrasant Tukadoji Maharaj Nagpur University	2015	Yes	Assistant Professor		01-02-2016	ECE	Communication Engineering	3	-	-	Yes	Regular
Mr. K. Jagadish Rao	M.Tech	Mangalore University	1986	No	Assistant Professor		26-07-2017	ECE	Industrial Electronics	2	-	-	04-05-2019	Regular
Mr. Ashutosh Srivastava	M.Tech	IIT Kanpur	2013	No	Assistant Professor		01-05-2017	ECE	RF Microwave & Photonics	1	-	-	04-05-2019	Regular

Ms. Parul Wadhwa	M.Tech	Kurusetra University	2011	No	Assistant Professor		27-01-2016	ECE	Electronics and Communication	9	-	-	04-05-2019	Regular
------------------	--------	----------------------	------	----	---------------------	--	------------	-----	-------------------------------	---	---	---	------------	---------

ACADEMIC YEAR: 2017-2018

Table B.5 c) Cumulative Faculty Information for Academic Year 2017-2018

Name of the Faculty Member	Qualification			Association with the Institution	Designation	Date on which Designated as Professor/Associate Professor	Date of Joining the Institution	Department	Specialization	Academic Research			Currently Associated (Y/N)	Nature of Association
	Degree (highest degree)	University	Year of Attaining Higher Qualification							Research Paper	Ph.D. Guidance	Faculty Receiving Ph.D.		
Prof. Mani Laxman Aiyar	M.S. Engg	CALS University	2002	No	Professor	10-07-2017	10-07-2017	ECE	VLSI Design	3	-	-	26-05-2018	Regular
Dr. Nisha K. C. R.	Ph.D.	Sathyabama University	2015	Yes	Professor	01-08-2017	28-01-2015	ECE	Power Electronics & Renewable System	23	4	-	Yes	Regular
Dr. Vasundha Srikumar	Ph.D.	Visvesvaraya Technological University	2016	Yes	Professor	17-06-2017	17-06-2017	ECE	ECE Science	30	-	-	Yes	Regular

Criterion-5 Self-Assessment Report (SAR)

Dr.Sivakumar	Ph.D.	Karunya University	2011	Yes	Professor	17-06-2017	17-06-2017	ECE	VLSI Design	20	-	-	Yes	Regular
Dr. Mohan Kumar Naik B	Ph.D.	Singhania University	2014	Yes	Senior Associate Professor	01-08-2018	21-07-2014	ECE	VLSI Design & Embedded Systems	18	5	-	Yes	Regular
Dr. Surendran J	Ph.D.	Annamalai University	2013	Yes	Associate Professor	25-07-2016	25-07-2016	ECE	Image Processing	8	-	-	Yes	Regular
Dr.Raghavendra Kulkarni	Ph.D.	Mewar University	2016	Yes	Associate Professor	21-07-2014	21-07-2014	ECE	Control and Instrumentation	8	-	-	Yes	Regular
Dr.S.Karthikeyan	Ph.D.	Mewar University	2013	Yes	Associate Professor	15-07-2013	15-07-2013	ECE	Intelligent Controllers for Power Electronics	7	-	-	Yes	Regular
Dr.Aradhana Yadav	Ph.D.	Uttar Pradesh Rajarshi Tandon Open University	2014	No	Associate Professor	01-08-2014	25-07-2012	MBA	Finance and Marketing	5	-	-	26-05-2018	Regular
Dr. Reema Sharma	Ph.D.	Visvesvaraya Technological University	2018	Yes	Associate Professor	15-01-2018	17-08-2017	ECE	Data Communication and Networking	14	-	Yes	Yes	Regular
Dr. Jayanthi M.	M.E.	Anna University	2006	Yes	Assistant Professor	01-08-2019	25-07-2016	ECE	Biomedical Signal and Image Processing	12	-	-	Yes	Regular

Criterion-5 Self-Assessment Report (SAR)

Dr. Naveen H.	M.Tech	Visvesvaraya Technological University	2011	Yes	Assistant Professor	02-03-2020	26-07-2017	ECE	Underwater Communication & Embedded Systems	3	-	-	Yes	Regular
Dr. Aravinda K.	M.Tech	Visvesvaraya Technological University	2010	Yes	Senior Assistant Professor		04-06-2007	ECE	VLSI	7	-	-	Yes	Regular
Ms. Divya Sharma	M.Tech	Uttarakhand Technical University	2010	Yes	Senior Assistant Professor		25-07-2012	ECE	Computer Science (Networking)	13	-	-	Yes	Regular
Ms. Ishani Mishra	M.Tech	Biju Patnaik University of Technology	2008	Yes	Senior Assistant Professor		25-07-2012	ECE	Image Processing	13	-	-	Yes	Regular
Ms. Dharmambal V.	M.S.	BITS Pilani	2009	Yes	Senior Assistant Professor		01-08-2012	ECE	Software Systems	10	-	-	Yes	Regular
Ms. Lipsa Dash	M.Tech	Biju Patnaik University of Technology	2012	Yes	Senior Assistant Professor		03-09-2012	ECE	Electronics and Telecommunication Engineering	8	-	-	Yes	Regular
Ms. Susmitha A.	M.Tech	Jawaharlal Nehru Technological University Hyderabad	2009	Yes	Senior Assistant Professor		24-07-2013	ECE	Digital Systems	8	-	-	Yes	Regular
Ms. Thanuja I. K.	M.Tech	Visvesvaraya Technological University	2015	Yes	Assistant Professor		21-07-2014	ECE	Digital Communication	2	-	-	Yes	Regular

Criterion-5 Self-Assessment Report (SAR)

Ms. Divya Rajan	M.Tech	Karunya University	2010	Yes	Assistant Professor		20-07-2015	ECE	Applied Electronics	3	-	-	Yes	Regular
Ms. Monika Gupta	M.Tech	Malaviya National Institute of Technology	2011	Yes	Assistant Professor		20-07-2015	ECE	VLSI Design	8	-	-	Yes	Regular
Ms. Neethu Johny	M.Tech	Anna University	2013	Yes	Assistant Professor		20-07-2015	ECE	VLSI Design	6	-	-	Yes	Regular
Ms. Nayana G. H.	M.Tech	Visvesvaraya Technological University	2016	Yes	Assistant Professor		27-07-2015	ECE	VLSI Design & Embedded Systems	7	-	-	Yes	Regular
Ms. Maheswari M.	M.E.	Anna University of Technology, Madurai	2013	Yes	Assistant Professor		23-01-2017	ECE	VLSI Design	7	-	-	Yes	Regular
Ms. Rajani K. V.	M.Tech	Visvesvaraya Technological University	2014	Yes	Assistant Professor		26-07-2017	ECE	VLSI Design & Embedded Systems	2	-	-	Yes	Regular
Mr. Bhimasen Kulkarni	M.Tech	Visvesvaraya Technological University	2015	Yes	Assistant Professor		21-07-2014	ECE	Signal processing	3	-	-	Yes	Regular
Mr. Sagar D K	M.Tech	Vellore Institute of Technology	2014	Yes	Assistant Professor		25-07-2016	ECE	VLSI Design		-	-	Yes	Regular

Criterion-5 Self-Assessment Report (SAR)

Ms. Ramanamma Parepalli	M.Tech	Visvesvaraya Technological University	2015	Yes	Assistant Professor		27-01-2016	ECE	VLSI Design & Embedded Systems	4	-	-	Yes	Regular
Mr. Karthik C. V.	M.Tech	Visvesvaraya Technological University	2014	Yes	Assistant Professor		25-07-2016	ECE	Electronics	2	-	-	Yes	Regular
Mr. Rajiv Gopal	M.Tech	GITAM University	2014	Yes	Assistant Professor		26-07-2017	ECE	VLSI Design	3	-	-	Yes	Regular
Ms. Shilpa Kambe	M.Tech	Rashtrasant Tukadoji Maharaj Nagpur University	2016	Yes	Assistant Professor		01-02-2016	ECE	Electronics Engineering	2	-	-	Yes	Regular
Vipin V K	M.Tech	Vellore Institute of Technology	2014	Yes	Assistant Professor		26-07-2017	ECE	VLSI Design	3	-	-	Yes	Regular
Mr. Nanda Kumar K	M.Tech	Sathyabama University	2008	Yes	Assistant Professor		26-07-2017	ECE	VLSI Design	4	-	-	Yes	Regular
Mr. Rishikesh S T	M.Tech	Rashtrasant Tukadoji Maharaj Nagpur University	2014	Yes	Assistant Professor		25-07-2016	ECE	VLSI Design	4	-	-	Yes	Regular
Ms.Neha	M.Tech	Rashtrasant Tukadoji Maharaj Nagpur University	2015	Yes	Assistant Professor		01-02-2016	ECE	Communication Engineering	3	-	-	Yes	Regular

Criterion-5 Self-Assessment Report (SAR)

Mr.K.Jagadish Rao	M.Tech	Mangalore University	1986	Yes	Assistant Professor		26-07-2017	ECE	Industrial Electronics	2	-	-	Yes	Regular
Mr. Ashutosh Srivastava	M.Tech	IIT Kanpur	2013	Yes	Assistant Professor		01-05-2017	ECE	RF Microwave & Photonics		-	-	Yes	Regular
Ms. Parul Wadhwa	M.Tech	Kurusetra University	2011	Yes	Assistant Professor		27-01-2016	ECE	Electronics and Communication	9	-	-	Yes	Regular
Mr. Ugrasena Maharaj	M.Tech	Visvesvaraya Technological University	2012	No	Assistant Professor		21-07-2014	ECE	Biomedical image and Signal processing	2	-	-	26-05-2018	Regular
Ms. Smitha G.S.	M.Tech	Visvesvaraya Technological University	2010	No	Assistant Professor		23-01-2017	ECE	Computer Science and Engineering	2	-	-	17-11-2018	Regular
Ms. Shachi P	M.Tech	Visvesvaraya Technological University	2013	No	Assistant Professor		01-02-2016	ECE	Electronics and Instrumentation	2	-	-	26-05-2018	Regular
Sachin V	M.Tech	Visvesvaraya Technological University	2016	No	Assistant Professor		05-01-2017	ECE	Electronics	3	-	-	17-11-2018	Regular
Ms. Mayur Shivamurthy Marinaik	M.Tech	NIT GOA	2016	No	Assistant Professor		23-01-2017	ECE	VLSI system Design	3	-	-	17-11-2018	Regular

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

CRITERION 6

FACILITIES AND TECHNICAL SUPPORT

CRITERION 6	FACILITIES AND TECHNICAL SUPPORT	80
--------------------	---	-----------

6.1 Adequate and Well Equipped Laboratories, and Technical Manpower (40)

Department of Electronics and Communication Engineering has well equipped laboratories which include Analog Electronics laboratories, Digital Electronic Circuits Laboratory, Digital Signal Processing Laboratory, Analog Communication & Linear Integrated Circuit Laboratory, VLSI Laboratory, HDL Laboratory, Microcontroller Laboratory, Advanced Communication Laboratory, Embedded System Design Laboratory, Wireless & Mobile Communication Laboratory. All the laboratories are furnished with adequate equipment as specified by the curriculum and it meets academic standards. Few laboratories notably VLSI laboratory and CISCO Centre of Excellence are established with Industry standards. Department laboratories are facilitated with the latest version of software cluster to fulfill both academic and industry requirements. Available software cluster includes MATLAB 2019a, Code Composer Studio 2007, Pspice –ORCAD V 9.1/17.2 Lite, Xilinx 12.1, Cadence, MASM 6.11, Lab view 7.1, Arduino-IDE 1.6.7, Python 2.7, Keil μ Vision 3/5, IDE -MSP 430/TI, Design Spark, Proteus. Safety instructions, safety tools including first aid box are provided in all the laboratories. Qualified and trained faculty members supported by a technical staff are available in the laboratories to guide and assist the students by providing constant support to ensure smooth conduct of the Practical sessions, research and development activities.

Table 6.1a: Adequate and well equipped laboratories and technical man power (Even Semester)

Sl. No	Name of the Laboratory	No. of Students per setup (Batch Size)	Name of the Important Equipment	Weekly utilization status (all the courses for which the lab is utilized) in Hours	Technical Manpower Support		
					Name of the technical staff	Designation	Qualification
1	Digital Signal Processing Laboratory	Batch size 20 1 Student per setup	<ul style="list-style-type: none"> ▪ MATLAB 7.0 ▪ Code Compressor Studio – CCS 5.5 ▪ DSK-TMS 320C6713/6748 ▪ DSP Emulators – XDS100 ▪ Computer – Intel dual core, 2GB RAM &250 GB HDD 	30	Mr. Parag Jain	Lab Instructor	B.E., M.Tech - Comm. Systems
2	HDL Laboratory	Batch size 20 1 Student per setup	<ul style="list-style-type: none"> ▪ VLSI Spartan kit ▪ Xilinx software ▪ Pattern Generator 32bit ▪ Computer – Intel dual core, 2GB RAM &250 GB HDD 	30	Mr. Baiju K	Lab Instructor	ITI - Electronics (Diploma Tel.Comm.)
3	Advanced Communication Laboratory	Batch size 24 2 Students per setup	<ul style="list-style-type: none"> ▪ Digital Storage Oscilloscope -50 MHZ 250 Ms/s Dual channel with USB ▪ Spectrum analyzer – RSA - 306, 9KHz to 602 GHz, Laptop –HP ▪ Communication modules ▪ Advanced fiber optics communication trainer kit. ▪ Antenna experimental set-up ▪ Microwave sources -2.2 to 3.4 GHz 	30	Mr. Umapasad B K	Foremen	Diploma- ECE, (B.Tech-E&TC)

4	Embedded System Design Laboratory	Batch size 20 1 Student per setup	<ul style="list-style-type: none"> ▪ ARM Cortex- M4 kits ▪ TIVA Series Development Board ▪ Software - Keil μ Vision5 IDE 	30	Mr. MadhuBabu K.S.	Lab Instructor	Diploma- ECE, (B.Tech- E&TC)
5	Centre of Excellence - CISCO Laboratory	Batch size 30 1 Student per setup	<ul style="list-style-type: none"> ▪ 2960 Catalyst Switch ▪ 1941- Router with Ethernet Line Cable ▪ Software –Packet tracer 7.12 ▪ Computers: Intel i5, 3.3 GHZ, RAM-8GB, HDD-1TB ▪ Monitor – LG TFT 17 inch ▪ Interactive LED Display - Smart Board 	30	Mr. Parag Jain	Lab Instructor	BE, M.Tech - Communication Systems

Table 6.1b: Adequate and well equipped laboratories, and technical manpower (Odd Semester)

Sl. No	Name of the Laboratory	No. of Students per setup (Batch Size)	Name of the Important Equipment	Weekly utilization status (all the courses for which the lab is utilized) Hours	Technical Manpower Support		
					Name of the technical staff	Designation	Qualification
1	Analog Electronics Laboratory	Batch size 24 2 Students per setup	<ul style="list-style-type: none"> ▪ Cathode Ray Oscilloscope- 30 MHz ▪ Signal Generators – 3MHz ▪ LCR meter – APLAB Model 4910 ▪ Computer – Intel dual core, 1GB RAM &80 GB HDD 	27	Mr. Chandrasekhar M	Lab Instructor	B.E.ECE

2	Digital Electronic Circuits Laboratory	Batch size 24 2 Students per setup	<ul style="list-style-type: none"> ▪ Digital IC Trainer Kit ▪ Digital IC Tester 	27	Ms. P. Bagyalakshmi	Lab Instructor	Diploma -ECE
3	Analog Communication & Linear Integrated Circuit Laboratory	Batch size 24 2 Students per setup	<ul style="list-style-type: none"> ▪ Digital Storage Oscilloscope (DSO) - 60MHz, 1Gs/Sec ▪ Signal Generators – 10 MHz ▪ Power Supply ▪ Computer – Intel dual core, 2GB RAM &250 GB HDD 	27	Ms. Raji M.	Lab Instructor	Diploma- ECE
4	Power Electronics Laboratory	Batch size 24 2 Students per setup	<ul style="list-style-type: none"> ▪ Power Scope – Scientech 824A, 30MHz 45 W ▪ Converter Modules ▪ Digital Firing Modules ▪ Regulated Power Supply ▪ Motors: Separately excited DC -1500 rpm Universal 6000 rpm ▪ Computers: Intel i3, 3.3 GHZ, RAM-4GB, HDD-500GB 	27	Mr. Madhu Babu K.S.	Lab Instructor	Diploma- ECE, (B.Tech-E&TC)
5	VLSI Laboratory	Batch size 20 1 Student per setup	<ul style="list-style-type: none"> ▪ Cadence Tool –Bundle 3, 180nm,90nM & 45nm (Digital and Analog package software) ▪ Computers: Intel i3, 3.3 GHZ, RAM-4GB, HDD-500GB ▪ Monitor – TFT 17 inch 	27	Mr. Manoranjan B.R.	Lab Instructor	B.Sc., M.Sc., CS
6	Microcontroller Laboratory	Batch size 24 1 Student per setup	<ul style="list-style-type: none"> ▪ 8085 Microcontroller ▪ (Keil μ Vision 3 IDE), ▪ 8086 Microprocessor 	Odd Semester: 27 hours Even Semester:	Mr. Manoranjan B R	Lab Instructor	B.Sc.- Electronics, M.Sc., CS

			<p>MASM 6.11</p> <ul style="list-style-type: none"> ▪ Interfacing kits – stepper motor, keypad, LCD/LED module, ADC/DAC kits. ▪ MPS 430 –IAR Embedded workbench ▪ Computer – Intel dual core, 2GB RAM &250 GB HDD Monitor – TFT 15.6” ▪ Monitor Compaq – TFT 18.5inch 	30 hours			
7	Wireless & Mobile Communication Laboratory	Batch size 10 2 Students per setup	<ul style="list-style-type: none"> ▪ DSS Trainer Kit ▪ CDMA Trainer Kit with DSO ▪ Spectrum Analyzer-9GHz Tektronics make ▪ Software- MATLAB version 7.1 	Odd Semester: 27 hours Even Semester: 30 hours	Mr. Umapasrad B K	Foremen	Diploma - ECE, (B.Tech-E& TC)
8	Centre of Excellence -CISCO Laboratory	Batch size 30 1 Student per setup	<ul style="list-style-type: none"> ▪ 2960 Catalyst Switch ▪ 1941- Router with Ethernet Line Cable ▪ Software –Packet tracer 7.12 ▪ Computers: Intel i5, 3.3 GHZ, RAM-8GB, HDD-1TB ▪ Monitor – LG TFT 17 inch ▪ Interactive LED Display - Smart Board 	Odd Semester: 27 hours Even Semester: 30 hours	Mr. Parag Jain	Lab Instructor	BE, M.Tech - Communication Systems

6.1.1: Additional Facilities provided for better quality of learning experience:

6.1.1a Teaching aids – chalk / white board, multimedia projectors, etc.

Table 6.1.1a Teaching aids for better Learning Experience

Sl. No	Teaching aids	Quantity
1	Interactive LED display Smart Board	5 Classroom
2	White Boards	All ECE Classrooms & Laboratories
3	Chalk Boards	06 Classrooms
4	Multimedia Projectors	05 Classrooms and all Laboratories
5	Neckband PA System	12

6.1.1b Acoustics, classroom, conditions of chair/benches, air circulation, lighting exists, ambiance, and other amenities/facilities

Table 6.1.1b Availability of Class Rooms

Sl. No.	Room Description/Class room number	Quantity of chairs and benches	Conditions/Description of available ambiance
1	A214	18 Benches with the Capacity of 75 students.	1. Buildings are designed by the professional architects who gave utmost care in providing academic ambience in all the rooms. 2. Proper ventilation is provided in all the classrooms with doors and windows that allow maximum day light. 3. In case of emergency all the classrooms doors are sufficiently wide to evacuate people.
2	A215		
3	A216		
4	A217		
5	A218		
6	A219		
7	A311		
8	A009		
9	A010		

6.1.1c Additional facilities provided for the students

Table 6.1.1c provides the additional facilities created for students for their professional experience.

Table 6.1.1c Additional facilities created for the students

Sl. No.	Facility Name	Detail	Purpose of facility	Utilization	Students benefit	Relevance to POs and PSOs
1.	Research and Development Laboratory	1. MATLAB 2019a Base – Licensed Software 2. Cadence Software for IC Design (Analog & Digital with FINFET design- 45nm) UG bundled version- licensed 3. Xilinx 14.1 –HDL software licensed	To encourage students in research and development activities.	As Needed	Facilitates student to gain knowledge in the recent advancements of technologies in the field VLSI, IoT based embedded systems, Next generation communication Systems, Advanced Signal/Image Processing, Latest semiconductor technology and Renewable sources.	PO1- PO12, PS01, PSO2
2.	Centre of Excellence- CISCO	1. Packet Tracer 7.12 – software, 2. 1941 Router with Ethernet line cable, 2960 catalyst switch 3. Interactive LED Display Smart Board	To enhance student knowledge to meet the industry standards.	30 hrs per Week	Enhance the competency in networking domain using CISCO platform.	PO3-PO5, PS01, PSO2
3.	Global Professional Program	1. Electronic device based Internet of Things (IoT) 2. Training & Certificate Programme on Artificial Intelligence and Machine Learning 3. Training & Certificate Programme on	Academic Features- Employment centric syllabus designed as per	100 hrs in four years of course	Value added programs have been introduced in the department to keep students abreast with the current trends in technology.	PO3-PO5, PO9, PS01, PSO2

		VLSI/Embedded/Robotics	industry expectation.			
4.	Study Abroad Program	An MoU was signed among the French Ministry of National Education (MEN), Schneider Electric India Private Limited (SEI).	Explore other country educational system, technology and culture.	11-12 weeks in 4 years of study	Students who prefer this program, in their seventh semester from all the B.E branches embarked and successfully completed a 11-week student exchange program in reputed universities in France.	PO9, PO10, PO11, PO12
5.	EFY Laboratory	Basic Electronics circuits kits with circuit diagram and respective components are made available.	Practical hands on training is made possible and students can develop their own hobby projects.	12 – 18 hrs per week	Students can do their mini project with these available resources.	PO3, PO6, PO7, PO9, PSO1
6.	Massive Open Online Courses (MOOC)	<p>a. Institution have a tie up with Coursera a world-wide online learning platform</p> <p>b. Nodal Centre for Swayam Courses</p>	<p>Coursera works with world top universities and other organizations to offer online courses, specializations, and degrees in a variety of subjects.</p> <p>One credit will be considered</p>	4 /8 /12week course	Students can select course last approximately four to ten weeks, with one to two hours of video lectures a week. These courses provide quizzes, weekly exercises, peer-graded assignments, an optional Honors assignment or exam. Courses are also provided on-demand, in which case student can take their time in completing the course with all of the material available at once.	PO9, PO10, PO12, PSO1

			for selective courses.			
7.	E-Learning IIRS-ISRO Outreach Programme	Nodal centre for Indian Institute of Remote Sensing (IIRS) Live and interactive session by scientist	Strengthen the academia and user segment in space technology.	Courses offered by IIRS	Students can up skill the knowledge in Space Technology & it's Applications	PO3, PO4, PO6, PO7, PO9, PO12
8.	Internet Facility	Bandwidth 100Mbps (1:1 ILL) (JIO Services)	Self-learning/ Seminars/ Solve Assignments, Documentations.	Unlimited	For the Courses specified in curriculum and co-curricular activities	PO12
9.	Tutorial Classes	Conducted for analytical courses	To improve problem solving skills for the students.	As per curriculum	For the Courses specified in curriculum with tutorial.	PO2, PSO1
10.	Department Library	Program Specific text books and references books, Previous year question papers	To provide additional reference for the students.	As Needed	The Department Library serves the student need in academic and research activities.	PO12
11.	Digital Library	IEEE Xplore, Science Direct, Springer,	Books, Technical Papers, Journals, Previous year question paper, Power Point Presentations, Video Lectures, Access to IEEE Xplore	As Needed	Courses specified in curriculum.	PO12

12.	Surveillance Cameras	IP Cameras	To enhance security of the department.	Round the clock	Security purpose.	NA
13.	Ramp/ Washrooms/ Wheel Chair	Each one (Boys/Girls)	For differently abled students.	For regular usage	To ensure that the differently abled students access the campus hassle free.	NA

6.1.1d: Academics Laboratory details

Table 6.1.1d provides the curriculum laboratory infrastructure with their usage, space, number of students, number of experiments, quality of instruments and manual availability.

Table 6.1.A.5 Laboratory Infrastructure details

S.No.	Lab Name	Exclusive/ Use/ Shared	Space, Number of Students	No. of Experiments	Quality of Instruments	Manual Availability
1	A 204 - Analog Electronics Laboratory	Exclusive	88.9 S.q.mt 24 Students	15 Experiments	As per the Academic Standard	Yes
2	A 211B Digital Electronic Circuits Laboratory	Exclusive	49.1 S.q.mt 24 Students	15 Experiments	As per the Academic Standard	Yes
3	A202 - Analog Communication & Linear Integrated Circuit Laboratory	Shared	61.96 S.q.mt 24 Students	15 Experiments	As per the Academic Standard	Yes

4	A211 C Microcontroller Laboratory	Shared	107.79 S.q.mt 24 Students	15 Experiments	As per the Academic Standard	Yes
5	A 211 A VLSI Laboratory	Shared	61.96 S.q.mt 24 Students	15 Experiments	As per the Academic Standard	Yes
6	A 211 E Wireless & Mobile Communication Lab	Shared	80.82 S.q.mt 20 Students	12 Experiments	As per the Academic Standard	Yes
7	A211 C Digital Signal Processing Laboratory	Shared	107.79 S.q.mt 24 Students	15 Experiments	As per the Academic Standard	Yes
8	A 211 E HDL Laboratory	Shared	80.82 S.q.mt 20 Students	12 Experiments	As per the Academic Standard	Yes
9	Analog Communication & Linear Integrated Circuit Laboratory	Shared	61.96 S.q.mt 24 Students	12 Experiments	As per the Academic Standard	Yes
10	A 211 A Embedded System Design Laboratory	Shared	61.96 S.q.mt 20 Students	12 Experiments	As per the Academic Standard	Yes

GLIMPSES OF LABORATORY FACILITIES



Figure 6.1 – Advance Communication Laboratory

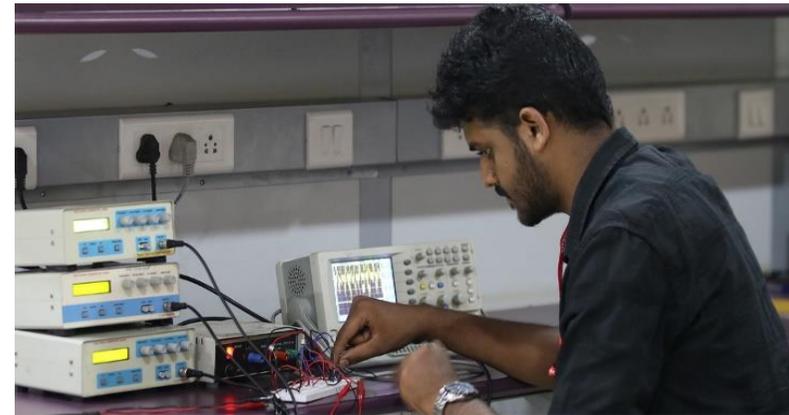


Figure 6.2 – Analog Electronics Laboratory



Figure 6.3 – Hardware Descriptive Language Laboratory



Figure 6.4 – Digital Electronics Laboratory



Figure 6.5 – Wireless & Mobile Communication Laboratory



Figure 6.6 – Analog Communication & Linear Integrated Circuit Laboratory



Figure 6.7 – Embedded System Design Laboratory



Figure 6.8 –VLSI Laboratory

6.1.2 - Availability of Adequate and Qualified Technical Supporting Staff in the Department

Table 6.1.2 List of Qualified Technical Supporting staff

Sl. No.	Name of the Technical Staff	Designation	Qualification	Exclusive/ Shared	Name of the Physical Laboratory	Responsibility
1.	Mr. Umprasad B K	Foremen	Diploma - ECE, (B.Tech-E&TC)	Shared	Wireless and Mobile Communication Lab / Digital communication Lab	<ol style="list-style-type: none"> 1. Organize and Supervise the work in all laboratories 2. Determine work procedures/ prepare work schedules/ logs and expedite work plan. 3. Evaluate procedures processes and equipment as per the requirement. 4. Estimating the materials and equipment required for specific lab work. 5. Procure goods and materials from the approved vendors when required. 6. Responsible for inspection report after installation and demo of the equipment procured.

Sl.No.	Name of the Technical Staff	Designation	Qualification	Exclusive/ Shared	Name of the Physical Laboratory	Responsibility
1	Mr. Baiju K	Lab Instructor	ITI –Electronics, Diploma - Telecommunication	Shared	HDL lab/ Microcontrollers lab	1. Maintaining equipment and tools in the lab. 2. Maintaining inventory/ Asset register for materials, equipment and parts purchased for his /her labs. 3. Maintaining log books & Attendance register with lab manuals. 4. Initiating necessary steps to maintain cleanliness in the lab. 5. Guiding of students regarding the proper usage of equipment. 6. Ensuring safety rules in the labs. 7. To maintain discipline in the lab including checking of Identity cards of the students.
2	Mr. Madhu Babu K.S.	Lab Instructor	Diploma- ECE, (B.Tech-E&TC)	Shared	Embedded System Design Laboratory/ Wireless & Mobile communication lab	
3	Mr. Chandrasekhar M	Lab Instructor	B.E.-ECE	Shared	Analog Electronics Laboratory/ Digital communication Lab	
4	Ms. P. Bagyalakshmi	Lab Instructor	Diploma -ECE	Shared	Digital Electronics Circuits Lab/ VLSI lab	
5	Mr. Parag Jain	Lab Instructor	BE, M.Tech - Communication Systems	Shared	Digital Signal Processing Lab/ CISCO lab	
6	Mr. Manoranjan B.R.	Lab Instructor	B.Sc., M.Sc -CS	Shared	VLSI Lab/ Microcontrollers Lab	
7	Ms. Raji M.	Lab Instructor	Diploma- ECE	Shared	Embedded Systems/ Analog Communications lab	

6.2 Laboratories maintenance and overall ambiance (10)

Department of Electronics and Communication Engineering have the necessary infrastructure for all academic laboratories and Research Centre. Every Laboratory is equipped with White/Black board, seating Arrangements and with Wi-Fi facility. Computer system based laboratories are facilitated with Air Conditioning facility. Each laboratory is handled by one faculty supported by a co-faculty. Also, every laboratory has a lab instructor/ technical assistant, who provides constant support and ensures maintenance of the laboratories.

Preventive Maintenance

1. The service and maintenance of the laboratory equipment are carried out regularly based on frequency of execution (daily, weekly, monthly, quarterly, half yearly and yearly) as identified.
2. Consumables are periodically verified and replaced if required.
3. Electrical safety is properly ensured for all the laboratories.
4. Hygiene is maintained in overall department.
5. Preventive measure is carried out by technical staffs of the department based on available resources and expertise.

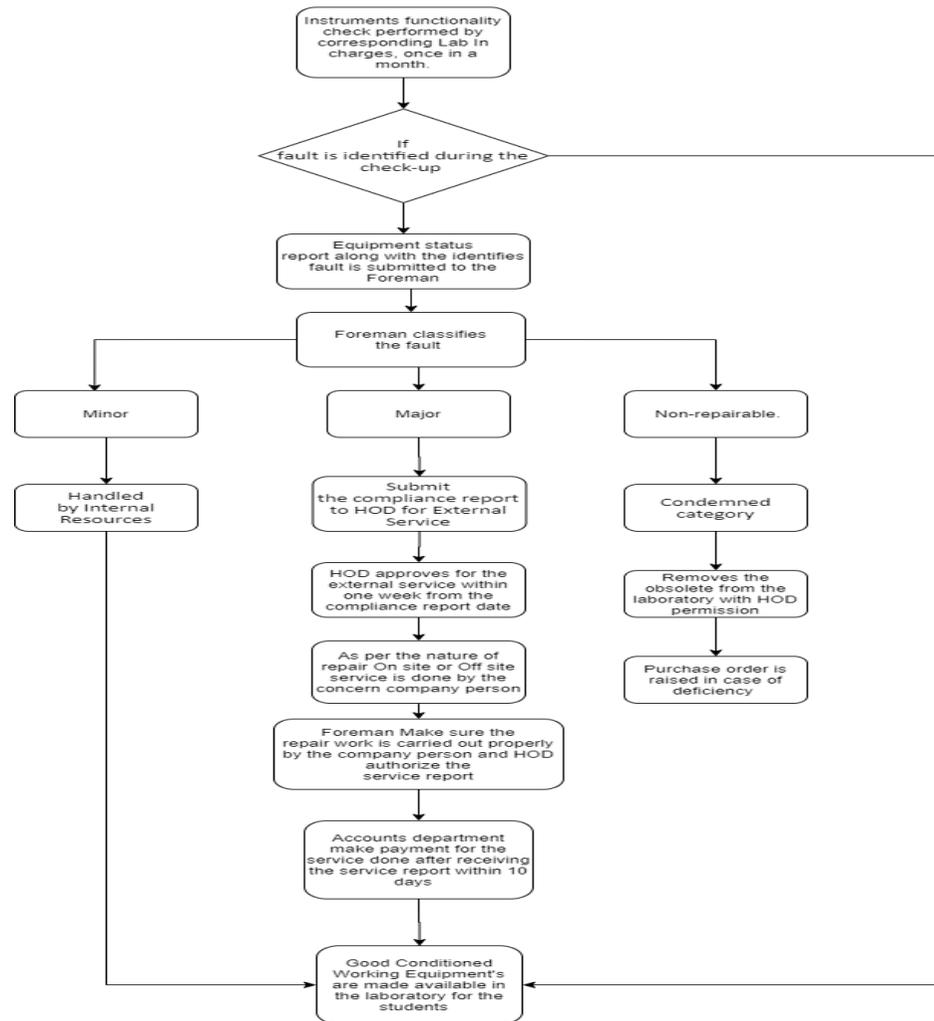
Breakdown Maintenance

1. Unexpected breakdown of equipment in the laboratory is recorded in the breakdown maintenance record.
2. Breakdown services are carried out by the technical staff of the department based on available resources and expertise.
3. If company service is required, the same issue is escalated and service is done based on the vendor availability with in minimum duration.
4. Computer based services are also carried by the system administrator (technical staff) of the department.

Repair Work

1. Repair works in all the laboratories are classified into three modes:
 - Minor
 - Major
 - Non-repairable.
2. Minor repair works are carried out by the technical assistants in the laboratory internally. Technical assistants from other departments are also utilized if required.
3. Major repair works that cannot be carried out internally are sent to the external service centers/suppliers. The equipment is initially checked for non-functionality and based on the type of repair; technical person from the industries/suppliers is called for carrying out the repair work.
4. The equipment or kits that are obsolete / cannot be repaired / non availability of the spares and other such difficulties fall under condemned category. These items are inspected by the technical committee of the institution and based on their report, the equipment is condemned.
5. Technical staffs are well trained for maintenance and calibration process.

Process Flow of Maintenance in Department



Overall Ambience

1. Department has adequate number of laboratories which is utilized throughout the year on a periodic time line basis to meet the curriculum requirements and also to enhance the practical skills of the students.
2. Necessary furniture for students is provided in each laboratory.
3. Laboratories are equipped with sufficient equipment to conduct the experiments.
4. Laboratory manuals contains information on vision, mission, PEO, PO, PSO, safety precautions, equipment handling instructions along with the details of the experiments are distributed to students well in advance.
5. 5KW Hybrid Solar system is commissioned to harness the clean energy to power up the Labs and class rooms.
6. UPS facility is available in all the laboratories.
7. Lighting system is very effective, along with the natural light in every laboratory.
8. All the laboratories are equipped with white board, projector, computers, Internet, and other such teaching- learning aids.
9. ICTs supported learning strategies are used for the enhancement of teaching learning process.
10. Institute has established 9 Industry sponsored laboratories (Centre of Excellence). CISCO networking academy is specific to the department through which students can earn international certification on networking and promote placement opportunities.
11. Every laboratory has dedicated technical staff resource.
12. It is ensured that the deputed technical staff has competent skills for handling hardware software tools pertaining to the laboratory.
13. Research laboratory is available for all faculty members and students to carry out their research work.
14. Project laboratory has been provided exclusively for the students to implement their minor and major projects.
15. Department laboratories are available with technical support beyond college working hour as well as on the holidays on demand

by students and faculty members.

16. Students are encouraged to conduct open ended experiments to improve their practical skills.

Code of conduct for the laboratories:

- Wearing ID card is mandatory inside the laboratory.
- Students are expected to be regular and punctual to the laboratory sessions.
- Students have to come prepared for the experiments as per the cycle of experiments.
- Students shall be permitted to do the experiment only if he/she brings the observation book and laboratory record duly completed.
- Attendance for all the laboratory and internal tests are compulsory.
- Students must handle laboratory equipment as per the instructions and should keep the laboratory clean and tidy.
- Any student found indulging in meddling with systems/equipment will be punished.
- Students are advised not to install, remove or copy any application without prior permission from the faculty in-charge.
- Students are advised not to use any non-educational applications or sites

6.3. Safety measures in laboratories (10)

Table 6.3: Safety Measures in Lab

Sl. No.	Laboratory names	Safety Measures
1	Analog Electronics Laboratory	First Aid Box and Fire Extinguisher are available in the laboratory
		The laboratory instructions/guidelines are displayed in the laboratory.
		Electrical wires are protected by MCB (Miniature Circuit Breaker), RCBO (Residual Current Breaker Operator) and Fuses
		Avoid the use of condemned equipment and provides needful equipment and components.
		Equipment's in the laboratory are with fuses of correct ratings
		Equipment's in the laboratory are calibrated and ensured proper wiring and grounding.
		Maintain a clean and organized laboratory.
2	Digital Electronic Circuits Laboratory	Cell phones usages are prohibited.
		The laboratory instructions/guidelines are displayed in the laboratory.
		First Aid Kit and Fire Extinguisher are available in the laboratory
		All electrical wires are protected by MCB, RCBO and Fuses
		Avoid the use of condemned equipment and provides needful equipment and components
		Trainer kits are equipped with proper fuse ratings and are calibrated.
		Maintain a clean and organized laboratory.
Cell phones usages are prohibited.		

3	Digital Signal Processing Laboratory	The laboratory instructions/guidelines are displayed in the laboratory.
		First Aid Box and Fire Extinguisher are available in the laboratory
		All electrical wires are protected by MCB, RCBO and Fuses
		Computer systems are configured with the latest updates of software.
		Cell phones usages are prohibited.
		Periodical servicing of the lab equipment.
		Maintain a clean and organized laboratory.
4	AC & LIC Laboratory	First Aid Box and Fire Extinguisher are available in the laboratory
		All electrical wires are protected by MCB, RCBO and Fuses
		All instruments are calibrated and equipped with proper fuse ratings.
		Three phase Stabilizers is kept in the lab for stabilized supply of current/Voltage.
		The laboratory instructions/guidelines are displayed in the laboratory.
		Maintain a clean and organized laboratory.
		Cell phones usages are prohibited.
5	VLSI Laboratory	First Aid Box and Fire Extinguisher are available in the laboratory
		Computer systems are configured with the latest updates of software.
		All electrical wires are protected by MCB, RCBO and Fuses
		Periodical servicing of the lab equipment.
		The laboratory instructions/guidelines are displayed in the laboratory
		Cell phones usages are prohibited.

		Maintain a clean and organized laboratory.
		Suitable storage area
6	Advanced Communication Laboratory	The laboratory instructions/guidelines are displayed in the laboratory.
		First Aid Box and Fire Extinguisher are available in the laboratory
		All electrical wires are protected by MCB, RCBO and Fuses
		IC testers are used for checking and ensuring proper working of the same.
		Communication Trainers kits are equipped with proper fuse ratings and are calibrated.
		Maintain a clean and organized laboratory.
		Suitable storage area
7	Microcontroller Laboratory	First Aid Box and Fire Extinguisher are available in the laboratory
		All electrical wires are protected by MCB, RCBO and Fuses
		Interfacing modules are calibrated.
		Periodical servicing of the lab equipment and computers
		Trainer kits are equipped with correct fuses ratings and are calibrated.
		The laboratory instructions/guidelines are displayed in the laboratory
		Maintain a clean and organized laboratory.
		Cell phones usages are prohibited.
		Suitable storage area
8	HDL Laboratory	First Aid Box and Fire Extinguisher are available in the laboratory
		All electrical wires are protected by MCB, RCBO and Fuses

		Computer systems are configured with the latest updates of software
		Periodical servicing of the lab equipment and computers
		The laboratory instructions/guidelines are displayed in the laboratory
		Cell phones usages are prohibited.
		Maintain a clean and organized laboratory.
		Suitable storage area
9	Embedded System Design Laboratory	First Aid Box and Fire Extinguisher are available in the laboratory
		All electrical wires are protected by MCB, RCBO and Fuses
		Computer systems are configured with the latest updates of software
		Periodical servicing of the lab equipment and computers
		Interfacing modules are calibrated.
		The laboratory instructions/guidelines are displayed in the laboratory
		Cell phones usages are prohibited.
		Maintain a clean and organized laboratory.
		Suitable storage area
11	Wireless and Mobile Communication Lab	Fire Extinguisher
		First Aid Box and Fire Extinguisher are available in the laboratory
		All electrical wires are protected by MCB, RCBO and Fuses
		Computer systems are configured with the latest updates of software.
		Periodical servicing of the lab equipment and computers

		Cell phones usages are prohibited.
		Maintain a clean and organized laboratory.
		The laboratory instructions/guidelines are displayed in the laboratory
12	CISCO Lab	First Aid Box and Fire Extinguisher are available in the laboratory
		All electrical wires are protected by MCB, RCBO and Fuses
		Computer systems are configured with the latest updates of software.
		Periodical servicing of the lab equipment and computers
		The laboratory instructions/guidelines are displayed in the laboratory
		Cell phones usages are prohibited.
		Maintain a clean and organized laboratory.
		Suitable storage area

SAFETY MEASURES IN LAB



Figure 6.9: First aid Box



Figure 6.10: Fire Extinguisher



Figure 6.11: Miniature Circuit Breaker Switches



Figure 6.12: Sealed LAN Connector



Figure 6.13: Air Conditioners in System Laboratories

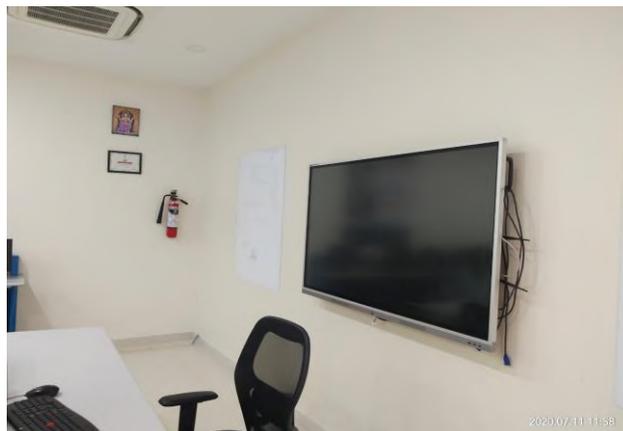


Figure 6.14: Smart Board in Centre of Excellence



Figure 6.15: Fire Extinguisher installed in laboratory

6.4 Project Laboratory (10)

Table 6.4: Project laboratory (Facility, Utilization and Relevance of POs and PSOs)

Sl No	Lab Name	Details	Facility in the Lab	Utilization	Relevance's to POs and PSOs
1	Project Laboratory 1 – A 211 A	20 computers, Projector, Monitor 17", Intel i3 Processor, 4GB RAM	Cadence Tool-Bundle 3, 180nm, 90nm & 45nm (Digital and Analog package software) Computer: Pentium dual core 2.5 GHz, Server XILINX FPGA kits- SPARTAN 2, 3 & 6 Pattern Generators-32 bit	UG/PG students, research scholars and faculty members utilize for their mini projects, projects and research activities	PO1-PO12, PSO 1 & PSO 2
2	Project Laboratory 2 – A 211	20 computers, Projector, Monitor 17", Intel i3 Processor, 4GB RAM	MATLAB 2019a Base OMAP L138/C6748 development kit DSP Kit TMS 320C6713 Power scope- Scientech 824A,30MHz,45 W Converter and digital firing modules Motors: Separately excited-1500 rpm, Universal-6000 rpm	UG/PG students, research scholars and faculty members utilize for their mini projects, projects and research activities	PO1-PO12, PSO 1 & PSO 2

6.4a: Facilities of Research and Development Laboratory:

Electronics and Communication domain is a key player in the research and one of the most needed globalized industries. The demand for electronics hardware development and commercialization of the product is expected to reach its peak in the year 2020. In order to progressively increase the value addition in electronic product development, a sustained R&D programme in the electronics and communication sector is essential for the use of the faculty members and student community.

In order to promote a vibrant and sustainable environment for R&D laboratory, domains are identified as the respective divisions under this Group listed below.

Divisions under R&D:

- Semiconductor Technologies
- IoT based Embedded systems
- Next Generation Communication Systems
- RF Power and Energy Systems
- Advanced Signal/Image processing

Table 6.4a Software Facilities in Research and Development Laboratory

Name of Software	Description	Licensed
MATLAB	Version – 2019a	Licensed
MATLAB	Version-2007	Licensed
Code Composer Studio	Version 5.5	Licensed

Pspice –ORCAD	Version 9.1/17.2 lite	Open Source
Xilinx	Version 12.1	Licensed
Cadence	Students Bundle -3	Licensed
MASM	6.11	Open Source
Lab view	7.1	Licensed
Arduino-IDE	1.6.7	Open Source
Python 2.7	Programming Language	Open Source
Keil μ Vision 3/5	Version- 3 & 5	Open Source
IDE -MSP 430/TI	Version-3	Open Source
Design Spark	PCB Design	Licensed
Proteus	Version 6 lite	Open Source

Table 6.4b Hardware Facilities in Research and Development Laboratory

Domain	Hardware Description
Semiconductor Technologies	Spartan 6 (Xilinx FPGA Kit)
	Xilinx Spartan 3E Kit Bays 2 100k
IoT Based Embedded Systems	ARM Development Board & Launch Pad
	MSP430 Development Board
	Cortex M4 Kit
	MSP 430 Launch Pad

	8051 Microcontroller Board/ Interfacing modules
	8086 Micro-Processor Kit
Energy Systems	Converter modules, Triggering Modules, Isolation Transformers, Power Scope, Power Meter 150W
	Induction Motor, BLDC Motor, DC motor and stepper motors
	325Wpk Solar panel (16Nos.)
	5KW Solar Hybrid Inverter
	Solar Tubular Battery(4Nos.)
Advance Signal and Image Processing	TMS320C6713 DSP Training kit
	TMS320C6748 DSP Training kit
Next Generation Communication Systems	Spectrum Analyser-6Ghz
	Function Generator-20MHz, Digital Storage Oscilloscope 50MHz, LCR Meter
	Advanced Fiber Optics Communication Trainer Kit, QPSK & DPSK Modulation & Demodulation Kit
	Data Communication Trainer Set
	LAN Trainer Set
	TCP/IP Trainer Kit

6.4c GLIMPSES OF PROJECT FACILITIES



Figure 6.16- CAN -SAT Communication Module

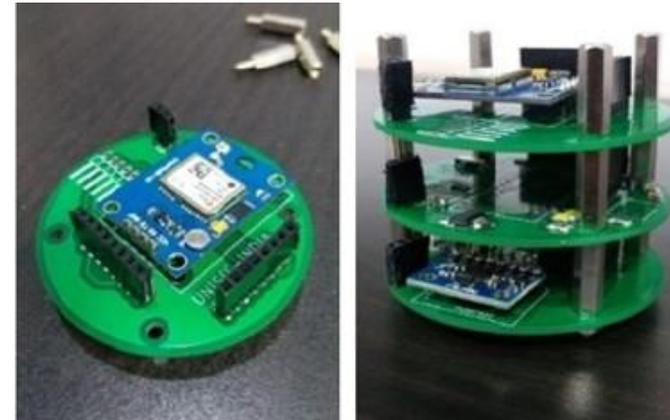


Figure 6.17 – CAN-SAT Payload Module



Figure – 6.18 CAN-SAT working Module



Figure – 6.19 – Testing phase of CAN-SAT

Criterion-6 Self-Assessment Report (SAR)

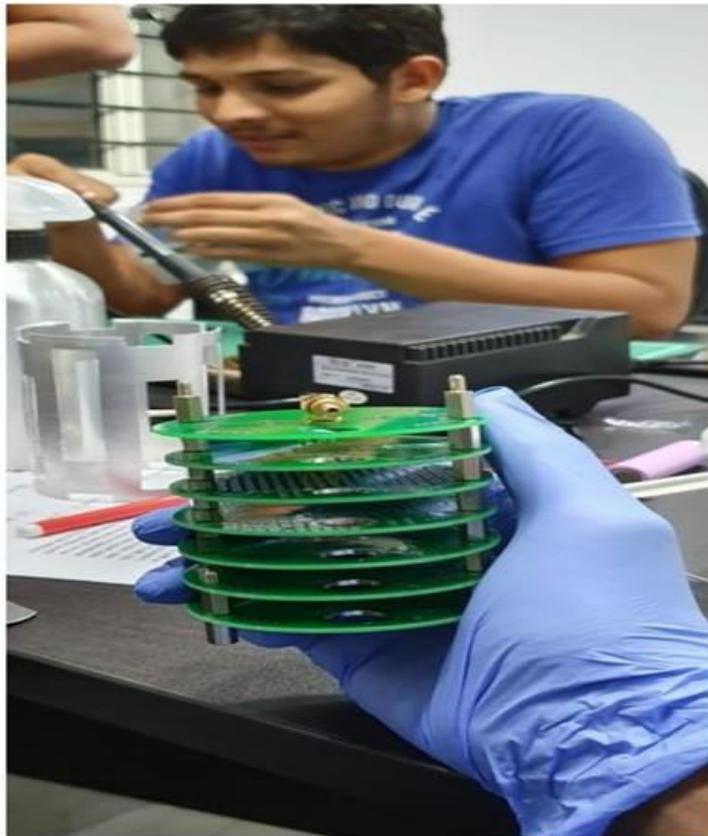


Figure – 6.20 Students working in various projects



Figure – 6.21 Yagi u da Antenna Installed in Terrace for real time communication projects

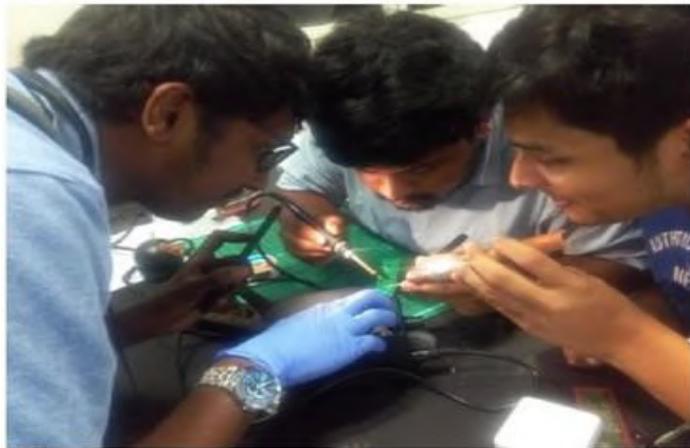


Figure 6.22 Students active participation in various ongoing projects of the department

**DEPARTMENT OF
ELECTRONICS &
COMMUNICATION ENGINEERING**

CRITERION 7

CONTINUOUS IMPROVEMENT

CRITERION 7	CONTINUOUS IMPROVEMENT	75
--------------------	-------------------------------	-----------

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 identified and implemented to improve POs & PSOs attainment levels for the assessment years. Actions to be written as per table in 3.3.2.

Examples of analysis and proposed action

Sample 1-*Course outcomes for a laboratory course did not measure up, as some of the lab equipment did not have the capability to do the needful (e.g., single trace oscilloscopes available where dual trace would have been better, or, non-availability of some important support software etc.).*

Action Taken-Equipment up-gradation was carried out (with details of up-gradation)

Sample 2-*In a course on EM theory student performance has been consistently low with respect to some COs. Analysis of answer scripts and discussions with the students revealed that this could be attributed to a weaker course on vector calculus.*

Action taken-revision of the course syllabus was carried out (instructor/text book changed too has been changed, when deemed appropriate).

Sample 3-*In a course that had group projects it was determined that the expectations from this course about PO3 (like: “to meet the specifications with consideration for the public health and safety, and the cultural, societal, and environmental considerations”) were not realized as there were no discussions about these aspects while planning and execution of the project.*

Action Taken-Project planning, monitoring and evaluation included in rubrics related to these aspects.

❖ POs Attainment Levels and Actions for improvement – CAY (2019-20)

Table 7.1.1. POs Attainment Levels and Actions for Improvement –CAY 2019-2020.

POs	Target Level	Attainment Level	Observation
PO1: Engineering Knowledge: Apply the knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems in Electronics and Communication Engineering.			
PO1	2.55	2.75	Target is achieved. The following actions were taken to enhance the target level.

<p>Action 1: Tutorial classes on applied mathematics have been arranged for the students to solve complex engineering problems in electronics and communication subjects.</p> <p>Action 2: A few new FPGA hardware kits have been purchased and their uses have been demonstrated during the theory classes of system design using HDL(16ECE46) course to help the students understand the utilization and functions of the FPGA kits.</p> <p>Action 3. Expert lectures on Signal & system(16ECE36) and Electronics Circuit(16ECE34) have been arranged for the students in order to reinforce their knowledge about the application of the subject.</p>			
<p>PO2: Problem analysis: Identify, formulate, review research literature, and analyse complex engineering problems in Electronics and Communication Engineering reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.</p>			
PO2	2.55	2.77	Target is achieved. The following actions were taken to enhance the target level.
<p>Action 1: IEEE research papers were assigned to students in Engineering Electromagnetics (ECE55) and Antennas and Wave Propagation(ECE72) course to analyse and review the research papers.</p> <p>Action 2: Application oriented problems were solved in Electronics circuit(16ECE43), Hardware design using HDL(16ECE46), Microcontroller(ECE53) and programming class(16ECE33) to improve logical thinking.</p> <p>Action 3: In Signal and Systems(16ECE36) and Digital Communication(ECE61), tutorial sessions were taken for the application of theory to real life problem.</p>			
<p>PO3: Design and development of solutions: Design solutions for complex engineering problems and design system components or processes of Electronics and Communication Engineering that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.</p>			
PO3	2.55	2.76	Target is achieved. The following actions were taken to enhance the target level.
<p>Action 1: Societal and environmental design problems were given as self-study to students in professional elective courses.</p> <p>Action 2: In Electronics Circuit(16ECE43) and Antennas & wave propagation(ECE72), Assignments were given to students to solve real field design problems.</p> <p>Action 3: The remedial sessions were arranged to enhance the performance of the students in Signal & System(16ECE46) and Control Systems(16ECE45) courses.</p>			
<p>PO4: Investigation of complex problem: Use research-based knowledge and research methods including design of experiments in Electronics and Communication Engineering, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.</p>			
PO4	2.55	2.71	Target is achieved. The following actions were taken to enhance the target level.
<p>Action 1: Several workshops were conducted on the design of Wireless and mobile Communication, Embedded system and microcontroller lab experiments.</p>			

<p>Action 2: In Microelectronics circuit(ECE63), Special attention was given to demonstrate how to analyse and interpret experimental data and synthesize a research conclusion/outcome.</p> <p>Action 3: Research based complex problems were given as assignment in CMOS VLSI design(ECE53), Signals & System(16ECE46), Digital Communication (ECE61), to improve practical skills of the students.</p>			
<p>PO5: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities in Electronics and Communication Engineering with an understanding of the limitations.</p>			
PO5	2.55	2.75	Target is achieved. The following actions were taken to enhance the target level.
<p>Action 1: Complex design problem using modern tool were given as assignment to the students in networking (Professional Elective), embedded system design courses(ECE62).</p> <p>Action 2: Workshops were conducted on several Electronics and Communication engineering software packages like PCB Design, Antenna design(HFSS).</p> <p>Action 3: Hands-on session on MATLAB-Simulink engineering tool were given to students to understand the concept of Analog communication (ECE51), digital communication(ECE61) and Wireless and mobile communication(ECE71) courses.</p>			
<p>PO6: 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 in Electronics and Communication Engineering.</p>			
PO6	2.55	2.70	Target is achieved. The following actions were taken to enhance the target level.
<p>Action 1: Awareness program on clean and renewable energy was organized to inculcate a strong sense of responsibility among the budding student engineers.</p> <p>Action 2: Students will be encouraged to participate in social clubs like Environment Club, Nature Club, and Leo Club.</p>			
<p>PO7: Environment and sustainability: Understand the impact of the professional engineering solutions of Electronics and Communication Engineering in societal and environmental contexts, and demonstrate the knowledge and need for sustainable development.</p>			
PO7	2.55	2.73	Target is achieved. The following actions were taken to enhance the target level.
<p>Action 1: Short video were presented to instil sense of responsibility among the students and also to promote sustainable environment.</p> <p>Action 2: Awareness program on effect of electronics circuit to nature will be given to promote a sustainable environment.</p> <p>Action 3: Proper guidance were given to the students to implement renewable energy projects using optimized material that would guarantee sustainable development.</p>			
<p>PO8: Ethics: Apply ethical principles and commit to professional ethics, responsibilities and norms of the engineering practice.</p>			
PO8	2.55	2.84	Target is achieved. The following actions were taken to enhance the target level.

<p>Action 1: Guest Lectures were arranged on topics related to professional ethics / value based education.</p> <p>Action 2: Online video links on ethical principles in electronics subjects were shared to students.</p> <p>Action 3: Students were encouraged to get their mini project, major project and internship reports for plagiarism check to ensure proper practice of professional ethics.</p>			
<p>PO9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.</p>			
PO9	2.55	2.73	Target is achieved. The following actions were taken to enhance the target level.
<p>Action 1: Students were motivated to participate in various club activities where they will learn to function effectively both as individuals and as team members in a group.</p> <p>Action 2: Several students' professional chapter activities were organized to demonstrate their abilities as team members in a group.</p> <p>Action 3: Students were motivated to work in a team in project work/Internship.</p>			
<p>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 reports and design documentation, make effective presentations, and give and receive clear instructions.</p>			
PO10	2.55	2.76	Target is achieved. The following actions were taken to enhance the target level.
<p>Action 1: Students were given training to write effective reports and make effective presentations on projects undertaken.</p> <p>Action 2: Students were encouraged to participate in class room presentations and national/international conferences/seminars/symposia/Hackathon/Cisco Ideathon.</p> <p>Action 3: In Programming with data structure (16ECE33) and renewable energy (ECE746) professional elective course, Students were encouraged to give effective self-study presentation on the given topic.</p> <p>Action 4: Guest Lectures were organized on personality development/Life skills/public speaking of the students.</p>			
<p>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.</p>			
PO11	2.55	2.71	Target is achieved. The following actions were taken to enhance the target level.
<p>Action 1: Students were encouraged to do multidisciplinary project involving allied departments.</p> <p>Action 2: Students were motivated to handle financial management during mini project, major project and club activities.</p>			
<p>PO12: Lifelong 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.</p>			
PO12	2.55	2.67	Target is achieved. The following actions were taken to enhance the target level.

Action 1: The recent technology like FIN-FET Technology, 5G Wireless Communication, Cybersecurity, Machine Learning, Artificial intelligence, VMware will be introduced to the students.

Action 2: Students were motivated to take up NPTEL Certification on Python, networking, RF design, Communication, VLSI related subjects.

Action 3: Students were motivated to take up Industry oriented certification like CCNA, CyberOps, DevOps, Python.

Action 4: Students were motivated to pursue higher studies in areas of Wireless Communication, RF Design, Semiconductor Technology in premier institution.

❖ **PSOs Attainment Levels and Actions for improvement – CAY (2019-20)**

PSOs	Target Level	Attainment Level	Observation
PSO1: To demonstrate the ability to design and develop complex systems in the areas of next generation Communication Systems, IOT based Embedded Systems, Advanced Signal and Image Processing, latest semiconductor technologies, RF and power systems.			
PSO1	2.55	2.65	Target is achieved. The following actions were taken to enhance the target level.
<p>Action 1: Students are motivated to take up the real life problems during their project work so that they can design, analyse and find solution which gives exposure to latest technologies.</p> <p>Action 2: Students were given design oriented activities in emerging fields of electronics and communication engineering.</p> <p>Action 3: Students were encouraged to take up MOOC courses as part of Co-curricular activities.</p>			
PSO2: To demonstrate the ability to solve complex Electronics and Communication Engineering problems using latest hardware and software tools along with analytical skills to contribute to useful, frugal and eco-friendly solutions.			
PSO2	2.55	2.70	Target is achieved. The following actions were taken to enhance the target level.
<p>Action 1: Hands on workshop were conducted from industry experts on latest hardware and software for getting real time exposure.</p> <p>Action 2: Short term training program were conducted on program specific courses</p> <p>Action 3: Students were motivated to take up industry related project to get understanding of advanced industry tools.</p>			

7.2 Academic Audit and actions taken thereof during the period of Assessment (15)

(Academic Audit system/process and its implementation in relation to Continuous Improvement)

7.2.a Academic Audit Process

PDCA process is followed by the department of Electronics and Communication and is as explained below:

PLAN: Lesson Plan, Academic Calendar, Course Syllabus, Workshop, Guest lectures, Club Activities, CO-PO mapping are planned by course coordinator, Verified by module co-ordinator and program co-ordinator.

DO: Innovative teaching, Assignment, Quiz, Self-study, Internal assessment, SEE exam are conducted by individual subject faculties.

CHECK: Course files, Department files, OBE report, result analysis are audited by department audit committee, Assignment and Quiz are verified on monthly basis by the department faculty coordinator and verified by the PAC Committee.

ACT: Action on teaching methods, Revision of CO/PO and Curriculum were done by departmental advisory board (DAB) and IQAC which completes PDCA process of electronics and Communication department in New Horizon College of Engineering.

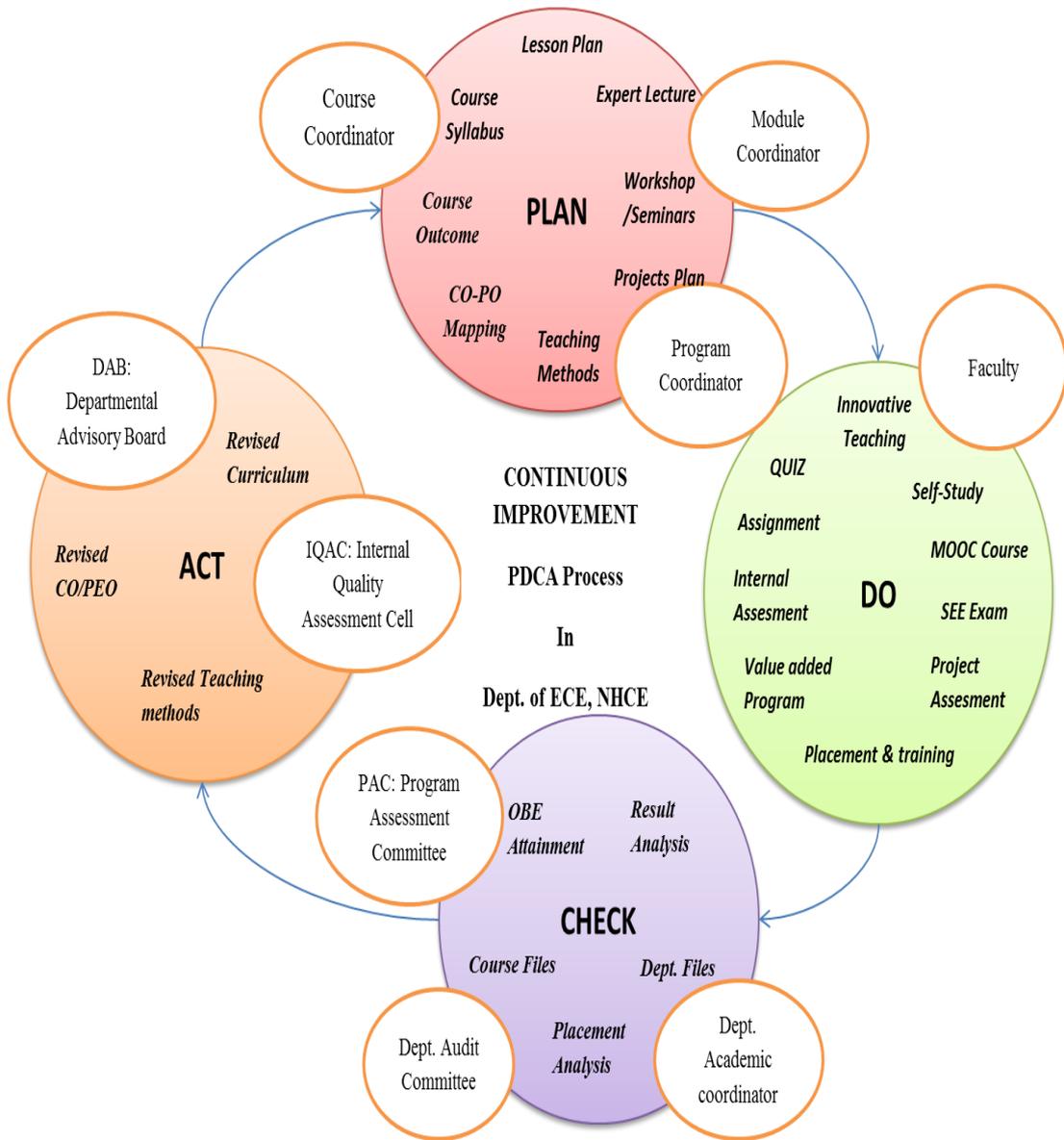


Fig 7.2.1 PDCA Process followed in ECE Department

The Academic audits are conducted as per ISO standards and evaluated. The process consists of internal audits and external audits. Audits are conducted for faculties, Laboratories, and departmental activities. Academic audit process flow chart with assessment committee and parameter is shown in the fig 7.2.2

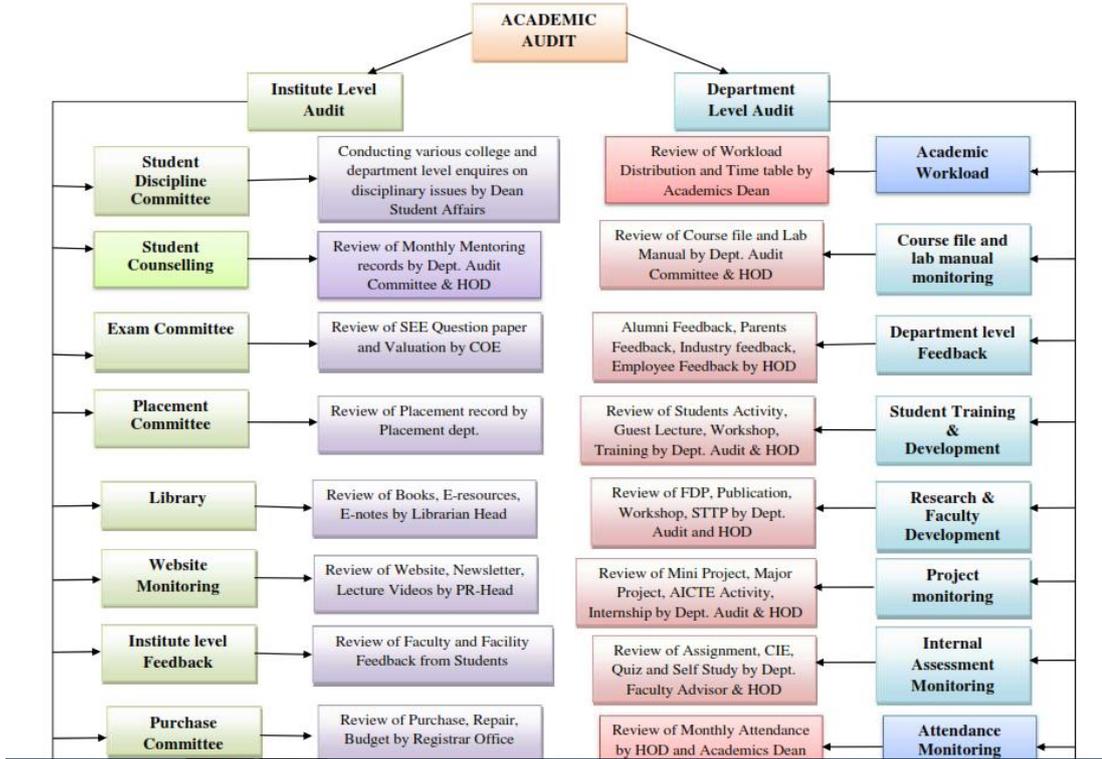


Fig 7.2.2 Audit Committee and Assessment Parameter Flow chart

Department audit process flow chart is shown in the fig 7.2.3

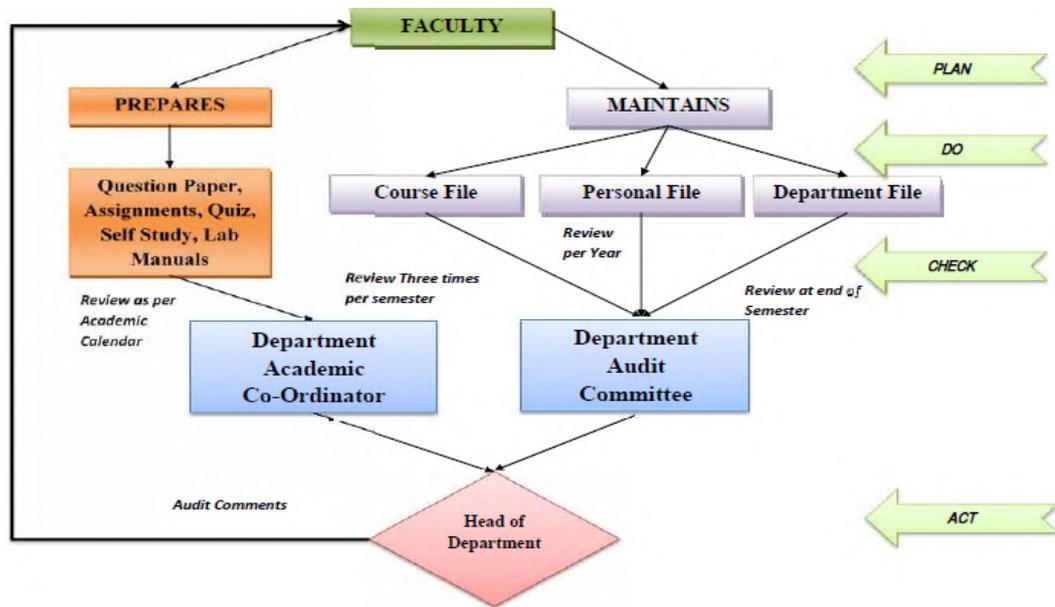


Fig 7.2.3 Department Audit Process flow chart

Table 7.1. Academic Audit assessment and Implementation

Sl. No	Assessment Criteria	Frequency	Conduct Mechanism and Action Plan	Implementation and Effectiveness
Department Level Audit				
1	Academic Curriculum Monitoring	Once in Year	<ol style="list-style-type: none"> 1. Verifying Scheme and Syllabus (Hardcopy) since inception. 2. Verifying the course outcome, program outcome and Program specific outcome by Board of Studies. 3. Collecting the feedback about the course outcome and program outcome from different stakeholders. 4. Revising the curriculum, course outcome, program outcome and teaching methods by Department advisory board(DAB) and verification by Institute quality assurance cell(IQAC). 5. Submitting the minute of meeting report to the dean academics. 	Verification of revised curriculum/CO-PO by Dean (Academics)
2	Academic Workload Monitoring	Once in Semester	<ol style="list-style-type: none"> 1. Verifying subject preference of faculties as per the domain area. 2. Verifying academic workload and portfolios for the current year. 3. Verifying Calendar of Events, departmental time table, lab time table, Individual time table, open elective time table, coaching class time table per semester. 4. Collecting total workload of individual faculty by the department. 5. Submitting of workload report by HOD to the dean(academics). 	Verification of work load reports and time table by Dean(Academics)
3	Attendance monitoring	Monthly Once	<ol style="list-style-type: none"> 1. Verification of Master Attendance in Automation (Contineo Software) once in month. 2. Collecting Long Absentee List from Class Teachers. 3. Verification of Shortage of Attendance and Issue of warning to students. 4. Collecting Monthly Cumulative Attendance Report from individual subject faculty. 5. Reviewing of shortage of attendance with HOD & Dean (Academics). 	Verification of Attendance reports by office of Dean (Academics), and HOD

			<p>6. Submitting of report to the Dean (Academics) by department faculty advisor</p> <p>7. Obtaining feedback on Course outcome attainment using automation (Contineo Software).</p> <p>8. Result analysis of internal exams on regular basis.</p>	
4	Internal Assessment Monitoring	As per Academic Calendar	<p>1. Assessing of Question Paper Format with Correct CO mapping as per syllabus and RBT level.</p> <p>2. Assessing Assignment, Quiz and Self Study by department Faculty Advisor.</p> <p>3. Documenting invigilators list, schedule and timetable.</p> <p>4. Verification of Invigilator Availability in the Examination Hall by IA Co-ordinator.</p> <p>5 Collecting Absentee report and recording actions taken.</p> <p>6. Submitting of report to the Faculty Advisor in the prescribed format.</p> <p>7. Monitoring Retest as per Schedule and Timings.</p> <p>8. Verification of assessment, Quiz and self-study marks entry in automation (Contineo software).</p> <p>9. Preparing consolidated marks statements.</p> <p>10. Verifying CO-PO attainment by the individual subject.</p> <p>11. Listing of failures along with the corrective and actions taken report by subject faculty.</p> <p>12. Submitting of report to the Dean academics in the prescribed format.</p>	Verification of reports by office of Dean (Academics) and HOD
5	Course file and lab manual monitoring	Monthly once	<p>1. Regular verification of course file by department Audit Committee. Course file particulars:</p> <ul style="list-style-type: none"> i. Calendar of Events ii. Subject Allotment iii. Time Table iv. Syllabus v. Lesson Plan vi. Attendance Register vii. Assignment Questions viii. Internal Question Paper and Scheme of Evaluation ix. Internal Test Marks 	Verification of reports by office of Dean (Academics) and HOD

			<ul style="list-style-type: none"> x. IA- Result Analysis & CAPA Report xi. Previous Year Question Papers xii. Special Class Records (if conducted) xiii. Teacher- Appraisal Feedback xiv. Exam Related Work <p>2. Verification of lab manuals with additional experiments by department Audit Committee. (Open ended.)</p> <p>3. Submission of audit finding report to the HOD in the prescribed format.</p>	
6	Project monitoring	As per Academic Schedule	<ul style="list-style-type: none"> 1. Verification of All Mini and Major Project Titles and Batches of Students. 2. Verification of all Internship and External Projects and their accompanying, progress reports. 3. Monitoring Student Guide Contact hours. 4. Submitting of report to the project co-ordinator and HOD in the prescribed format. 5. Encouraging and helping students to convert their project into quality technical articles. 6. Publishing and helping students to convert their project into quality technical articles. 	Verification of reports by office of Dean (Academics) and HOD
7	Training & development	Monthly once	<ul style="list-style-type: none"> 1. Identifying of training and development needs of students. 2. Training pre-final year students through Internships. 3. Organizing Professional Tours. 4. Offering Guidance for Higher Studies in India or Abroad. 5. Organizing Guest lecture, workshops/ seminars on Technical Skills, Emotional Intelligence, Soft Skills etc. 6. Encouraging students to join and participate in Students Club activity and Professional society activity. 7. Encouraging the student to participate in societal activities to be responsible citizen. 	Verification by HOD and Dean(R&D)
8	Research & Faculty development	Semester wise	<ul style="list-style-type: none"> 1. Encouraging faculty and students to pursue their research plans by submitting research proposals to various agencies and scientific laboratories. 	

			<ol style="list-style-type: none"> 2. Allocating funds budgeted by the college for support of research and professional development. 3. Assuring proper accountability in the use of grants. 4. Ensuring the proper functioning of Labs. 5. Encouraging faculty to submit research article to reputed journals. 6. Encouraging and motivating faculty to apply their research ideas to Indian Patent. 7. Motivating teaching faculty to publish technical books. 	<p>Verification by HOD & Dean(R&D)</p>
Institute Level Audit				
1	Student Discipline Committee (Institute Level)	Monthly once	<ol style="list-style-type: none"> 1. Ensuring maintenance of good student discipline and providing proper amenities for student wellbeing on the campus. 2. Conducting various college and department level enquires on disciplinary issues. 3. Proper functioning of anti- ragging cell. 4. Creating awareness among students about the negative effects / disciplinary actions of ragging on the campus. 	<p>Verification of reports by office of Dean (Student Affairs) and HOD</p>
2	Student Mentoring/ Counselling	Monthly once	<ol style="list-style-type: none"> 1. Striving to work in a coordinated manner as an efficient team. 2. Holding of regular meetings with the students to discuss all relevant issues concerning student welfare for there all round development. 3. Regular meeting of students with department counsellor to discuss any specific issue faced by the students. 	<p>Verification of reports by Dean (Student Affairs), Head Counsellor & HOD</p>
3	Feedback	End of semester	<ol style="list-style-type: none"> 1. Obtaining online faculty feedback and facilities feedback at the end of the semester from the students. 2. Obtaining employee, alumni feedback and exit surveys whenever necessary. 3. Reviewing of feedback with the concerned Heads 4. Counselling the faculty to strengthen their performance. 5. Preparing a consolidated department wise report. 	<p>Verification by HOD & Dean (Academics)</p>

			6. Submitting of report to the HOD in the prescribed format.	
4	Exam Committee	As per the academic calendar	<p>1. Documenting and submitting of the following to the faculty adviser:</p> <ul style="list-style-type: none"> a. Examination notices received from Dean (Academics) b. Circulars for students regarding Exam Fee Collection, the last date of fee collection, modalities of payments of fine c. Examination Time table, Invigilation duty chart, seating plans for the students d. Result analysis e. Disciplinary issues and corrective actions <p>2. Scrutinize the SEE question papers and scheme of valuation, Number of paper set by external and internal examiners by the Board of Examiners.</p> <p>3. Maintaining of all records pertaining to Examinations by the Examination Cell.</p> <p>4. Addressing of grievances of administration, faculty, staff and students on all examination related issues.</p> <p>5. Reporting any issues and suggestions to Controller of Examination(COE) in the prescribed format.</p>	Verification by HOD & Controller of Examination (COE)
5	Purchase Committee	Once in a Year	<p>1. Recommending any new lab facilities setup to enhance the quality of the labs</p> <p>2. Reviewing the budget proposals for purchase of lab components, lab software, PC, printers and other lab equipment's.</p> <p>3.Updating the In-Out register, device calibration records, Lab components repair records</p> <p>4.Submitting the report to the office of registrar in the prescribed format</p>	Verification of reports by HOD and office of registrar, IQAC
6	Library	Once in a Year	<p>1. Recommending any furniture, assistive devices, or other materials that would enhance the quality of the library.</p> <p>2. Recommending guidelines to HODs for purchasing instructional materials and journals</p> <p>3. Reviewing budget proposals for books, journals, materials and equipment needed to further the library's educational endeavours.</p> <p>4. Updating the books inventory, damaged books inventory and lost books inventory file.</p>	Verification of reports by Head-Librarian

			5. Submitting of report to the office of library in the prescribed format.	
7	Placement Committee	As Required	1. Updating student placement record file. 2. Ensuring steps to conduct mock interviews and personality tests for the final year students. 3. Conducting various Career Fairs 4. Submitting detailed Campus Placements Activity Report for the current academic Year. 5. Conducting various soft skills, aptitude skills and language training sessions.	Data is available with T&P cell
8	Website Monitoring	As Required	1. Ensuring department event posters and details are updated in college website 2. Updating the college website after completion of the event. 3. Recommending any updates about the department in the college website.	Data is available with PR Department

7.2.b Internal Audit Committee

Department Audit Committee			
Sl. No	Year	Semester	Audit Committee Members
1	2019-20	Even Semester	Dr. Sanjeev Sharma, Mr. Aravinda, Mr. Rajesh G, Ms. Maheshwari M
2	2019-20	Odd Semester	Dr. Sanjeev Sharma, Mr. Aravinda, Mr. Rajesh G, Ms. Maheshwari M, Ms. Thanuja
3	2018-19	Even Semester	Dr. Sanjeev Sharma, Mr. Aravinda, Dr. Shreesha Kotur, Ms. Maheshwari M, Ms. Thanuja
4	2018-19	Odd Semester	Dr. Sanjeev Sharma, Mr. Aravinda, Dr. Nisha K C R, Dr. Reema Sharma, Ms. Jayanthi, Ms. Maheshwari M
5	2017-18	Even Semester	Mr. Mani Lakshman Iyer, Dr. Nisha K C R, Ms. Dharmambal V, Ms. Maheshwari M, Ms. Thanuja, Ms. Sachi P
6	2017-18	Odd Semester	Mr. Mani Lakshman Iyer, Dr. Nisha K C R, Ms. Jayanthi, Ms. Maheshwari M, Ms. Monika G, Ms. Nayana G H, Ms. Dharmambal V

Institute Audit Committee		
Sl. No	Year	Auditors
1	2019-20	Dr. Prashanth CSR, Dean Academics Ms. Hima Bindhu, Educational prog.analyst, NHQASDC Dr. Anandavardhan, Professor and HOD, BioTech Dr. Niranjana, Professor and HOD, Civil Dr. Anitha S Rai, HOD, Library& Information center, Convener
2	2018-19	Dr. Prashanth CSR, Dean Academics Dr. Anitha S Rai, HOD, Library& Information center, Convener Dr. Anandhavardhan, HOD, Biotech
3	2017-18	Dr. Prashanth CSR, Dean Academics Dr. Anitha S Rai, HOD, Library& Information center, Convener Dr. Girija S, Head, NHQASDC

7.2.c External Audit process

The External audit is conducted by Visveswaraya Technological University once in a year. University appoints a group of experts from various institutions wherein financial details and administrative details are verified at institute level. Course files, lab Manuals, department files and result analysis are verified at the respective department. The external audit committee prepares report based on the observation and institute submit the compliance report to the university. External audit process flow chart is shown in the fig 7.2.4

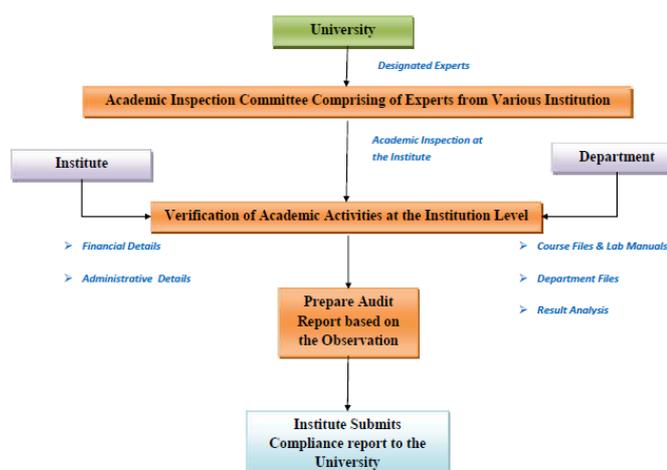


Fig 7.2.4 External Audit Process flow chart

7.2.d Audit Findings sample compliance report

ACADEMIC AUDIT OBSERVATION- ECE				
	Date: 28/08/2019		Time : - 2:00 pm to 4:30 pm	
Sl. #	Parameters	Sub Sections	Available/ Not available	Remarks
1	Board of Studies (BOS)	Constitution	Available	PO's and PEO's discussion a practice of dissemination
	As per Statutory guidelines	Meeting and its minutes – at-least once in a year(ensure for the structure)	Available	All respective Internal/external stakeholders feedback need to be considered in BOS, Agenda needs a revision
2	Board of Examiners (BOE)	Constitution	Available	2nd Agenda needs a revision to include the consistency of CO's along with Bloom's level
		Meeting and its minutes	Available	BoE chairman signature required in all docs
		Quality of question papers at SEE	Available	Some strategy can be devised
		No. of QPs set by External & Internal Examiners	Not available	QP setters list given to COE need to be filed
3	Scheme & Syllabus	All the semesters since inception – HARD COPY	Available	Well maintained
		Frequency of its revision	Available	Brief Index maintained
4	Teaching Learning & Evaluation	Vision & Mission	Available	
		PEOs & PSOs	Available	
		Rules & Regulations copy	Available	Suggested to circulate among all the staff members and familiar with academic rules
		Calendar of events	Available	suggested to stick to the specified date of the events
		Students list	Available	
		Registration of the course – including re-registration	Available	
		Students dropping	Nil	

		v) Final Marks with break up	Available	
		Lab Manuals	Available	
		Club activities	Available	In Some Club events, the details of event like Brochure, Registrtaion of participants / attendees details/ Report with outcome of the event is not available.
5	STUDENT CENTRIC	Students Mentoring Process		
		i) Mechanism of students feedback	Available	
		ii) Feedback on courses	Available	Format has to be uniform
		iii) Healthy practices for ensuring students discipline	Available	
		iv) Assigning of students to faculties	Available	Consolidated file was not available where student faculty ratio should be filed
		v) Mentoring record books (update in CONTINEO)	Available	
		vi) PTM	Available	
6	Academic files	Check List as per Academic file	Available	
		Calendar of Events	Available	
		Subject Allotment	Available	
		Time Table	Available	
		Syllabus	Available	
		Lesson Plan	Available	
		Attendance Register	Available	
		Assignment Questions	Available	Not Group Wise
		Internal Question Paper and Scheme of Evaluation	Not available	Scheme Not Available
		Internal Test Marks	Available	

		IA- Result Analysis & CAPA Report	Available	
		Previous Year Question Papers	Available	
		Special Class Records (if conducted)	Available	
		Teacher-Appraisal Feedback	Available	
		Exam Related Work	Available	
7	Coaching Class	Identifications of the subjects		
		List of students		
		Time Table		
		Details of classes conducted and attendance		
		Test / Assignment / Quiz (conducted if any)		
8	R&D Activities	Details about Research Center / Supervisors / Research Scholars	Available	Scholar USN need to be updated;
		Details about publications / grants / patents	Available	
		Students publication details	Available	
		Conferences / Symposium / Seminars / FDPs attended by the faculty.	Available	
		Conferences / Symposium / Seminars / FDPs conducted.	Available	
		Chapters & Books published by the faculty.	Available	
		MOUs executed	Available	Need execution plan and evidences
9	Result Analysis		Available	Graphs need to prepared course-wise, semester-wise, batch-wise

10	Placement Activities		Available	
11	Guest Lectures / Expert talks	Conducted in the department	Available	Indexing of events and reports must be filed
12	Industrial visit & Interaction	Any visit carried out	Available	
13	Administration	Teaching Staff list	Available	
		Non Teaching Staff list	Available	
		Minutes of the department meeting	Available	
		Faculty performance	Available	
	NOTE WORTHY	1. Scheme & solutions semester wise spiral binded - ready reference book any time		
		2. Final year project Reports - Synopsis file - Spiral binded - ready reference any time		
		3. Final year project reports - Assessment - 3 phases - spiral binded - ready reference		
	Audit Team			
	Dr. Prashanth CSR	Dean Academics		
	Ms. Hima Bindhu	Educational prog.analyst, NHQASDC		
	Dr. Anandavardhan	Professor and HOD, BioTech		
	Dr. Niranjana	Professor and HOD, Civil		
	Dr. Anitha S Rai	HOD, Library& information center, Convener		

7.3 Improvement in Placement, Higher Studies and Entrepreneurship (10)

Assessment is based on improvement in:

- Placement: number, quality placement, core industry, pay packages etc.
- Higher studies: performance in GATE, GRE, GMAT, CAT etc., and admissions in premier Institutions
- Entrepreneurs

7.3.a Placement details:

The list of students’ placement record and their salary package per annum for three assessment years are listed in Table 7.3.1

Table 7.3.1 Placement data for the year 2016-17

Sl. No	Name of Company	No. of students Placed	Salary Per Annum per students in Rupees
1	Ellucian	1	180000
2	Tech Mahindra	16	325000
3	Capgemini	9	415000
4	Mindtree	1	425000
5	Amazon	1	474300
6	Microland	2	485000
7	NTT Data	10	547000
8	Sigma Infosolutions	1	565000
9	Wipro	6	575000
10	Thomson Reuters	4	575000
11	Speridian	2	575000
12	Cyient	1	575037
13	Servion Global Solutions	1	580000
14	Sprinklr	11	598200
15	Anora Semiconductors	11	625000
16	Sankalp Semiconductors	11	650000
17	Epsilon	4	655720
18	Torry Harris	2	750000
19	Global Logic	21	950393
Total Students Placed		115	Average Pay =553981
Percentage of student Placed		66.80%	

Table 7.3.2 Placement data for the year 2017-18

Sl. No	Name of Company	No. of students Placed	Salary Per Annum per students in Rupees
1	Infosys Ltd	2	300000
2	DXC	10	320004
3	Servion	2	325000
4	Mindtree	8	325000
5	Sonata	4	350000
6	Envision Financial	4	575000
7	NTT Data	6	591916
8	Torry Harris	1	611045
9	Wipro	9	650012
10	Cameo Global	6	654000
11	Valtech	5	663400
12	Cyient	1	665000
13	Verdantis	4	675344
14	CCP IOT	3	676098
15	Quintiles	3	690000
16	Eximius Design	3	695000
17	IBM	1	698000
18	Profinch	4	700000
19	Hexaware	2	700000
20	Quick Logic	5	700523
21	Sankalp Semiconductor	6	714000
22	Century Link	3	736400
23	Microchip Technology	1	740000
24	Zapcom Solutions	6	750000
25	Secpod	1	750000
26	EFI	5	760000
27	Broadridge	1	765000
28	Sony	6	775000
29	Allstate	1	775000
30	Hotelsoft	3	780000
31	Speridian Technologies	1	845000
32	Datagres IT	4	850000
33	Ellucian	4	860000
34	VVDN	5	920000
35	NineLeaps	1	950000
36	Intimetec	2	1023000

37	Applied Materials	1	1054020
38	Fintellix Solutions	3	1074444
39	Eurofins IT	4	1100000
40	Juniper Networks	3	1200000
Total Students Placed		144	Average Pay = 724680
Percentage of student Placed		70.24%	

Table 7.3.3 Placement data for the year 2018-19

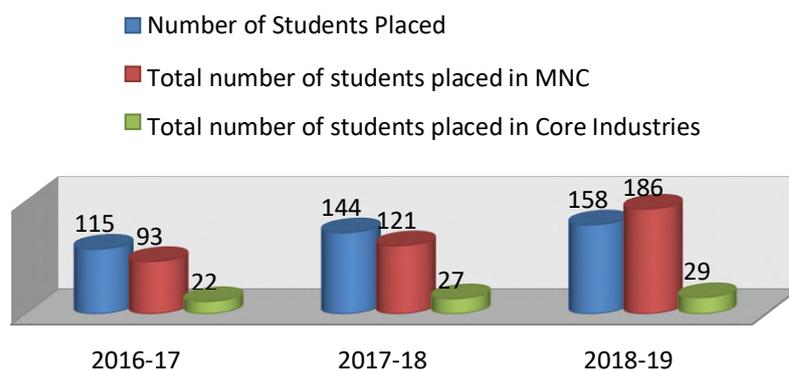
Sl. No	Name of Company	No. of students Placed	Salary Per Annum per students in Rupees
1	42Gears Mobility Systems	3	350000
2	Altran Gurgaon	2	350000
3	Allstate Solutions Pvt Ltd	3	352000
4	Aeronautical Development Agency(ADA)	1	365000
5	Aricent	5	373000
6	Anora Semiconductors	3	379000
7	Astromeda	1	396875
8	Applied Materials	1	400000
9	Elmeasure	7	400020
10	EXL Service	5	450000
11	CenturyLink Technologies India Pvt Ltd	2	450000
12	Eurofins IT Solutions Pvt Ltd	2	651000
13	Extra Marks	1	675000
14	Infosys Ltd	6	711970
15	IBM	1	712000
16	Huawei Technologies	2	720430
17	IBM, pune	1	722801
18	Ideas91 India Pvt Ltd	5	759200
19	ITC Infotech	11	764300
20	L&T Infotech	5	765432
21	L & T Technologies	11	774000
22	JMR Infotech	11	776712
23	LGSOFT India Pvt Ltd	1	780000
24	Mindtree	3	785765
25	Moengage	2	800000
26	Microchip Technology India Pvt Ltd	1	833460
27	Nineleaps	1	854000
28	Lowe's Services India Pvt Ltd	2	854000

29	NTT DATA	8	854000
30	Ocwen Financial	1	854000
31	Pinclick	1	854000
32	QtPi Robotics	2	854000
33	SOCTRONICS	1	875000
34	SoCtronics Technologies Pvt Ltd	1	879987
35	Sony India	2	900000
36	SonicWALL Technology Systems India Pvt Ltd	4	900000
37	Softcell technologies	1	934500
38	Speridian Technologies	3	950000
39	TCS	5	975000
40	Torry Harris Business Solutions	3	975000
41	Telaverge Communications	5	975000
42	Triconinfotech Pvt Ltd	1	975000
43	Surya Software Systems Pvt Ltd	4	1200000
44	Wipro	8	1250000
45	Yokogawa	1	1254034
46	Udaan	3	1254034
47	VVDN Technologies	1	1354545
48	Velocis Systems Pvt Ltd	4	1463000
Total Students Placed		158	Average = 786188
Percentage of student Placed		73.40%	

PLACEMENT COMPARATIVE ANALYSIS REPORT				
Year	Total number of Eligible students	Total number of students placed	% of students placed	Improvement in %
2016-17	172	115	66.8%	-
2017-18	205	144	70.24%	3.44%
2018-19	215	158	73.4%	6.6%
Year	Total number of Eligible students	Total number of students placed in MNC	% of students placed in MNC	Improvement in %

2016-17	172	93	54.06%	-
2017-18	205	121	59.02%	4.96%
2018-19	215	186	86.51%	32.45%
Year	Total number of Eligible students	Total number of students placed in Core Industries	% of students placed in Core Industries	Improvement in %
2016-17	172	22	12.7%	-
2017-18	205	27	13.1%	0.4%
2018-19	215	29	13.4%	0.7%
Year	Total number of Eligible students	Highest Pay Package received by student (in Rupees)	Lowest Pay Package received by student (in Rupees)	Average pay package received by students (in Rupees)
2016-17	172	950393	180000	553981
2017-18	205	1200000	300000	724680
2018-19	215	1463000	350000	786188

Comparative Analysis of Placement data



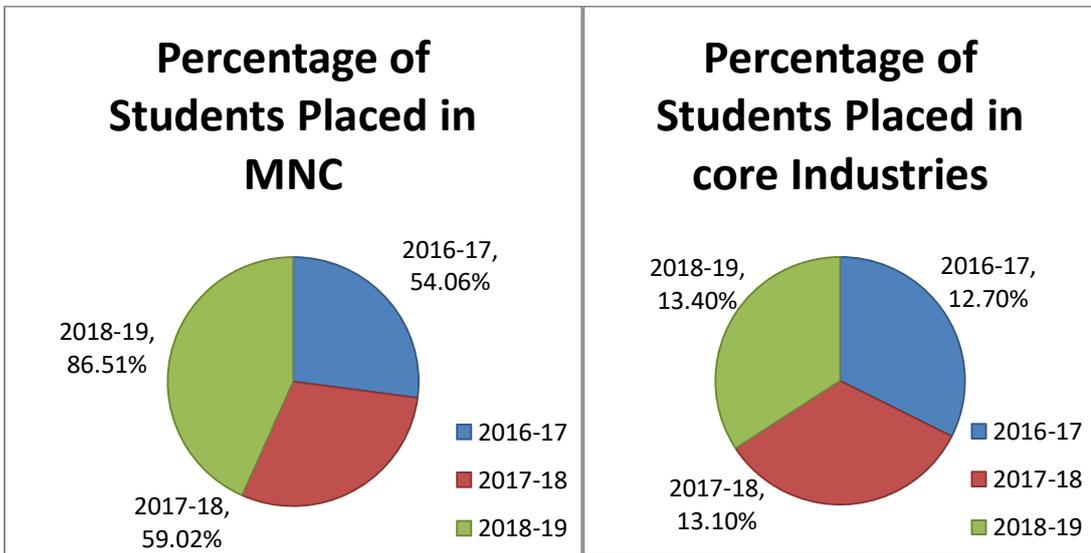
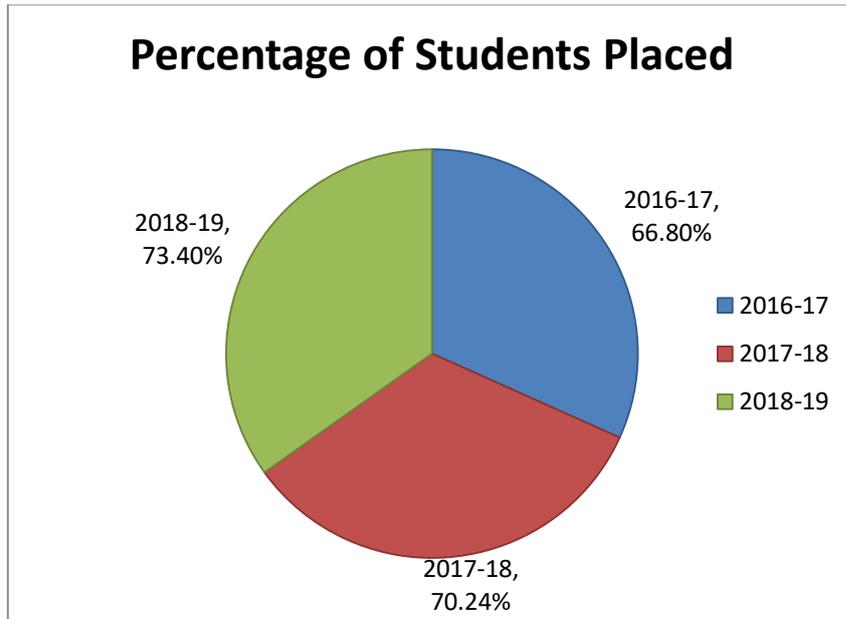


Fig.7.3.1 Comparative Analysis of Placement data for three assessment years

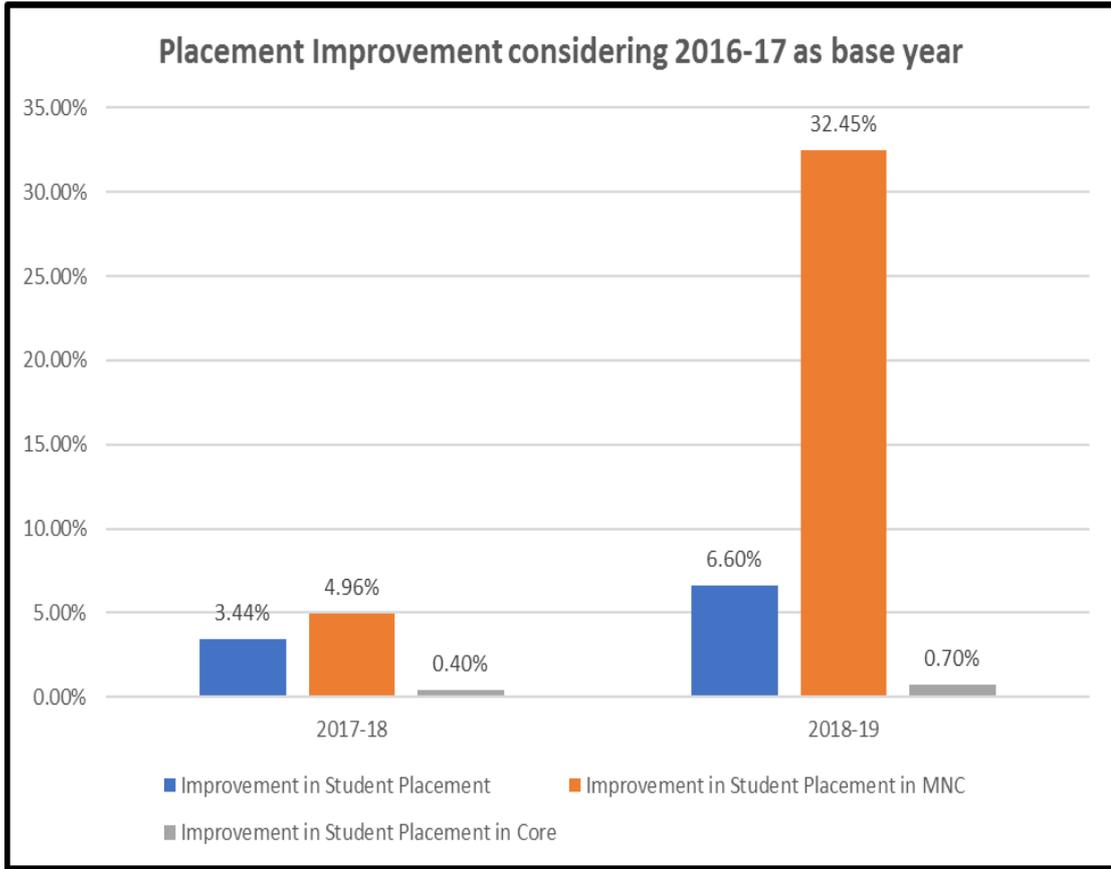


Fig.7.3.2 Placement Improvement considering 2016-17 as base year

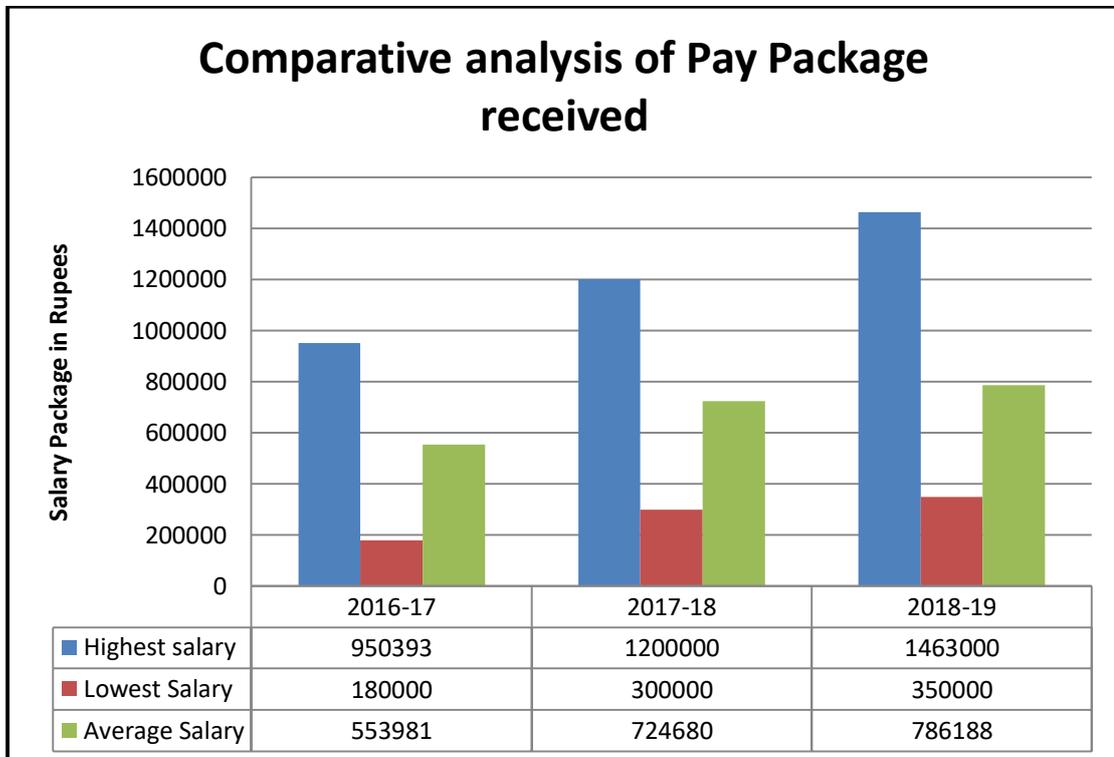


Fig.7.3.3 Comparative analysis of pay package received during assessment year

7.3.b Higher studies details:

Table 7.3.4 Higher studies enrolment details for 2016-17

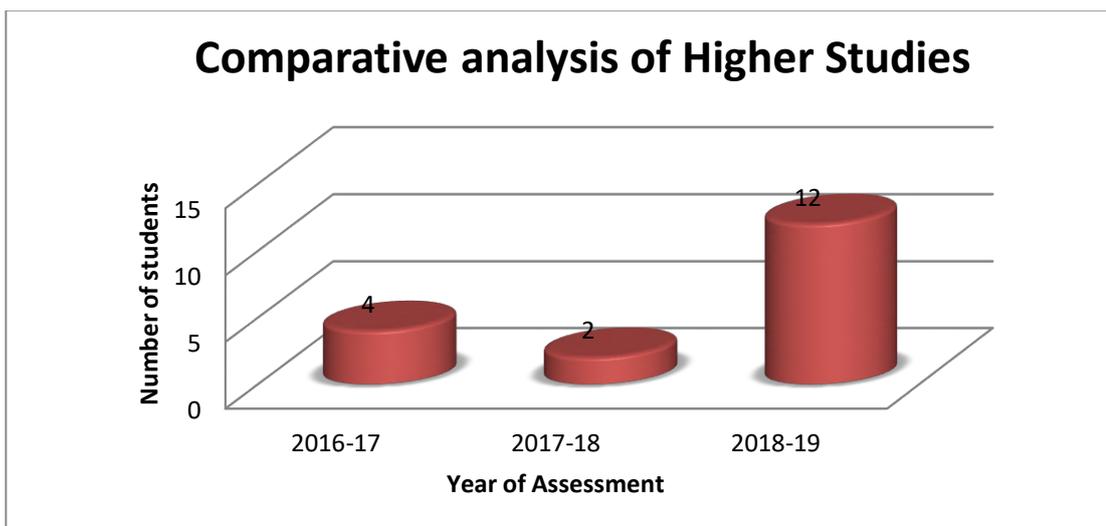
Sl. No.	Name of the program	Name of Exam	Number of students cleared
1	M. Tech	GATE/PG-CET	02
2	MS	GRE	01
3	MBA	GMAT/CAT	01
Total number of students joined for higher studies: 4			

Table 7.3.5 Higher studies enrolment details for 2017-18

Sl. No.	Name of the program	Name of Exam	Number of students cleared
1	M. Tech	GATE/PG-CET	00
2	MS	GRE	01
3	MBA	GMAT/CAT	01
Total number of students joined for higher studies: 02			

Table 7.3.6 Higher studies enrolment details for 2018-19

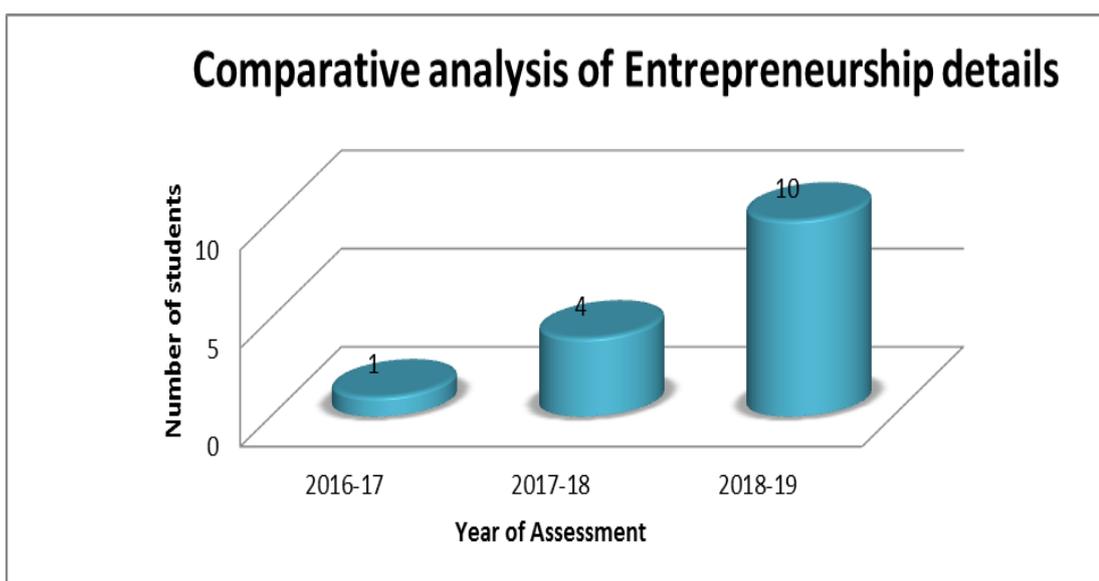
Sl. No.	Name of the program	Name of Exam	Number of students cleared
1	M. Tech	GATE/PG-CET	06
2	MS	GRE	04
3	MBA	GMAT/CAT	02
Total number of students joined for higher studies: 12			



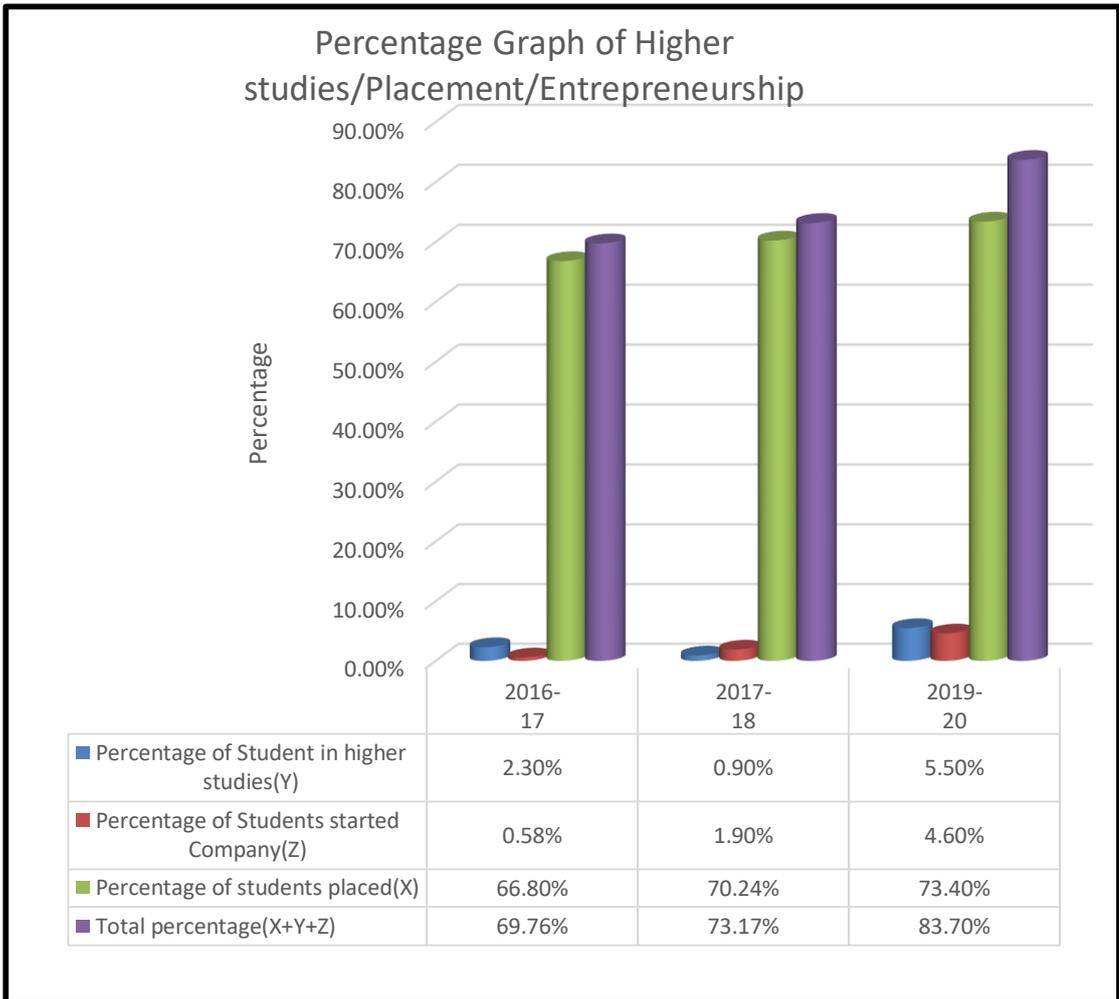
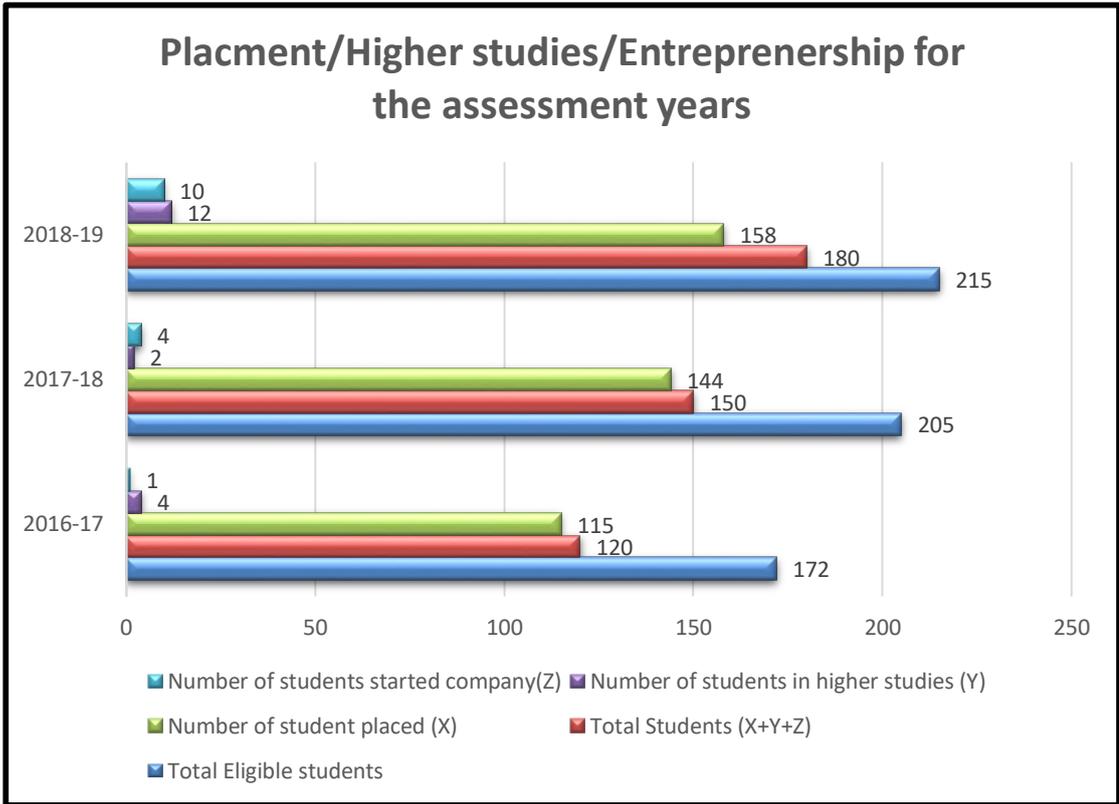
7.3.c Entrepreneur details:

Table 7.3.7 Entrepreneur details

Sl. No	Year	Number of students Involved	Number of students registered and started
1	2016-17	01	01
2	2017-18	09	04
3	2018-19	12	10



HIGHER STUDIES COMPARATIVE ANALYSIS REPORT				
Year	Total number of students	Total number of students joined for higher studies in Premier Institution (MS/ M. Tech)	% of students joined Higher studies	Improvement in %
2016-17	172	4	2.3%	
2017-18	205	2	0.9%	-
2018-19	215	12	5.5%	3.2%
ENTREPRENEURSHIP COMPARATIVE ANALYSIS REPORT				
Year	Total number of students	Total number of students attempted or started company	% of students started Company	Improvement in %
2016-17	172	1	0.58%	
2017-18	205	4	1.9%	1.32%
2018-19	215	8	3.7%	3.12%
PLACEMENT, HIGHER STUDIES AND ENTREPRENEURSHIP COMPARATIVE REPORT				
Year	Total number of students	Total number of students placed/Higher Studies/Started Company	Total Percentage	Improvement in %
2016-17	172	120	69.76%	
2017-18	205	150	73.17%	3.41%
2018-19	215	180	83.7%	13.94%



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.

Table 7.4.1. Admission Data for three Assessment Years.

Item	Particulars	CAY (2019-20)	CAYm1 (2018-19)	CAYm2 (2017-18)
<i>National Level Entrance Examination (Name of the Entrance Examination)</i>	No. of Students admitted	-	-	-
	Opening Score/Rank	-	-	-
	Closing Score/Rank	-	-	-
<i>Karnataka Common Entrance Test-CET</i>	No. of Students admitted	72	72	72
	Opening Score/Rank	7457	7594	7416
	Closing Score/Rank	21432	21770	26517
<i>Karnataka Religious & Linguistic Minority (KRLM) Entrance test</i>	No. of Students admitted	108	108	108
	Opening Score/Rank	2	10	230
	Closing Score/Rank	980	349	429
	Total No. of Students (PUC)	180	180	180
<i>Karnataka Diploma Common Entrance Test (DCET)</i>	No. of Students admitted	13	33	32
	Opening Score/Rank	2045	1652	3089
	Closing Score/Rank	4640	7252	9462
	Total No. of Students (With Diploma)	193	213	212
	<i>Average CBSE/Any other Board Result of admitted students (Physics, Chemistry & Maths)</i>	89.80	89.55	82.14

Serial Code & Link to the Item	Item	Page No.
	Institute Level Criteria	
8	First Year Academics	590-617
9	Student Support Systems	618-786
10	Governance, Institutional Support and Financial Resources	787-855
PART C	Declaration by the Institution	856
Annexure I	Program Outcomes(POs) & Program Specific Outcomes (PSOs)	857-858

**DEPARTMENT OF
ELECTRONICS &
COMMUNICATION ENGINEERING**

CRITERION 8

FIRST YEAR ACADEMICS



Autonomous College Permanently affiliated to VTU, Approved by AICTE & UGC

New Horizon Knowledge Park, Ring Road, Bengaluru, Karnataka 560103
Tel: +91-80-6629 7777, Fax: +91-80-2844 0770, Email: principal@newhorizonindia.edu
www.newhorizonindia.edu



Criterion - 8

First year Academics



Autonomous College Permanently affiliated to VTU, Approved by AICTE & UGC

New Horizon Knowledge Park, Ring Road, Bengaluru, Karnataka 560103
Tel: +91-80-6629 7777, Fax: +91-80-2844 0770, Email:principal@newhorizonindia.edu
www.newhorizonindia.edu

ELECTRONICS AND COMMUNICATION ENGINEERING

CRITERION 8	FIRST YEAR ACADEMICS	50
--------------------	-----------------------------	-----------

8.1: First Year Student-Faculty Ratio (FYSFR, 5)

Data for first year courses to calculate the FYSFR:

Table B.8.1.

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

**** 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

Table B.8.2

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

8.3 First Year Academic Performance (10)

Academic Performance	Computer Science Engineering		
	CAYm1	CAYm2	CAYm3
Mean of CGPA of all successful students (x)	8.16	8.46	8.30
Total no. of successful students (y)	176	179	169
Total students appeared in the examination (Z)	188	187	187
API = $x*(y/Z)$	7.63	8.09	7.50
Average	7.74		

Academic Performance = ((Mean of 1st 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)

Table 8.4.1.a Tools used in measuring CO

Assessment Tool Type	Assessment Tool Title	Tool Description
Direct Assessment	Continuous Internal Evaluation (CIE)	This is used as an assessment tool to evaluate the attainment of course outcomes, through Assignments, Quizzes, Internal Assessment (Average of 3 Exams) which are conducted throughout the semester and designed in such a way that the evaluation of complete syllabus is covered. This is done for all courses of the semester.
	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 examinations.
	Semester End Examinations (SEE)	This tool examines at all cognitive levels the ability and understanding of the students with respect to the concepts taught and their applicability in solving complex Engineering problems. The ability of the students to understand and apply knowledge of mathematics, science and engineering concepts in solving engineering problems is keenly evaluated.

Table 8.4.1.b Calculation of CO attainment

CO Attainment	Weightage	Assessment Tools
Overall CO Attainment	100%	Continuous Internal Evaluation CIE (50%)
Direct Attainment		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-50 marks and Lab courses-25 marks (Sample) is as given in table below.

Table 8.4.1.1. Distribution of marks for theory & Lab courses evaluation.

Assessment Tool	Max Marks	Marks scaled to	Weightage
Assignments	15	15	50%
Quizzes	10	10	
Internal Assessment Exam (Avg. of 3 Exams)	25	25	
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	

The Process for Assessment and Attainment of COs is described in the flowchart as shown in Flow Chart

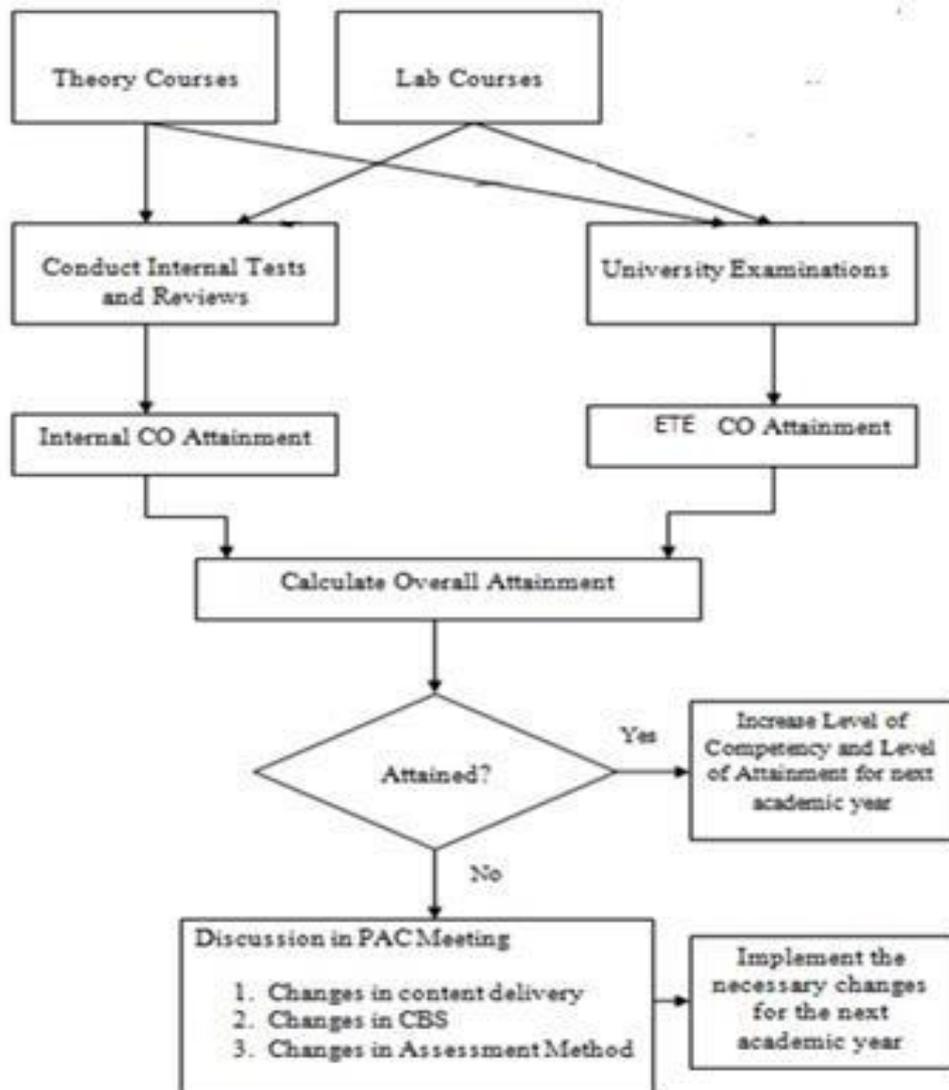


Fig 8.4.1. Process of assessment and attainment of CO

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)

Table 8.4.2.

Attainment Levels: Internal Assessment

Course	Attainment Level	CAYm3 2016-17	CAYm2 2017-18	CAYm1 2018-19
Mathematics I	0	less than 37% scored ≥ 28	less than 40% scored ≥ 28	less than 45% scored ≥ 28
	1	37% to 46% scored ≥ 28	40% to 49% scored ≥ 28	45% to 54% scored ≥ 28
	2	47% to 56% scored ≥ 28	50% to 59% scored ≥ 28	55% to 64% scored ≥ 28
	3	57% and more scored ≥ 28	60% and more scored ≥ 28	65% and more scored ≥ 28
Engineering Physics	0	less than 45% scored ≥ 34	less than 45% scored ≥ 38	less than 45% scored ≥ 28
	1	45% to 54% scored ≥ 34	45% to 54% scored ≥ 38	45% to 54% scored ≥ 28
	2	55% to 64% scored ≥ 34	55% to 64% scored ≥ 38	55% to 64% scored ≥ 28
	3	65% and more scored ≥ 34	65% and more scored ≥ 38	65% and more scored ≥ 28
Elements of Civil Engineering	0	less than 40% scored ≥ 23	less than 42% scored ≥ 25	less than 44% scored ≥ 25
	1	40% to 49% scored ≥ 23	42% to 51% scored ≥ 25	44% to 53% scored ≥ 25
	2	50% to 59% scored ≥ 23	52% to 61% scored ≥ 25	54% to 63% scored ≥ 25
	3	60% and more scored ≥ 23	62% and more scored ≥ 25	64% and more scored ≥ 25
Elements of Mechanical Engineering	0	less than 40% scored ≥ 34	less than 40% scored ≥ 36	less than 40% scored ≥ 25
	1	40% to 49% scored ≥ 34	40% to 49% scored ≥ 36	40% to 49% scored ≥ 25
	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
Basic Electrical Engineering	0	less than 35% scored ≥ 21	less than 45% scored ≥ 23	less than 50% scored ≥ 25
	1	35% to 44% scored ≥ 21	45% to 54% scored ≥ 23	50% to 59% scored ≥ 25
	2	45% to 54% scored ≥ 21	55% to 64% scored ≥ 23	60% to 69% scored ≥ 25
	3	55% and more scored ≥ 21	65% and more scored ≥ 23	70% and more scored ≥ 25
Engineering Physics Lab	0	Included with Theory as it is an integrated subject	Included with Theory as it is an integrated subject	less than 50% scored ≥ 15
	1			50% to 59% scored ≥ 15

	2			60% to 69% scored ≥ 15
	3			70% and more scored ≥ 15
Basic Electrical Engineering Lab	0	No Lab Course	No Lab Course	less than 40% scored ≥ 15
	1			40% to 49% scored ≥ 15
	2			50% to 59% scored ≥ 15
	3			60% and more scored ≥ 15
Mathematics II	0	less than 37% scored ≥ 28	less than 40% scored ≥ 28	less than 45% scored ≥ 28
	1	37% to 46% scored ≥ 28	40% to 49% scored ≥ 28	45% to 54% scored ≥ 28
	2	47% to 56% scored ≥ 28	50% to 59% scored ≥ 28	55% to 64% scored ≥ 28
	3	57% and more scored ≥ 28	60% and more scored ≥ 28	65% and more scored ≥ 28
Engineering Chemistry	0	less than 45% scored ≥ 34	less than 45% scored ≥ 38	less than 45% scored ≥ 28
	1	45% to 54% scored ≥ 34	45% to 54% scored ≥ 38	45% to 54% scored ≥ 28
	2	55% to 64% scored ≥ 34	55% to 64% scored ≥ 38	55% to 64% scored ≥ 28
	3	65% and more scored ≥ 34	65% and more scored ≥ 38	65% and more scored ≥ 28
Introduction to Programming with C	0	less than 40% scored ≥ 34	less than 40% scored ≥ 38	less than 45% scored ≥ 38
	1	40% to 49% scored ≥ 34	40% to 49% scored ≥ 38	45% to 54% scored ≥ 38
	2	50% to 59% scored ≥ 34	50% to 59% scored ≥ 38	55% to 64% scored ≥ 38
	3	60% and more scored ≥ 34	60% and more scored ≥ 38	65% and more scored ≥ 38
Computer Aided Engineering Drawing	0	less than 40% scored ≥ 25	less than 40% scored ≥ 27	less than 40% scored ≥ 28
	1	40% to 49% scored ≥ 25	40% to 49% scored ≥ 27	40% to 49% scored ≥ 28
	2	50% to 59% scored ≥ 25	50% to 59% scored ≥ 27	50% to 59% scored ≥ 28
	3	60% and more scored ≥ 25	60% and more scored ≥ 27	60% and more scored ≥ 28
Basic Electronics	0	less than 30% scored ≥ 28	less than 30% scored ≥ 29	less than 30% scored ≥ 30
	1	30% to 39% scored ≥ 28	30% to 39% scored ≥ 29	30% to 39% scored ≥ 30

	2	40% to 49% scored ≥ 28	40% to 49% scored ≥ 29	40% to 49% scored ≥ 30
	3	50% and more scored ≥ 28	50% and more scored ≥ 29	50% and more scored ≥ 30
Programming with C lab	0	Included with Theory as it is an integrated subject	Included with Theory as it is an integrated subject	less than 45% scored ≥ 13
	1			45% to 54% scored ≥ 13
	2			55% to 64% scored ≥ 13
	3			65% and more scored ≥ 13
Engineering Chemistry Lab	0	Included with Theory as it is an integrated subject	Included with Theory as it is an integrated subject	less than 50% scored ≥ 15
	1			50% to 59% scored ≥ 15
	2			60% to 69% scored ≥ 15
	3			70% and more scored ≥ 15
Business / Professional communication	0	less than 30% scored ≥ 25	less than 32% scored ≥ 13	less than 34% scored ≥ 13
	1	30% to 39% scored ≥ 25	32% to 41% scored ≥ 13	34% to 43% scored ≥ 13
	2	40% to 49% scored ≥ 25	42% to 51% scored ≥ 13	44% to 53% scored ≥ 13
	3	50% and more scored ≥ 25	52% and more scored ≥ 13	54% and more scored ≥ 13
Environmental Science & Awareness	0	less than 40% scored ≥ 25	less than 44% scored ≥ 30	Course removed and included in higher semester
	1	40% to 49% scored ≥ 25	45% to 54% scored ≥ 30	
	2	50% to 59% scored ≥ 25	55% to 64% scored ≥ 30	
	3	60% and more scored ≥ 25	65% and more scored ≥ 30	

Attainment Levels: External Assessment

Course	Attainment Level	CAYm3 2016-17	CAYm2 2017-18	CAYm1 2018-19
Mathematics I	0	less than 37% scored ≥ 56	less than 40% scored ≥ 56	less than 45% scored ≥ 56
	1	37% to 46% scored ≥ 56	40% to 49% scored ≥ 56	45% to 54% scored ≥ 56
	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

Engineering Physics	0	less than 45% scored ≥ 68	less than 45% scored ≥ 76	less than 45% scored ≥ 56
	1	45% to 54% scored ≥ 68	45% to 54% scored ≥ 76	45% to 54% scored ≥ 56
	2	55% to 64% scored ≥ 68	55% to 64% scored ≥ 76	55% to 64% scored ≥ 56
	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
	3	60% and more scored ≥ 46	62% and more scored ≥ 50	64% and more scored ≥ 50
Elements of Mechanical Engineering	0	less than 40% scored ≥ 68	less than 40% scored ≥ 72	less than 40% scored ≥ 50
	1	40% to 49% scored ≥ 68	40% to 49% scored ≥ 72	40% to 49% scored ≥ 50
	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
Basic Electrical Engineering	0	less than 35% scored ≥ 42	less than 45% scored ≥ 46	less than 50% scored ≥ 50
	1	35% to 44% scored ≥ 42	45% to 54% scored ≥ 46	50% to 59% scored ≥ 50
	2	45% to 54% scored ≥ 42	55% to 64% scored ≥ 46	60% to 69% scored ≥ 50
	3	55% and more scored ≥ 42	65% and more scored ≥ 46	70% and more scored ≥ 50
Basic Electrical Engineering Lab	0	No Lab	No Lab	less than 40% scored ≥ 30
	1			40% to 49% scored ≥ 30
	2			50% to 59% scored ≥ 30
	3			60% and more scored ≥ 30
Engineering Physics Lab	0	Included with Theory as it is an integrated subject	Included with Theory as it is an integrated subject	less than 50% scored ≥ 30
	1			50% to 59% scored ≥ 30
	2			60% to 69% scored ≥ 30
	3			70% and more scored ≥ 30

Mathematics II	0	less than 37% scored ≥56	less than 40% scored ≥56	less than 45% scored ≥56
	1	37% to 46% scored ≥56	40% to 49% scored ≥56	45% to 54% scored ≥56
	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
Engineering Chemistry	0	less than 45% scored ≥68	less than 45% scored ≥76	less than 45% scored ≥56
	1	45% to 54% scored ≥68	45% to 54% scored ≥76	45% to 54% scored ≥56
	2	55% to 64% scored ≥68	55% to 64% scored ≥76	55% to 64% scored ≥56
	3	65% and more scored ≥68	65% and more scored ≥76	65% and more scored ≥56
Introduction to Programming with C	0	less than 40% scored ≥68	less than 40% scored ≥76	less than 45% scored ≥76
	1	40% to 49% scored ≥68	40% to 49% scored ≥76	45% to 54% scored ≥76
	2	50% to 59% scored ≥68	50% to 59% scored ≥76	55% to 64% scored ≥76
	3	60% and more scored ≥68	60% and more scored ≥76	65% and more scored ≥76
Computer Aided Engineering Drawing	0	less than 40% scored ≥50	less than 40% scored ≥54	less than 40% scored ≥56
	1	40% to 49% scored ≥50	40% to 49% scored ≥54	40% to 49% scored ≥56
	2	50% to 59% scored ≥50	50% to 59% scored ≥54	50% to 59% scored ≥56
	3	60% and more scored ≥50	60% and more scored ≥54	60% and more scored ≥56
Basic Electronics	0	less than 30% scored ≥56	less than 30% scored ≥58	less than 30% scored ≥60
	1	30% to 39% scored ≥56	30% to 39% scored ≥58	30% to 39% scored ≥60
	2	40% to 49% scored ≥56	40% to 49% scored ≥58	40% to 49% scored ≥60
	3	50% and more scored ≥56	50% and more scored ≥58	50% and more scored ≥60
Programming with C lab	0	Included with Theory as it is an integrated subject	Included with Theory as it is an integrated subject	less than 45% scored ≥26
	1			45% to 54% scored ≥26
	2			55% to 64% scored ≥26
	3			65% and more scored ≥26

Engineering Chemistry Lab	0	Included with Theory as it is an integrated subject	Included with Theory as it is an integrated subject	less than 50% scored ≥ 30
	1			50% to 59% scored ≥ 30
	2			60% to 69% scored ≥ 30
	3			70% and more scored ≥ 30
Business / Professional communication	0	less than 30% scored ≥ 50	less than 32% scored ≥ 26	less than 34% scored ≥ 26
	1	30% to 39% scored ≥ 50	32% to 41% scored ≥ 26	34% to 43% scored ≥ 26
	2	40% to 49% scored ≥ 50	42% to 51% scored ≥ 26	44% to 53% scored ≥ 26
	3	50% and more scored ≥ 50	52% and more scored ≥ 26	54% and more scored ≥ 26
Environmental Science & Awareness	0	less than 40% scored ≥ 50	less than 44% scored ≥ 60	Course removed and included in higher semester
	1	40% to 49% scored ≥ 50	45% to 54% scored ≥ 60	
	2	50% to 59% scored ≥ 50	55% to 64% scored ≥ 60	
	3	60% and more scored ≥ 50	65% and more scored ≥ 60	

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

Table 8.4.2.1a CO Attainment CAYm3 (2016-17)

S. No.	Course Code	Course Name	Direct Attainment		Overall CO attainment
			CIE Evaluations	Semester End Exam	
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

CO Attainment 2017-18

Table 8.4.2.1b CO Attainment CAYm2 (2017-18)

S. No.	Course Code	Course Name	Direct Attainment		Overall CO attainment
			CIE Evaluations	Semester End Exam	
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 CAYm1 (2018-19)

S. No.	Course Code	Course Name	Direct Attainment		Overall CO attainment
			CIE Evaluations	Semester End Exam	
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 Engineering	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.

POs/PSOs attainment	Assessment method	Assessment Tool	Frequency
	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	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
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	-	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)

Table 8.5.1.1b Programme Articulation Matrix CAYm2 (2017-18)

Course Code	Course Name	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
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	-	-	-	3	1	-	1
MEE14/24	Computer Aided Engineering Drawing	2	-	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)

Table 8.5.1.1b Programme Articulation Matrix CAYm1 (2018-19)

Course	Course Name	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
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

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

PO Attainment CAYm2 (2017-18)

Table 8.5.1.2b PO Attainment CAYm2 (2017-18)

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

PO Attainment CAYm1 (2018-19)

Table 8.5.1.2c PO Attainment CAYm1 (2018-19)

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
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 Attainment Level	2016-17	2017-18	2018-19
	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)

PO	Target Level	Attainment Level	Observations
PO-1: Engineering knowledge:	Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.		
	Emphasized the role of fundamental sciences in Electronics and Communication engineering domain by conducting the virtual tours of the Labs related to Electronics and Communication Engineering department.		
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 Expert Lectures from leading R & D organizations such as Tata Institute of Fundamental Research(TIFR)Bangalore, International Researchers (USA), National Aerospace Laboratories (NAL) Bangalore, Raman Research Institute(RRI).		
PO-2	2.6	2.96	Target Achieved

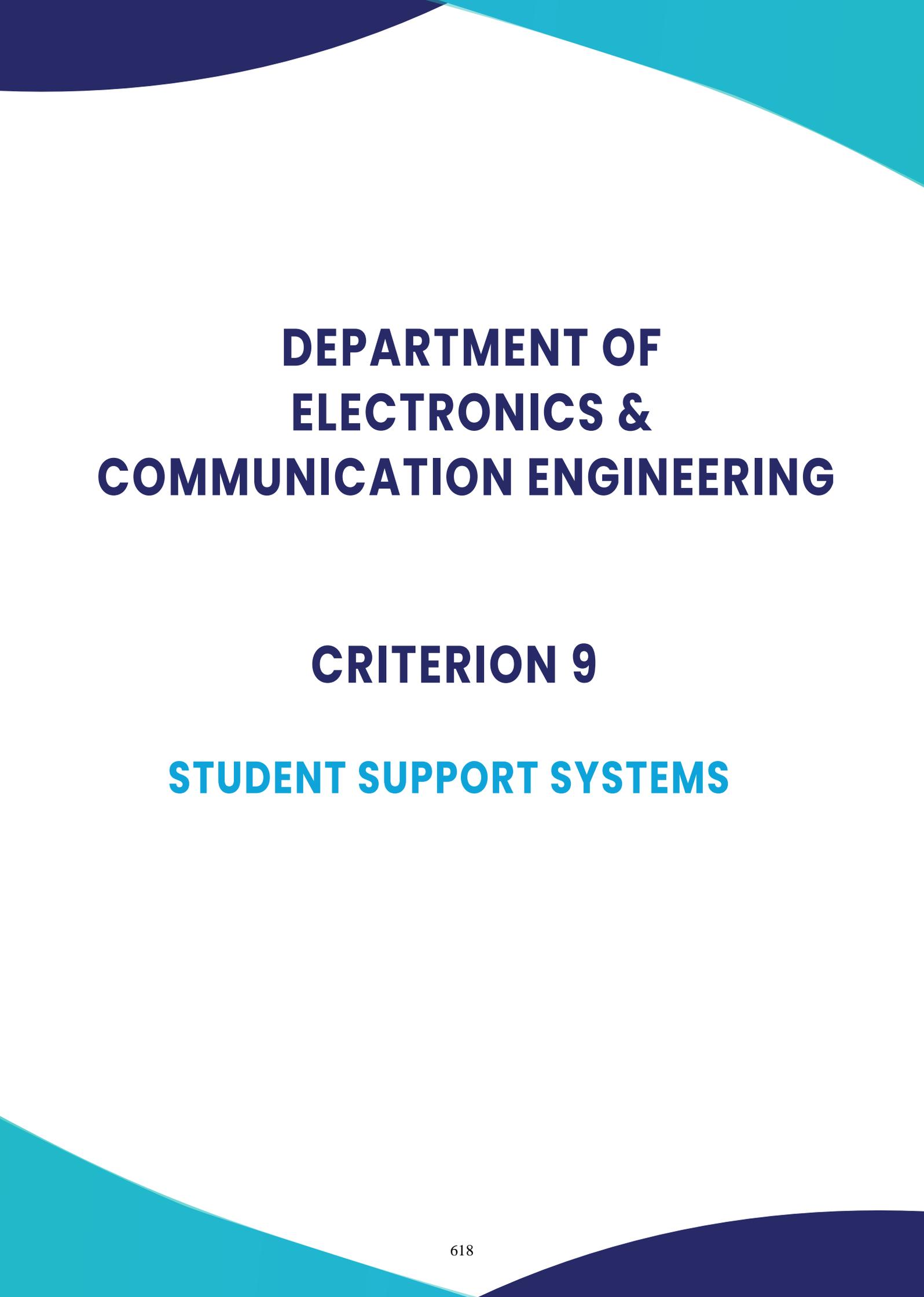
PO	Target Level	Attainment Level	Observations
<p>PO-3: Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.</p>			
<p>Workshop on 18MEE14/24 (CAED) was conducted to the students. Using the Industry Institute labs students were demonstrated the solution for engineering problems. As well the students were assigned the small projects as self-study and the project exhibition was conducted at the end of the semester.</p>			
PO-3	2.6	2.91	Target Achieved
PO	Target Level	Attainment Level	Observations
<p>PO-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.</p>			
<p>The significance of literature survey was outlined to students.</p>			
PO-4	2.6	2.94	Target Achieved
PO	Target Level	Attainment Level	Observations
<p>PO-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 with an understanding of the limitations.</p>			
<p>The product and design applications were demonstrated using the CISCO Lab and MATLAB tool.</p>			
PO-5	2.6	2.95	Target Achieved
PO	Target Level	Attainment Level	Observations
<p>PO-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.</p>			
<p>Engineers primary obligation is to protect the safety, health and welfare of the public. Engineers decision making is very important because the ultimate beneficiary are the general public or society at large. This was emphasized through the course Constitution of India and Professional Ethics. Three weeks' induction program also outlined the contribution of engineers to the society.</p>			
PO-6	2.6	3	Target Achieved
PO	Target Level	Attainment Level	Observations
<p>PO-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.</p>			

The electronic waste management and its need in the current digital world impacting the ecological balance was demonstrated through videos.			
PO-7	2.6	3	Target Achieved
PO	Target Level	Attainment Level	Observations
PO-8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.			
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	2.6	2.95	Target Achieved
PO	Target Level	Attainment Level	Observations
PO-9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary 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	2.6	2.97	Target Achieved
PO	Target Level	Attainment Level	Observations
PO-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 reports and design documentation, make effective presentations, and give and receive clear instructions.			
The "Center for Soft Skills and Life Long Learning" ensures the students are equipped with all possible communication tools.			
PO-10	2.6	2.96	Target Achieved
PO	Target Level	Attainment Level	Observations
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
PO	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
ELECTRONICS &
COMMUNICATION ENGINEERING**

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.
- 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.

Table 9.1.1: Summary of Mentoring System

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

The student mentoring process flow is shown below

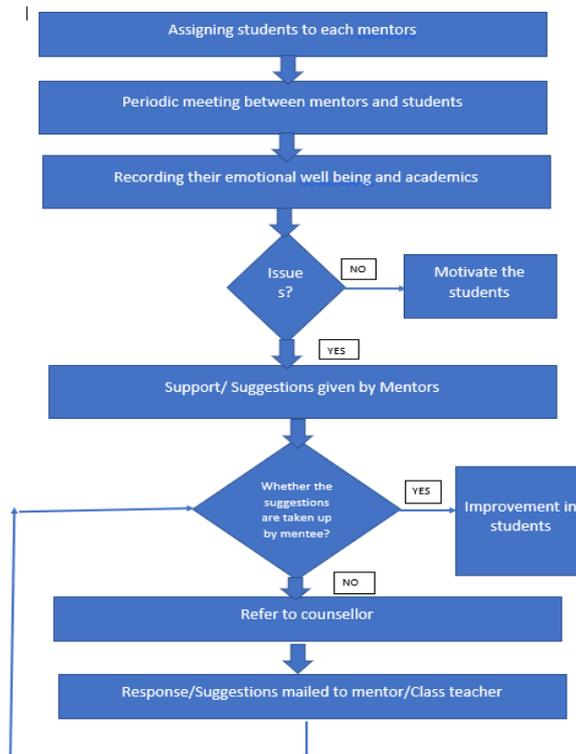


Figure 9.1.1: The structure of mentoring report

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 to 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.

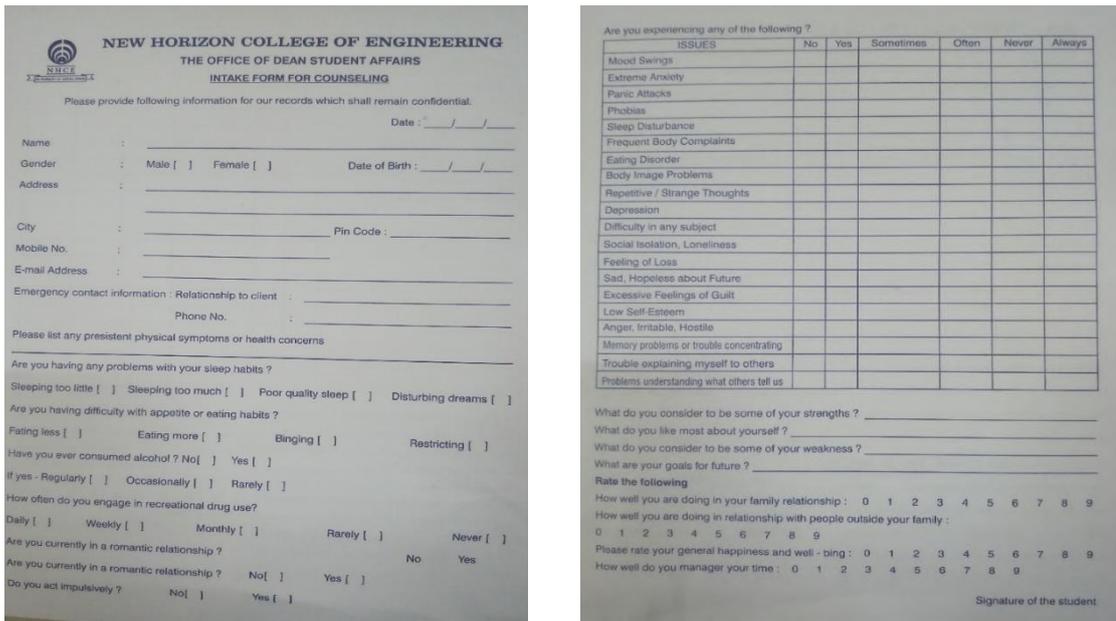
Procedure to be followed by counselors at NHCE:

- 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.

Table 9.1.2: Details of Counselors committee members

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

Format used by Counselors



NEW HORIZON COLLEGE OF ENGINEERING
 THE OFFICE OF DEAN STUDENT AFFAIRS
INTAKE FORM FOR COUNSELING

Please provide following information for our records which shall remain confidential.

Date : ___/___/___

Name : _____

Gender : Male [] Female [] Date of Birth : ___/___/___

Address : _____

City : _____ Pin Code : _____

Mobile No. : _____

E-mail Address : _____

Emergency contact information : Relationship to client : _____
 Phone No. : _____

Please list any present physical symptoms or health concerns _____

Are you having any problems with your sleep habits ?
 Sleeping too little [] Sleeping too much [] Poor quality sleep [] Disturbing dreams []

Are you having difficulty with appetite or eating habits ?
 Eating less [] Eating more [] Binging [] Restricting []

Have you ever consumed alcohol ? No [] Yes []
 If yes - Regularly [] Occasionally [] Rarely []

How often do you engage in recreational drug use?
 Daily [] Weekly [] Monthly [] Rarely [] Never []

Are you currently in a romantic relationship ? No Yes

Are you currently in a romantic relationship ? No [] Yes []

Do you act impulsively ? No [] Yes []

Are you experiencing any of the following ?

ISSUES	No	Yes	Sometimes	Often	Never	Always
Mood Swings						
Extreme Anxiety						
Panic Attacks						
Phobias						
Sleep Disturbance						
Frequent Body Complaints						
Eating Disorder						
Body Image Problems						
Repetitive / Strange Thoughts						
Depression						
Difficulty in any subject						
Social Isolation, Loneliness						
Feeling of Loss						
Sad, Hopeless about Future						
Excessive Feelings of Guilt						
Low Self-Esteem						
Anger, Irritable, Hostile						
Memory problems or trouble concentrating						
Trouble explaining myself to others						
Problems understanding what others tell us						

What do you consider to be some of your strengths ? _____
 What do you like most about yourself ? _____
 What do you consider to be some of your weakness ? _____
 What are your goals for future ? _____

Rate the following

How well you are doing in your family relationship : 0 1 2 3 4 5 6 7 8 9
 How well you are doing in relationship with people outside your family :
 0 1 2 3 4 5 6 7 8 9
 Please rate your general happiness and well - being : 0 1 2 3 4 5 6 7 8 9
 How well do you manager your time : 0 1 2 3 4 5 6 7 8 9

Signature of the student _____

Figure 9.1.2: Format of the counseling form used by counselor

IV. Efficacy of mentoring/counseling system:

The mentoring/counseling system developed by the college is very effective as defined by different parameters as listed.

Table 9.1.3: Efficacy of Mentoring System

Parameters	Outcome
Student’s Attendance:	Enhanced / improved
The Involvement of Students in the Academics, Co-Curricular and Extra-Curricular:	Has improved
Individual Student’s Talents/ Skills Identified and Nurtured towards:	Excellence (the mentor/counselor/student ratio being optimum for supported growth).
Students’ Self-Confidence/ Self-Esteem:	Improved over time, thus making inner adjustments easier and coping with and tackling successfully external challenges like facing job interviews/ speaking in public /giving presentations/ even mentoring peers.

9.1 (A) Sample Format of Mentoring System for CSE

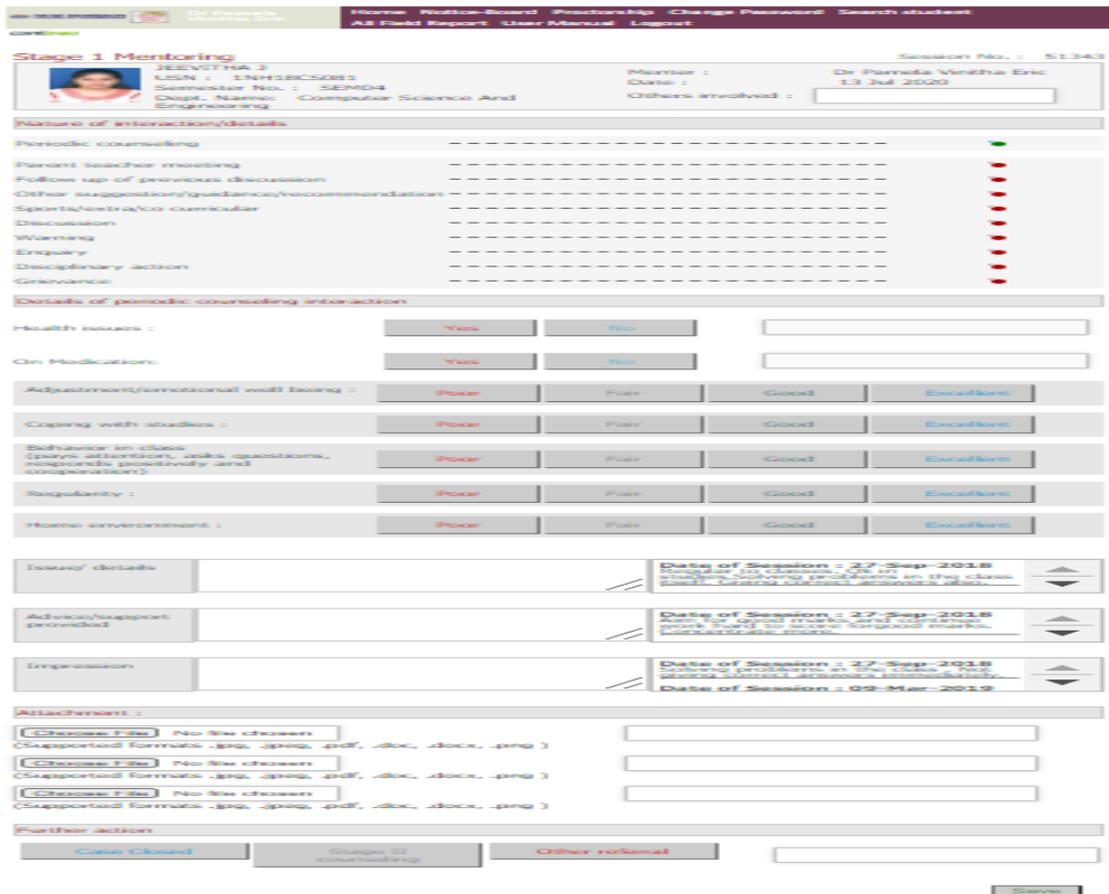


Figure 9.3: A snap shot of the mentoring system

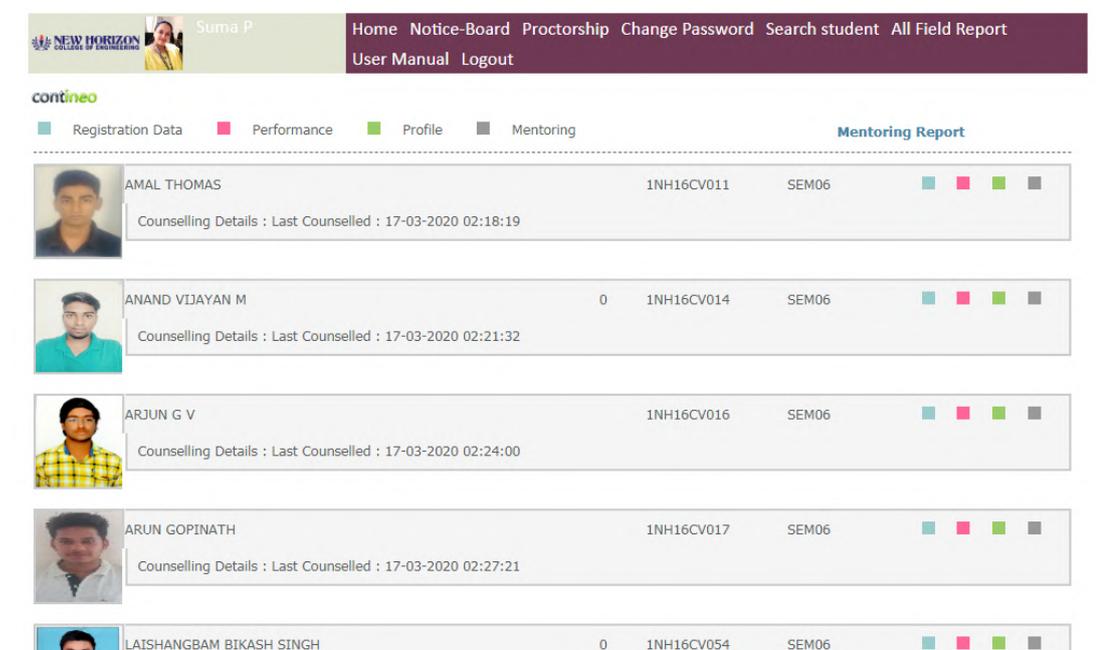
Table 9.14: List of Courses offered for Life Long Learning

Semester	Course Code	Subject Name
Course Specific		
I	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
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		
I	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		
I	HSS171	Essential English
I	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 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 (B) Sample Format of Mentoring System for CV



The screenshot shows the Contineo mentoring system interface. At the top, there is a navigation bar with links for Home, Notice-Board, Proctorship, Change Password, Search student, All Field Report, User Manual, and Logout. Below this is a menu with options: Registration Data, Performance, Profile, and Mentoring. The main content area displays a list of students with their profiles, names, IDs, and counselling details. Each student entry includes a profile picture, name, ID, and counselling details. The counselling details include the last counselling date and time.

Student Name	ID	Semester	Last Counselling Date
AMAL THOMAS	1NH16CV011	SEM06	17-03-2020 02:18:19
ANAND VIJAYAN M	1NH16CV014	SEM06	17-03-2020 02:21:32
ARJUN G V	1NH16CV016	SEM06	17-03-2020 02:24:00
ARUN GOPINATH	1NH16CV017	SEM06	17-03-2020 02:27:21
LAISHANGBAM BIKASH SINGH	1NH16CV054	SEM06	

Figure 9.1.4: Sample Student mentoring in Contineo

Sl. No	Name	USN	Roll No	Semester	Nature of Counselling	Issue/Details	Suggestion/Action Plan	Date Of Session
1	AMAL THOMAS	1NH16CV011		SEM06	Periodic counseling	Irregular to classes, He is good but lack in concentration	stage2	17-03-2020
2	ANAND VIJAYAN M	1NH16CV014	0	SEM06	Periodic counseling	He is irregular to classes and lacks interest in studying	stage2	17-03-2020
3	ARJUN G V	1NH16CV016		SEM06	Periodic counseling	not regular.... average scoring in internals	none	17-03-2020
4	ARUN GOPINATH	1NH16CV017		SEM06	Periodic counseling	Irregular and absent in most of subjects cie	stage2	17-03-2020
5	M GIRISHANKAR	1NH16CV057	0	SEM06	Periodic counseling	he s regular to classes but should concentrate in class and work hard.	none	17-03-2020
6	SHUHAIL M	1NH16CV101		SEM06	Periodic counseling	he is very irregular to class.	stage2	17-03-2020
7	ABDUL ROUF WANI	1NH17CV001		SEM06	Periodic counseling	Quite good in the studies, However there is a scope for improvement	none	18-03-2020
8	ABHINAV DUBEY	1NH17CV002		SEM06	Periodic counseling	student is regular and disciplined, no issues in academics and behaviour	none	18-03-2020
9	ABHISHEK B V	1NH17CV003		SEM06	Periodic counseling	good student no issues	none	18-03-2020
10	ABHISHEK P	1NH17CV004		SEM06	Periodic counseling	good student no issues	none	18-03-2020
11	AKRITI NAIK	1NH17CV008		SEM06	Periodic counseling	v good student no issues	none	18-03-2020

Mentor: suma p HOD

Figure 9.1.5: Sample Student Mentoring Report

Sl.No	Semester	USN	Student Name	Subjects < 40%	SESSION SUMMARY
1	IV A	1NH16CV102	SIDDESH S	19CIV44-Analysis of Determinate Structures	Re-registered student who said subjects seems to be a little different now and hence is taking time to understand. Oriented him the importance of academics and advised him to approach teachers for any difficulties. He seems to be confident this internals.
				19CIV46-Applied Hydraulics and Machinery	
2	IV A	1NH16CV124	YUVRAJ YADAV	19CIV44-Analysis of Determinate Structures	Re-registered student who said MATH is a new added subject now and hence is taking time to understand. Oriented him the importance of academics and advised him to approach teachers for any difficulties. He seems to be promising this time.
				19CIV45-Higher Surveying	
				19CIV46-Applied Hydraulics and Machinery	
3	IV A	1NH17CV017	BILLI LOMBI	19CIV44-Analysis of Determinate Structures	He said he was earlier in C sec and then was shifted to A sec which made him difficult to cope with the teaching techniques of different teachers. Advised him to approach teachers for any doubts and concentrate to study well. Oriented him the importance of studies. he seems more confident for this internals.
				19CIV45-Higher Surveying	
4	IV A	1NH17CV019	CHANDAN SURYA L H	19CIV44-Analysis of Determinate Structures	He said he was earlier in C sec and then was shifted to A sec where the syllabus was much ahead than the previous class and hence missed classes. Advised him to approach teachers for any doubts and concentrate to study well. Oriented him the importance of studies. he seems more assuring now.
				19CIV46-Applied Hydraulics and Machinery	
5	IV A	1NH17CV054	MADHU SUDANA K	19CIV44-Analysis of Determinate Structures	He said he joined late for the semester and by then most of the syllabus was covered and hence could not do well. Oriented him the importance of attendance and academics. Advised him to approach teachers when missed classes to clear doubts. He Seems more comfortable for this coming internals.
				19CIV45-Higher Surveying	

Figure 9.1.6: Sample Counseling Report

Daily Counselling report (14.05.2020)

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 sem 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.

SAHANA.S
Student counsellor
ISE & CIVIL

Figure 9.1.7: Counseling report

Table 9.1.5: List of Courses offered for Life Long Learning

Semester	Course Codes	Course Name
I	19HSS171	Essential English
I/II	19HSS172	Constitution of India and Professional Ethics
II	19HSS271	Professional Communication
III	19HSS321	Economics for Engineers
III	19HSS323	Environmental Science and Awareness
IV	19HSS422	Life skills for Engineers
		All Civil Engineering courses

9.1 (C) Sample Format of Mentoring System for ECE



New Horizon College of Engineering
First Year
Student Mentoring Report

Sl. 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 9.1.8: Sample Student Mentoring Report

IIIA

Sl.No.	USN	STUDENT NAME	Session Summary
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.	1NH18EC005	AMITH SABU	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 internals.
3.	1NH18EC016	AYAAN KHAN S	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 study better for the coming internals.

Figure 9.1.9: Sample report by counselor

IIIA

Sl.No.	USN	STUDENT NAME	Session Summary
1.	1NH18EC001	ABHIRAG	<p>The student said that he did not study as he missed classes due to fast track exam</p> <p>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.</p>
2.	1NH18EC005	AMITH SABU	<p>The student said that he did not study that is the reason he could not perform well.</p> <p>Spoke to him on the consequences of not securing enough marks for the internals. Motivated him to study better for the coming internals.</p>
3.	1NH18EC016	AYAAN KHAN S	<p>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 study better for the coming internals.</p>

Figure 9.1.9: Sample report by counselor

Table 9.1.6: List of Courses offered for Life Long Learning

Semester	Course Codes	Subject Name New
I	15MA11	Engineering Mathematics I
I	15CH12	Engineering Chemistry
I	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
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

9.1 (D) Sample Format of Mentoring System for ME



Sl. No	Name	USN	Roll No	Semester	Nature of Counseling	Issue/Details	Suggestion/Action Plan	Date Of Session
1	B MAHITHESH GOWD	1NH15ME708	0	SEM08	Periodic counseling	NOT REGULAR TO CLASS AS HE IS REREGISTERED.	none	18-03-2020
2	MOHAMMED RIYAZ BAIG	1NH15ME727	0	SEM08	Periodic counseling	since he has very less basics HE NEEDS TO PREPARE MORE	none	18-03-2020
3	RAKSHITH REDDY	1NH15ME735	0	SEM08	Periodic counseling	Irregular to classes.working on internship	none	18-03-2020
4	ABHISHEK	1NH16ME700		SEM08	Periodic counseling	no issues observed.	none	18-03-2020
5	GOUTHAM G	1NH16ME718		SEM08	Parent teacher meeting	student was not willing to come to college and hence parent had to come with him	none	18-03-2020
6	ADHARSH MADHUSUDAN	1NH16ME701		SEM08	Periodic counseling	Good student. No issue with him.	none	18-03-2020

Figure No. 9.1.10: Student Counseling Report (Faculty)

Counseling Report on Students scored less than 10 in CIEI- Odd Semester, 2019			
Department of Mechanical Engineering- 3rd Semester			
	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 terms of attendance and marks. Encouraged to set target scores for all these subjects in second internal to achieve a safe semester average score. Appeared to be confident.
18ME089	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.
18ME082	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
18ME081	Nischal P	Difficulty with numerical subjects and because of fever also couldn't do well. Asked for retest	Suggested to take help from teachers or friends for better subject clarity.
18ME424	Aneesah Ahmed	Joined late for the semester and some basics are missing. Requested for retest.	Needs to work on motivation. Helped to set target scores according to the shortage to compensate on marks.
18ME759	Yathish Ravindra	Because of viral fever couldn't do well.	Helped to set target scores accordingly for the next exam.

Figure No. 9.1.11: Student Counseling Report (Counselors)

Table 9.7: Impact of efficacy of mentoring/counseling system

Type of Mentoring/ Counseling	2018-19		2017-18		2016-17	
	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

Table 9.2.1: Feedback collection process

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
Metrics used for calculation	5-Excellent 4-Very good 3-Good 2-Satisfactory 1-Below average

Feedback Analysis Process

Summary of the feedback reports pertaining to course, program and teaching-learning 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

Questionnaire

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
11. Treats students with respect and effectively
12. Control of the classroom by faculty
13. Relevance of assignments to the subject
14. Overall satisfaction
15. Discussion of any interesting topic beyond the syllabus but relevant to the field.
16. Usefulness of the question papers of internal tests in your preparation for the examination.
17. Helpfulness of the online course material (question bank, etc.) and assignments for you to understand and prepare and for tests and examination.
18. Accessibility availability after the class hours in the college.

Rating of Scale

5- Excellent	2- Fair
4- Very Good	1- Poor
3- Good	

Figure 9.2.1: Format of student feedback on Teaching – Learning

Reward / corrective measures**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.

9.2 (A) 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

STUDENT FEEDBACK - EVEN TERM 2020

This form is given to you to analyze the effectiveness of the service offered at NHCE. Please answer the questions below to the best of your ability to reflect your individual feeling about the course so far, and not those of your collective group. This would help us in accurately evaluating how the course is perceived by each one of you individually, and the level of interaction between you, faculty and the institution. Please be honest and candid in your feedback. Your opinion is treated completely confidential.

Neuroanatomical And Functional Pools (BTES12) Dr. Asha B M

FEEDBACK ON FACULTY

Sl. No.	Particulars	(By: Asha B M)
1	Clarity in explaining the subject.	Select
2	Subject explained was easy to understand.	Select
3	Content quality is relevant and useful.	Select
4	Faculty answers to your queries/questions.	Select
5	Coverage of topic/subject is on time.	Select
6	The concepts were explained with examples.	Select
7	Faculty preparation for the class.	Select
8	Faculty guidance for preparation of seminar, conference and exam.	Select
9	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
16	Usefulness of the question papers of internal tests in your preparation for the examination.	Select
17	Helpfulness of the online course material (question bank, etc.) and assignments for you to understand and prepare and for tests and examination.	Select
18	Accessibility availability after the class hours in the college.	Select

Figure 9.2.2: 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.

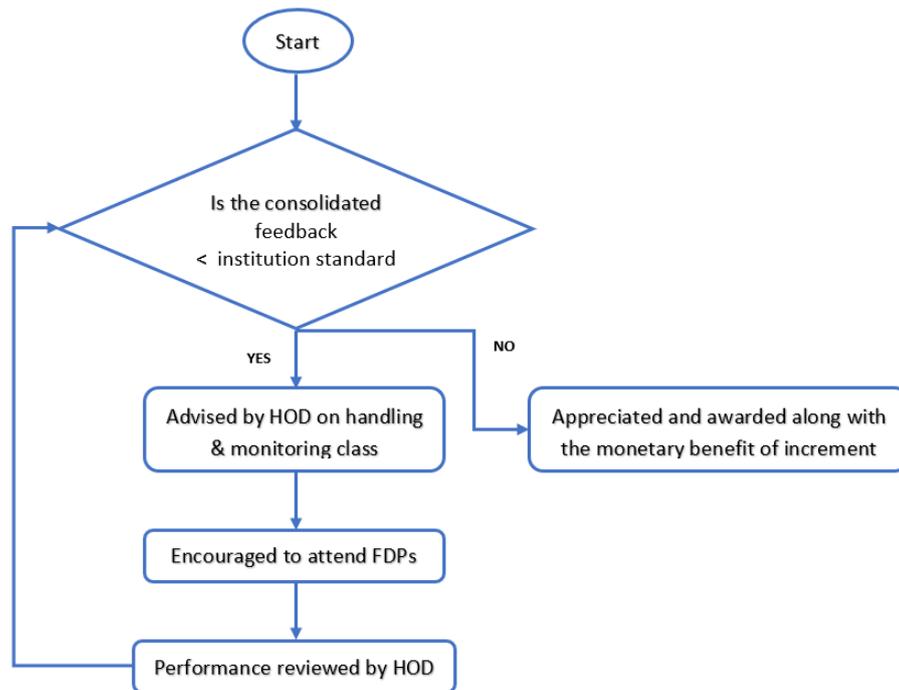


Figure 9.14: Sample Corrective Measure on teaching-learning

Table 9.2.2: Sample feedback analysis on Teaching –Learning

NEW HORIZON COLLEGE OF ENGINEERING			
DEPARTMENT OF CIVIL ENGINEERING			
<u>Faculty feedback analysis - 2019-20 - EVEN SEM</u>			
Sl.no.	Feedback range	Name of the faculty	Score
1	4.5 - 5	Dr. Niranjana P S	4.64
2		Dr. N Mahesha	4.52
3	4-4.5	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		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	3.5 - 3.99	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		Mr. Rajendra T N	3.91
29		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
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		37
Feedback	4.5-5	2
Feedback	4-4.5	20
Feedback	3.5-3.99	15
Feedback	less than 3.5	0

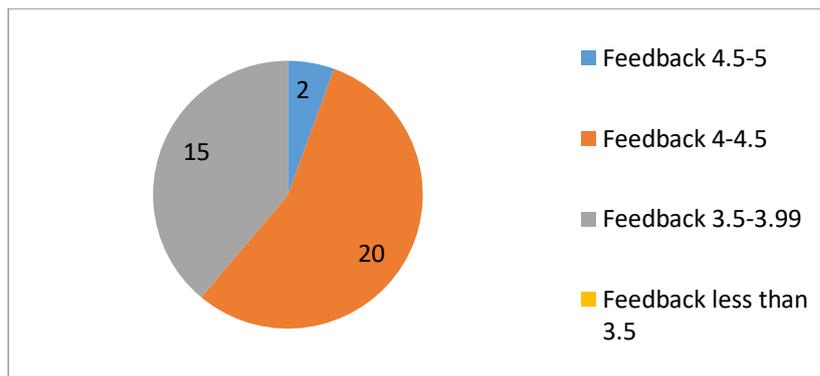


Figure 9.2.5: Sample feedback analysis on Teaching- Learning

- 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 9.2.6

NEW HORIZON COLLEGE OF ENGINEERING, BANGALURU
DEPARTMENT OF CIVIL ENGINEERING
FACULTY FEEDBACK AND CORRECTIVE MEASURE ANALYSIS

FACULTY NAME: -

DESIGNATION: -

SEM/ YEAR: -

Sl. No	Curriculum, Teaching, Learning and Evaluation:	Excellent (5)	Very Good (4)	Good (3)	Average (2)	Poor (1)
1.	Clarity in explaining the subject & Treats students with respect and courtesy.					
2	Communicates distinctly and effectively.					
3	Aims and objectives of the syllabi are well defined and clear to students					
4	Course content is followed by corresponding reference books/materials					
5	The course/syllabus has good balance between theory and Lab.					
6	The course/syllabus of this subject increased my knowledge and perspective in the subject area					
7	The course/program of studies carries sufficient number of optional papers.					

8	Counseling the faculty through counselors About building confidence in handling the subject(referral*)	
9.	Deputing faculty to FDP (if any) (referral)	

REMARK IF ANY

Figure 9.2.6: Sample Corrective Measure on teaching-learning

9.2 (C) Sample Feedback analysis for ECE

New Horizon College of Engineering
Student Feedback Report
Consolidated Faculty Scorecard for EC Department

SR. No.	Name of the faculty	CLASS	No of Students	Subjects	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Avg.		
1	Ms. Monika Gupta	EC SEM IV SEC A	1	ECE44	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
		EC SEM IV SEC A	1	ECE44	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
		EC SEM IV 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	4.67	4.33	4.67	4.67	4.67	4.67	4.63
		EC SEM IV SEC A	43	19ECE45	4.09	4.12	4.02	4	4.28	4.05	4.33	4.05	4.37	4.1	4.17	4.05	4.07	3.93	3.65	4	3.93	3.88	4.06	4.06	
		EC SEM IV SEC A	19	19ECL48	3.89	3.74	3.68	3.68	3.84	3.63	3.74	3.58	4	3.79	3.79	3.53	3.74	3.74	3.78	3.53	3.74	3.68	3.73	3.73	
		EC SEM IV SEC A	12	19ECL48	4.42	4.33	4.58	4.17	4.5	4.33	4.42	4.25	4.42	4.25	4.42	4.33	4.5	4.25	3.82	4.42	4.33	4.25	4.33	4.25	4.33
		Overall avg				4.35	4.31	4.33	4.25	4.38	4.28	4.36	4.2	4.41	4.3	4.34	4.26	4.33	4.27	4.1	4.27	4.28	4.25	4.29	
		2	Ms. Vijaya	EC SEM IV SEC B	1	18HSS272	4	4	3	3	3	4	3	4	3	4	3	4	4	3	4	3	4	3	3.5
				Overall avg				4	4	3	3	3	4	3	4	3	4	3	4	3	4	3	4	3	3.5
		3	Ishani Mishra	EC SEM IV SEC A	1	ECE43	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
EC SEM IV SEC A	19			19ECL47	3.68	3.42	3.63	3.58	3.32	3.32	3.68	3.68	3.74	3.63	3.53	3.47	3.32	3.42	3.5	3.47	3.37	3.26	3.5	3.5	
EC SEM IV SEC C	1			ECE44	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
EC SEM IV SEC C	1			ECE44	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
EC SEM IV SEC C	50			19ECE44	4.46	4.28	4.42	4.48	4.52	4.42	4.48	4.5	4.5	4.44	4.5	4.16	4.44	4.4	4.32	4.44	4.4	4.44	4.42	4.42	4.42
EC SEM VI SEC C	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	4.33	4.34	4.34
EC SEM VI SEC C	14			ECE61	4.29	4.21	4.14	4.14	4.07	4.07	4.14	4.14	4.43	4.21	4.36	4.21	4.29	4.14	4.29	4.21	4.29	4.36	4.22	4.22	4.22
EC SEM VI SEC C	13			ECE61	4.23	4.23	4.31	4.38	4.46	4.23	4.46	4.23	4.54	4.15	4.31	4.15	4.38	4.38	4.08	4.08	4.15	4.08	4.27	4.27	4.27
EC SEM VI SEC C	19			ECE61	4.37	4.47	4.42	4.32	4.42	4.37	4.42	4.42	4.53	4.53	4.42	4.53	4.53	4.53	4.58	4.53	4.53	4.47	4.47	4.47	4.47
Overall avg				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	4.36	4.35	4.34	4.34	4.33	4.36	4.36		

Figure 9.2.7: Sample Students feedback on Teaching -Learning

9.2 (D) Sample Feedback analysis for ME

New Horizon College of Engineering

Student Feedback Report
Consolidated Faculty Scorecard for ME Department

SR. No.	Name of the faculty	CLASS	No of Students	Subjects	Q.1	Q.2	Q.3	Q.4	Q.5	Q.6	Q.7	Q.8	Q.9	Q.10	Q.11	Q.12	Q.13	Q.14	Q.15	Q.16	Q.17	Q.18	Avg.	
1	Prof. Puneeth H V	MIESEM IV SECA	69	MKE452	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	
		MIESEM IV SECA	24	MKE452	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	
		MIESEM IV SECA	23	MKE452	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	
		MIESEM IV SECA	22	MKE452	4.77	4.82	4.73	4.86	4.82	4.73	4.77	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
2	Prof. Ronald Reagon R	MIESEM IV SECA	69	MKE462	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	
		MIESEM IV SECA	24	MKE462	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	
		MIESEM IV SECA	23	MKE462	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	
		MIESEM IV SECA	22	MKE462	4.82	4.77	4.82	4.73	4.68	4.68	4.86	4.73	4.73	4.82	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
3	Dr. Kavitha	MIESEM IV SECA	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	
		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
4	Prof. Raghu Tllak Reddy	MIESEM IV SECA	69	MKE442	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	
		MIESEM IV SECA	24	MKE442	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	
		MIESEM IV SECA	23	MKE442	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	
		MIESEM IV SECA	22	MKE442	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. 9.2.8: Faculty Feedback

Faculty Feedback Analysis for EVEN Semester 2018

Total 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

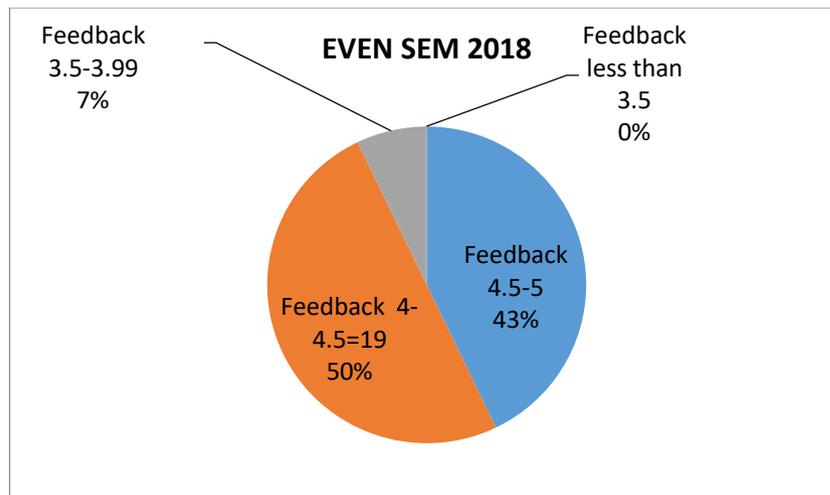


Figure No. 9.2.9: Faculty Feedback analysis

- 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

Table 9.3.1: Details of feedback collection process

Items	Description
Feedback collected on all facilities provided by the college.	YES
Feedback collection process	Computerized
Feedback receiver	Administrative officer / Admin manager
Frequency of feedback collection	Once in an academic year
Metrics used for calculation	Strongly agree Agree Partially agree Disagree
Purpose of comments	For improving the quality of facilities.

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 9.3.1: Table Tennis room



Figure 9.3.2: 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(A) 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.



The screenshot shows a web-based feedback form with three main sections:

- Feedback to Placement:** A table with 6 rows. Each row has columns for 'Sl.No.', 'Particulars', and 'Rating'. The items include 'Quality of training programs provided - Technical', 'Satisfaction on number of opportunities provided', 'Satisfaction on profile of companies visiting PPTCC', 'Quality of training programs provided - Non Technical (Soft Skills & Aptitude)', 'Placement Office responsiveness to students', and 'Overall satisfaction on placement assistance'.
- Feedback to the college:** A table with 13 rows. Each row has columns for 'Sl.No.', 'Particulars', and 'Rating'. The items include 'Library facilities', 'Placement support provided', 'Cyber Lab facility', 'Extra-curricular activities at College', 'Responsiveness of Exams office', 'Transport facilities of the College', 'Hostel Facility', 'Canteen facilities', 'Lab facilities', 'Classroom Infrastructure', 'Responsiveness of college admin office', 'Responsiveness of Accounts office', and 'Toilet facilities and maintenance'.
- Feedback for placement Trainer/Institute Aptitude Training:** A table with 6 rows. Each row has columns for 'Sl.No.', 'Particulars', and 'Rating'. The items include 'Faculty's preparation for the class', 'Subject explained was easy to understand', 'Clarity in explaining the subject', 'Content quality - relevant & usefulness', 'Explanation of concepts with examples', 'Faculty answers to your queries / questions', 'Overall satisfaction', and 'Communicates distinctly and effectively'.

At the bottom of the form, there is a 'Comments (if any)' text area and a 'Submit' button.

Figure 9.23: Sample Student feedback on facilities

9.3(B) Feedback analysis for CV

NEW HORIZON COLLEGE OF ENGINEERING, BANGALURU

DEPARTMENT OF CIVIL ENGINEERING

FEEDBACK FORM ON FACILITIES

YEAR:.....

SEM:.....

SEC:.....

FACILITIES/ RATINGS	EXCELLENT (5)	VERY GOOD (4)	GOOD (3)	AVERAGE (2)	FAIR (1)
CLASS ROOM INFRASTRUCTURE					
LIBRARY					
LABORATORIES					
CANTEEN					
PLAYGROUND					
INTERNET FACILITY					
INDOOR STADIUM					
PARKING SPACE					
COLLEGE AMBIENCE					
MEDICAL FACILITY					
OVERALL RATING					

REMARK IF ANY

Figure 9.3.4: Sample Student feedback on facilities

9.3(C) Feedback analysis for ECE

Respected sir,
The following are the key points from the student feedback and the action has been taken.

Sl. No.	Year	Problem	Action taken
1	2 nd	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 mini project in charge and asked to communicate the same to all guides
3		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	3 rd	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 9.3.5: Sample Student feedback on facilities

9.3(D) Feedback analysis for ME

Sl No	Remarks	Class teachers Remarks
1	Due to such massive pandemic plz let the students stay at home safely and continue their semesters	Informed
2	I have been working with HR dept. and Executive Director Prof. Gurucharan Singh and his HR team have always guided and encouraged me. they have also responded to me after college hours. I thank ED sir for giving me the opportunity of being a brand ambassador for a japanese company. I was just a student with academic knowledge but now i also know about corporate culture and this credit goes to ED sir and his team. Me being a student from mechanical dept. my HOD Dr.M S Ganesha Prasad sir is soo supportive and he has always been there allowing me to take part in events and other extra curricular activities. Also my class teacher Prof.Rajesh sir has been protective and helping me cope up with the portions when i miss classes for events. he has also helped me to convey the required message to subject teachers. I hereby thank all the faculty and college officials for trusting me and giving me the opportunity and being soo friendly and helpful. THANK YOU! ALL	Noted
3	Kindly request the college to provide information regarding the end semester exams and fastrack semester as soon as possible Request teachers to upload the timetable for online classes the previous evening to avoid confusion and provide clarity	Informed and conducted through parent-teachers /students-teachers
4	Place check over mechanics block washrooms have a proper flash to	Informed to the concered staff
5	Please make college half day and decrease the price in canteen	No comment
6	Poor transportation from vidya mandir to college... And full off noise beside construction plz do it in mornig not night thank you	Informed to the concered staff
7	SOME ANSWERS WERE RESPONSE FOR THE ONLINE CLASS EDUCATION SYSTEM. I AN NOT ABLE TO UNDERSTAND MUCH AS I AM A DULL STUDENT	Discussed with all students
8	There's little to no promotion for extra curricular activities for the amount of fee that we students pay. There is a lot of unnecessary transactions that are being levied on the students on different terms	No comments
9	Try to provide extra k	Informed
10	Wifi provided by the c	Informed

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
No of Students:		3.757

Figure No. 9.3.6: 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

Table 9.4.1: A sample list of webinars organized during Covid

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

Following are the various modes of self-learning and facilities created in the institution.

Table 9.4.2: Self Learning Facilities

Web based learning	<ul style="list-style-type: none"> • It creates the opportunity for sharing ideas & knowledge and also helps improving lifelong learning skills by providing easy access to global resources. • It improves cross-cultural relationships which lead to collaboration between institution educators and learners
---------------------------	---

	<p>locally and internationally.</p> <ul style="list-style-type: none"> • Enhances active learning. • Contextualized content can be shared by all
<p>Library/Digital Library</p>	<ul style="list-style-type: none"> • 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 <p>The Digital Library offers,</p> <ul style="list-style-type: none"> • NPTEL videos. • Sufficient systems with multimedia facilities. • Institutional membership of DELNET, a library networking database. • Internet facility.
<p>Project Based Learning</p>	<ul style="list-style-type: none"> • Enables students to think from different angles or simply ‘to think out of the box’. • To aid in language development and in particular subject areas of study. • Helps in building knowledge base. • Helps in building Team work
<p>Case study</p>	<p>Students are actively engaged in figuring out the principles by abstracting from the examples. This develops their skills in:</p> <ul style="list-style-type: none"> • Problem solving • Analytical tools, quantitative and/or qualitative, depending on the case • Decision making in complex situations • Coping with ambiguities
<p>Professional Bodies</p>	<ul style="list-style-type: none"> • 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

	<p>networking possibilities or jump start to job hunt, a professional association membership is an option which is worth exploring.</p> <ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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

Table 9.4.3: Sample Sources and tools of self-learning

Sl. No.	Self-Learning Sources	Tools	ICT Support
1.	E Courses/Learning	NPTEL	Computer System Internet Connection
		Course Era	
		Swayam	
		Udemy	

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

Process of Self Learning

In the classrooms:

- Faculty members run at least 2 video lectures per course and evaluate as per Table 9.4.4

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

Table 9.4.4: Mode of evaluation with various related sources of self-learning

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.

9.4(A) 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.

Table 9.4.5: MOOC Courses Registered and Completed

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
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

Table 9.4.6: Paper Publication by Students

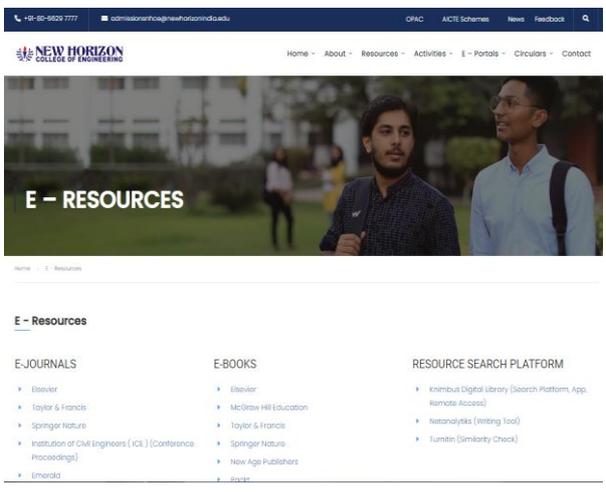
Sl. No	USN	Name of the Student	Title of the Paper	Journal	Date of Publication
Academic Year 2019-2020					
1	1NH16CS079 1NH16CS093 1NH14CS091	Eric, Pooja Nimje, Roshlin Acharya, Prachi Singh	Face emotion recognition techniques	International Journal of Scientific Research in Computer Science, Engineering and Information Technology ISSN: 2456-3307 UGC Journal No: 64718 Impact Factor = 4.032	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		Dec-19
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 Telecommunication		Dec-19
6	1NH16CS073 1NH16CS074 1NH16CS145	NirupashreeS 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	Dec-19
8	1NH16CS094	S Sivan Chakravarthy	Analyzing GraphQL and implementing the framework on Android devices	Dec-19
9	1NH16CS066	Namratha L Bemane	Safe-Ride: Automatic Detection of Potholes and Humps on Roads using Ultrasonic Sensor and Notifying the Same to the Drivers	Dec-19
10	1NH16CS051 1NH16CS118	Kirti R Nambiar, Vaibhavi Kulkarni	Credit card reader with face recognition using webcam	Dec-19
11	1NH16CS727 1NH16CS701	Shalini Koyikkal, Anurag Rajshekar	Efficient Buildings– A key element to build smart cities	Dec-19
12	1NH17CS106	Punyasri H	Feature selection for smartphone-based recognition of human activities and postural transitions	Dec-19
13	1NH17CS753	Srinivas R	An Application of Autocrat Workshop	Dec-19

14	1NH16CS700 1NH16CS709	Alankrita Srivastava, Hritik	Natural language processing- Interaction between humans and machines		Dec-19
Academic Year 2018-2019					
1	1NH15CS084	Nissi Thomas	Indexing solr with MySQL database	International Journal of Information and Computing Science ISSN NO: 0972- 1347	May-19
2	1NH16CS112	Sumangala S	APACHE PIG as a platform for Data analytics		May-19
3	1NH16CS736	V.C Chandra Kishore	A survey of Big Data analytics-it's challenges		May-19
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, 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		May-19

			Thyroid Cancer using machine learning algorithms	
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(B) Scope of Self-learning for CIVIL

Web based learning	<p>Compulsory NPTEL courses:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td colspan="3" style="text-align: center;">New Horizon College of Engineering, Bangalore</td> </tr> <tr> <td colspan="3" style="text-align: center;">Department of Civil Engineering</td> </tr> <tr> <td colspan="3" style="text-align: center;">Mentors for V semester NPTEL Courses- ODD 2019-2020</td> </tr> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> </tr> <tr> <th style="text-align: center;">Sl. No.</th> <th style="text-align: center;">Name of the Course</th> <th style="text-align: center;">Mentor</th> </tr> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">Design of Masonry Structures</td> <td style="text-align: center;">Dr. N Subramani</td> </tr> <tr> <td style="text-align: center;">2</td> <td style="text-align: center;">Waste Water Treatment and Recycling</td> <td style="text-align: center;">Dr. N Mahesha</td> </tr> <tr> <td style="text-align: center;">3</td> <td style="text-align: center;">Scheduling Techniques in Projects</td> <td style="text-align: center;">Mr. Channabasava</td> </tr> </table>	New Horizon College of Engineering, Bangalore			Department of Civil Engineering			Mentors for V semester NPTEL Courses- ODD 2019-2020									Sl. No.	Name of the Course	Mentor	1	Design of Masonry Structures	Dr. N Subramani	2	Waste Water Treatment and Recycling	Dr. N Mahesha	3	Scheduling Techniques in Projects	Mr. Channabasava
New Horizon College of Engineering, Bangalore																												
Department of Civil Engineering																												
Mentors for V semester NPTEL Courses- ODD 2019-2020																												
Sl. No.	Name of the Course	Mentor																										
1	Design of Masonry Structures	Dr. N Subramani																										
2	Waste Water Treatment and Recycling	Dr. N Mahesha																										
3	Scheduling Techniques in Projects	Mr. Channabasava																										
Library/Digital Library	 <ul style="list-style-type: none"> • The Institution library provides information and ideas that are fundamental to functioning successfully in today’s information and knowledge based society. 																											

	<ul style="list-style-type: none"> • The Institution library equips students with learning skills and develop the knowledge • Availability of NPTEL videos. • Sufficient systems with multimedia facilities. • Institutional membership of DELNET, a library networking database. • Internet facility 			
	LIST OF JOURNALS			
	Sl No.	Title	No of Issues	Publisher
	1	New Bldg, Materials & Construction World	12	NBM&CW
	2	Civil Engineering Construction Review	12	TSEPL
	3	Indian Concrete Journal	12	TICJ
	4	Journal of Construction Management	4	NICMAR
	5	Structural Engineering	4	IUP
6	Indian Highways	12	IRC	
Project Based Learning	<p>Project-based learning (PBL) promotes development of critical thinking and problem-solving skills by allowing students to work in teams on real world projects. However, in spite of its effectiveness, the use of PBL in engineering classrooms has been limited due to the challenges associated with its design and implementation.</p> <p>4 Mini Projects including Extensive survey and Final year projects are carried out based on Project Based Learning</p>			

Case study	<p>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.</p>
Professional Bodies	<p>Joining a professional body opens up a vast network of knowledge and expertise that is much wider than your immediate university community. Students will gain access to those who are one or two steps ahead of them and it helps them feel part of a community of like-minded people.</p> <p>ICI Students Chapter is in existence</p>
Club Activities	<p>Prakruthi club</p> <p>To identify major environmental problems and to find the best possible remedies.</p> <p>To create an awareness on the need for d environment preservations for a better tomorrow.</p> <p>Avishkar club</p> <p>To provide insight into existing and evolving technologies.</p> <p>To familiarize with real life problems and the ideas to tackle them. -</p>
Assignments	<p>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.</p>
Industrial visit	<p>Industry visits help enhance interpersonal skills and communication techniques. Students become more aware of industry practices and</p>

	<p>regulations during industry visits. Industry visits broaden the outlook of students with exposure to different workforces from different industries</p>
<p>Internships</p>	<p>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.</p>
<p>Conference/Seminar/Workshop</p>	<p>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,</p> <ul style="list-style-type: none"> Broadening their knowledge Cross pollinating their ideas Developing their Network Advancing their careers Re igniting their enthusiasm or passion.

Table 9.4.7: Records of evaluation of self-learning activities

Records of Self Learning Activities to be maintained by each faculty								
Sl. No	Mode of Evaluation	Source of Self-learning activities	Name of source of self-learning activities	URL Reference given by faculty	Date of event conducted by faculty	No. of participants	Avg. marks (%)	Event conducted by faculty (Yes/No)
1	Quiz	Lecture	CIV824, Lecture no.54	https://forms.gle/Wf3YUt2mRTSKfTZv6	17/04/2020	64	90%	Yes
		Videos of Flipped class room	Course video – on the topic “Manufacturing of concrete”	https://docs.google.com/forms/d/1uSM1JZOUpMURWC9xeT7Dh-qhGorCvDM0EcsrDJ9yC8Y/edit	30/04/2020	54	72%	Yes
2	Presentation	Journal and articles	Institute of Civil Engineers - ICE	a) Suma. P (civ33)	07/11/2019	97	80%	Yes
				b) Suma.P (civ653)	19/05/2020	62	70%	Yes
				c)Swetti Jha (civ824)	24/04/2020	64	80%	Yes
					19/05/2020	60	70%	Yes
3	Assignment on problem solving	Course and lecture Materials	Concrete technology – lecture materials on Concrete mix design	https://classroom.google.com/u/1/c/OTE3Nzk5NzEzMzla/a/OTE3Nzk5NzEzNTNa/submissions/by-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

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(C) Scope of Self-learning for ECE

Table 9.18: Records of evaluation of self-learning activities

Records of Self Learning Activities to be maintained by each faculty								
Sl. No	Mode of Evaluation	Sources of Self-learning	Name of source of self-learning	URL Reference given by faculty	Date of event conducted 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/5BURUMfull8 , https://youtu.be/Zt7u4WAYQnk	24/3/2020	73	80%	Yes
2	Presentation and Report Preparation	Course-Rural Energy system-RDL 722	Animal Energy and its application	http://web.iitd.ac.in/~vkvijay/files/Animal%20Energy.pdf	16-9-2019	16(4Teams)	90%	Yes
		Iisc-article	Design and fabrication of universal action bullock cart	http://www.ksct.iisc.ernet.in/sppArchive/public/Abstract/038/7962.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/file/d/1dXEySlgHQgr0obZqRFeczDVta_Fm2rIc/view?usp=sharing	2/4/2020	35	80%	Yes
4	Viva	SWAYAM "Embedded System Design with ARM"	ARM Cortex Architecture https://onlinecourses.nptel.ac.in/noc19_cs22/	https://drive.google.com/file/d/12eJTBF-ehZnAoRNXd69odD7Fi9Jxy915/view?usp=sharing	2-4-2020	12 teams	75%	Yes

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.

9.4(D) 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 9.4.9: 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 9.4.10: Records of evaluation of self-learning activities

Year	No of Students	No of faculty	Courses
July -Dec 2019	128	2	Manufacturing Automation
			Robotics
			Aircraft Propulsion – Online
			Fluid Machines – Online
			Machine Learning for Engineering and Science Applications – Online
			Manufacturing of Composites - Online
Jan- Apr 2019	136	31	Electric Vehicles - Part 1
			Non-Conventional Energy Resources
			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
July -Dec 2018	2	10	Nanotechnology in Agriculture
			Outcome based pedagogic principles for effective teaching
			Laws of thermodynamics
			Mechanics of Machining
			Processing of Polymers and Polymer Composites
			Fundamentals of Surface Engineering: Mechanisms, Processes and Characterizations
			Design Practice – II
			Leadership
			Introduction to Operations Research

			Nature and Properties of Materials
Jan- Apr 2018	0	26	Energy conservation and heat recovery
			Manufacturing of composites
			Fundamentals of Manufacturing process
			Refrigeration and air conditioning
			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 pre-

final 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.

Table 9.5.1: Facilities for Placement & Training

Facilities	Number
Office	1
Auditorium	1
Seminar hall	2
Rooms for Group Discussion	3
Interview Rooms	4
Computer Centers for Online Test	11

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 9.5.2: 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 life skills & 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

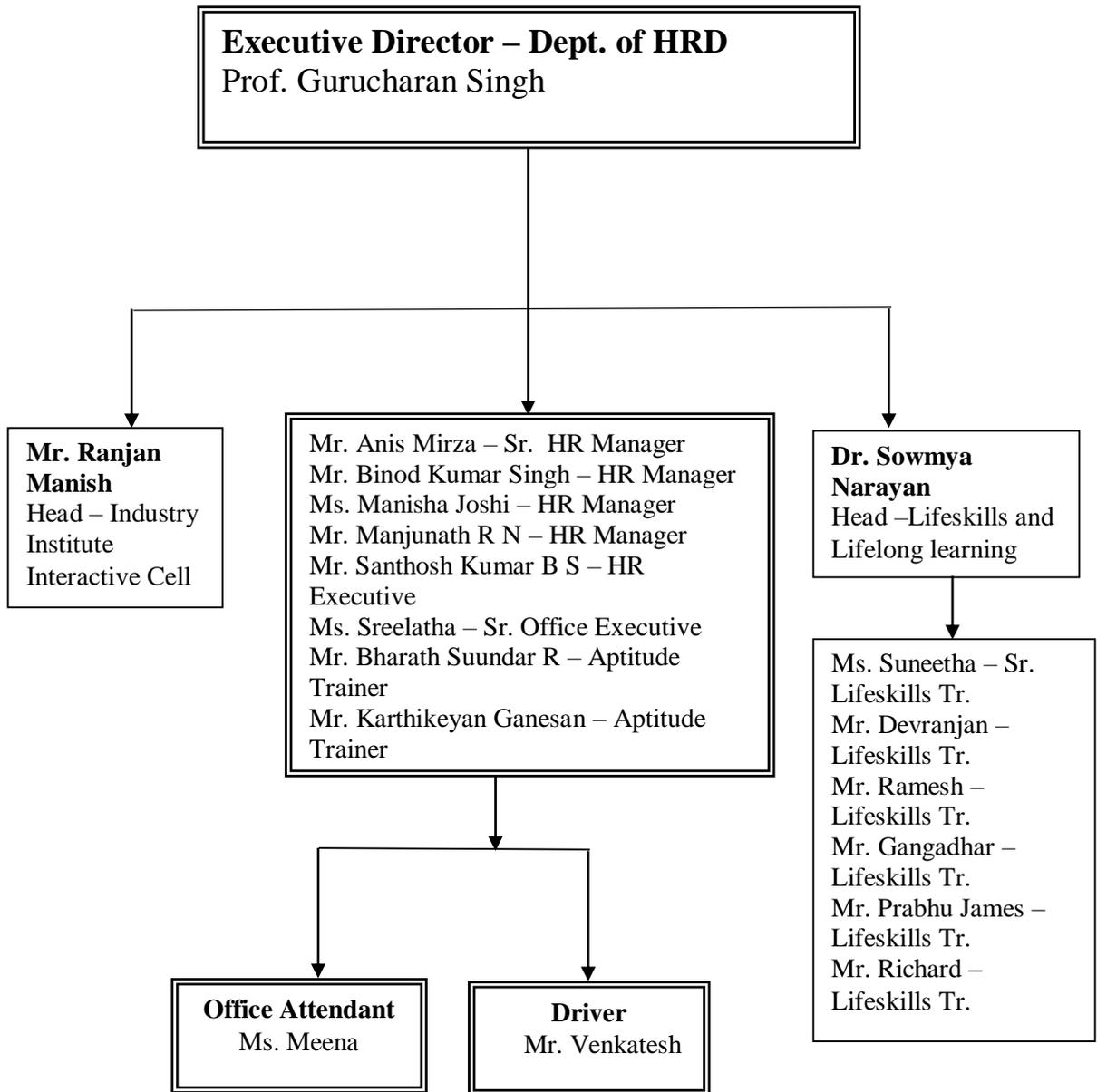


Figure No. 9.27: Structure of department of HRD

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 3rd / 4th 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.

9.5(A) Career counseling for higher studies (CSE)

Motivation for Higher Studies

Faculties of the department advise and motivate students to pursue higher education by introducing them to the range of benefits available to those who are better equipped. Students are briefed about the opportunities and advantages of pursuing higher education in India and abroad. International education offers the opportunity to broaden horizons and build skills and experiences and makes them more employable, as they gather experience that a lot of other candidates won't have. Students can widen their repertoire and communicate more effectively when exposed to education abroad.

Faculty let the students know that the opportunities for professional development are vast and by building their professional skills, they will move up the jobs ladder and are likely to increase their income quickly. Students are also made aware of the eligibility criteria and are advised to take up tests like GRE, GMAT, IELTS, TOEFL, etc if they are interested in pursuing education overseas. Students who want to pursue education in India are briefed about GATE, CAT, PG CET and given exposure to the various opportunities.

9.5(B) Career counseling for higher studies (CIVIL)

Table 9.5.3: Career counseling for higher studies

Sl. No	Name	Designation
1	Financial Literacy program for SC/ST Students	Dr Sheelan Misra, HOD-MBA, NHCE
2	Workshop on Students exchange program to France	Dean-Academics, NHCE
3	Workshop on Overseas Education for M. S	Mr. Devanand M, Market Development Executive, Global reach, Brigade road, Bangalore
4	Quiz - InQuizitive Minds 2018	Career Launch, Marathalli
5	Motivational talk on Higher studies in Foreign Countries	Ms. Usha Mahadevappa, Manager, Business Development, International Education Specialist (IDP) IDP Education India Pvt. Ltd
6	Motivational talk on Opportunities for Higher Studies in Abroad	Mr. Shaon Basu, Manager, Operations & Academics, Jamboree Education, No. 539, ashwini complex, 2nd Floor, CMH Road, indiranagar, Bangalore-38

9.5(C) Career counseling for higher studies (ECE)

The Department of Electronics and Communication Engineering has organized student “Orientation program on Study abroad on 20thsep 2019, in association with IDP Education India Pvt. Ltd. The Sessions are conducted in three different sessions for all the 2nd,3rd and final year students. The orientation is on how to prepare for IETLS & SOP writing.

60+ students of Department of Electronics and Communication Engineering attended the launch of First Education event launch of IDP on 9th March at Whitefield, opposite to Brigade Metropolis.

9.5(D) Career counseling for higher studies (ME)

Table 9.5.4: Career counseling for higher studies (ME)

Sl. No	Name	Designation
1	Financial Literacy program for SC/ST Students	Dr Sheelan Misra, HOD-MBA, NHCE
2	Workshop on Students exchange program to France	Dean-Academics, NHCE
3	Motivational talk on Higher studies in Foreign Countries	Mr, Rahul Sharan Renu., Research assistant, Mentor, Form Instructor Francis Marion University
4	Motivational talk on Opportunities for Higher Studies	Mr, Lance Fung, IEEEAsia Specific Region Director, R10.

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. 9.5.2: 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.

Training Time table Sample (Placements)

NEW HORIZON COLLEGE OF ENGINEERING

DEPARTMENT OF TRAINING AND PLACEMENTS

APTITUDE DEVELOPMENT TIME TABLE FOR 6TH SEM ENGG, 4TH SEM MCA & 2ND SEM M.TECH STUDENTS
(EVEN SEMESTER 2017 i.e., From 6th, Feb 2017 for MCA+M.Tech and 13th Feb'17 for B.E)

	9.00-10.00	10.00-11.00	11.10-12.10	12.10-1.10		1.50-2.50	2.50-3.50	3.50-
MON			MECH-B MCA- A+M.Tech(CSE,SE,CNE,MD, ,Aero)	MECH-B MCA- A+M.Tech(CSE,SE,CNE,MD, Aero)	LUNCH BREAK	MCA-B+M.Teh(VLSI,COM.SYS)	MCA- B+M.Teh(VLSI,COM.SYS)	
TUE			MECH-A MCA - C	MECH-A MCA - C		MCA- A+M.Tech(CSE,SE,CNE,MD,Ae ro)	MCA- A+M.Tech(CSE,SE,CNE,MD ,Aero)	
WED						MCA-B+M.Teh(VLSI,COM.SYS)	MCA- B+M.Teh(VLSI,COM.SYS)	
THU			MECH-C ISE-A ISE-B MECH-B	MECH-C ISE-A ISE-B MECH-B				
			MECH-C ISE-A	MECH-C ISE-A		MCA-C	MCA-C	

Figure No. 9.5.3: Placement training schedule 2017

New Horizon College of Engineering								
Refresh Classes for Recruitment Process-2018								
Date/Day	B1(CSE)	B2(ISE)	B3(ECE-1)	B4(ECE-2)	B5(ME-1)	B6(ME-2)	B7(EEE)	B8(CV, BT,MCA)
24/09/2018 Monday	Apti (3-5pm)	Tech (3-5pm)	Apti (3-5pm)	Tech (3-5pm)	Apti (3-5pm)	Tech (3-5pm)	Apti (3-5pm)	Tech (3-5pm)
25/09/2018 Tuesday	Tech (3-5pm)	Apti (3-5pm)	Tech (3-5pm)	Apti (3-5pm)	Tech (3-5pm)	Apti (3-5pm)	Tech (3-5pm)	Apti (3-5pm)
26/09/2018 Wednesday	Apti-Test (5-7pm)	Tech- Test (5-7pm)	Apti-Test (5-7pm)	Apti-Test (5-7pm)	Tech-Test (5-7pm)	Tech-Test (5-7pm)	Tech-Test (5-7pm)	Apti-Test (5-7pm)
27/09/2018 Thursday	Tech-Test (5-7pm)	Apti-Test (5-7pm)	Tech-Test (5-7pm)	Tech-Test (5-7pm)	Apti-Test (5-7pm)	Apti-Test (5-7pm)	Apti-Test (5-7pm)	Tech-Test (5-7pm)
3/10/2018 Wednesday	Apti (3-5pm)	Tech (3-5pm)	Apti (3-5pm)	Tech (3-5pm)	Apti (3-5pm)	Tech (3-5pm)	Apti (3-5pm)	Tech (3-5pm)
4/10/2018 Thursday	Tech (3-5pm)	Apti (3-5pm)	Tech (3-5pm)	Apti (3-5pm)	Tech (3-5pm)	Apti (3-5pm)	Tech (3-5pm)	Apti (3-5pm)
5/10/2018 Friday	Apti-Test (5-7pm)	Tech- Test (5-7pm)	Apti-Test (5-7pm)	Apti-Test (5-7pm)	Tech-Test (5-7pm)	Tech-Test (5-7pm)	Tech-Test (5-7pm)	Apti-Test (5-7pm)
6/10/2018 Saturday	Tech-Test (5-7pm)	Apti-Test (5-7pm)	Tech-Test (5-7pm)	Tech-Test (5-7pm)	Apti-Test (5-7pm)	Apti-Test (5-7pm)	Apti-Test (5-7pm)	Tech-Test (5-7pm)
Batch wise Faculty Trainer:								
B1-CSE(Tech-Ms. Kavitha(MCA), Apti- Dr. Srinivasa G.(Math)), B5-ME-1(Tech-Mr. Shivabalan(CSE), Apti- Mr.Sub B2-ISE(Mr. Govinda Raju(MCA), Apti- Dr. Srinivasa G.(Math)),B6-ME-2(Tech-Ms. Vandana(ISE), Apti- Mr.Subrar B3-ECE-1(Tech-Mr. Gangadhar(ISE), Apti-Mr. Madhu Mohan Raju(Math))B7-EEE(Tech-Mr. Vishwanath(MCA), Ap								

Figure No. 9.5.4: Placement training schedule 2018

- Training schedule (CS)

SUBJECTS (V semester)		
Problem Solving	: 12 Hours	Lecture
Object Oriented Programming Revision	: 8 Hours	Lecture
C Programming Revision	: 4 Hours	Lecture
IT Latest Technology	: 4 Hours	Faculty PPT presentation
Public Speaking by students	: 4 Hours	Class Management
Tech Talk by students	: 4 Hours	Class Management
Placement Talk	: 2 Hours	
Alumni Talk	: 2 Hours	Class Management
Test	: 2 Hours	Invigilation (Oops concepts)
Tech Quiz	: 2 Hours	Invigilation (MCQs on C & C++)
Code Debugging	: 2 Hours	Invigilation (C or C++)
Faculty interaction	: 2 Hours	
Hands-On/Assignment	: 8 Hours	
TOTAL	: 56 Hours	

NEW HORIZON COLLEGE OF ENGINEERING, BANGALORE
Autonomous college affiliated to VTU, Accredited with NAAC 'A' grade
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
TIME TABLE FOR EMPLOYMENT CENTRIC CLASSES
From 23-31 July 2018
SEMESTER: V
SEC : C

CLASS TEACHER: Ms Soja Rani

Day/Time	9:00-10:00	10:00-11:00	11:00 - 11:10	11:10-12:10	12:10-1:10	1:10 -1:50	1:50-2:50	2:50-3:50	3:50-4:50
Mon	Placement Talk	Placement Talk	TEA BREAK	C Pgmng Mr Muralidhara	Problem Solving Ms Soja	LUNCH BREAK	C Pgmng Mr Muralidhara	IT Latest Techgy Ms Jaya	Hands-On/Assignment
Tue	Alumni Talk Ms Jaya	C Pgmng Mr Muralidhara		Problem Solving Ms Soja	C Pgmng Mr Muralidhara		Problem Solving Ms Soja	Tech Talk Ms SheebaPrabakaran	Hands-On/Assignment
Wed	OOPs Mr Muralidhara	Problem Solving Ms Soja		OOPs Mr Muralidhara	IT Latest Techgy Ms. Timu		Problem Solving Ms Soja	Public Speaking Ms. Jaya	Hands-On/Assignment
Thur	Alumni Talk Ms Jaya	OOPs Mr Muralidhara		Problem Solving Ms Soja	OOPs Mr Muralidhara		Problem Solving Ms Soja	Public Speaking Ms. Jaya	Hands-On/Assignment
Fri	IT Latest Techgy Ms HeyShanthini	Problem Solving Ms Soja		OOPs Mr Muralidhara	Problem Solving Ms Soja		OOPs Mr Muralidhara	Public Speaking Ms. Jaya	Hands-On/Assignment
Sat	IT Latest Techgy Ms Vasantha	OOPs Mr Muralidhara		Problem Solving Ms Soja	OOPs Mr Muralidhara		Problem Solving Ms Soja	Tech Talk Ms SheebaPrabakaran	Hands-On/Assignment

Figure No. 9.5.5: Placement training schedule CSE 2018

NEW HORIZON COLLEGE OF ENGINEERING

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Summary of placement classes conducted for the 2019 Batch

SI NO	TRAINING	SEMESTER	DURATION	NO OF HOURS
1	C & Data Structures Training	VII	1/JUN/18 - 7/JUN/18	108
2	Domain based Training	VII	20/JUN/18 - 26/JUN/18	128
3	One Direct Training	VII	20/JUN/18 - 23/JUN/18	56
4	Java Training	VII	20/JUN/18 - 14/JUL/18	140
5	Employment Centric Classes	III , V	23/JUL/18 - 31/JUL/18	336
6	Departmental Training	VI	05/MAR/19 – 09/APR/19	22

Summary of placement Non-technical classes conducted for the academic year 2018-2019 (Autonomous Batch)

SI NO	TRAINING	SEMESTER	DURATION	NO OF HOURS
1	Aptitude & soft skill training	VII	11/JUN/18 - 19/JUN/18	138

NEW HORIZON COLLEGE OF ENGINEERING, BANGALORE
Autonomous college affiliated to VTU, Accredited with NAAC 'A' grade

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

TIME TABLE FOR EMPLOYMENT CENTRIC CLASSES
From 23-31 July 2018

CLASS TEACHER: Mr Muralidhara SEMESTER: III SECTION : A

Day/Time	9:00-10:00	10:00-11:00	11:00-11:10	11:10-12:10	12:10-1:10	1:10-1:50	1:50-2:50	2:50-3:50	3:50-4:50
Mon	C Pgm Ms ShanmugaPriya	IT Latest Techgy Dr Clara	TEA BREAK	Problem Solving Ms PadmaPriya	C Pgm Ms ShanmugaPriya	LUNCH BREAK	Problem Solving Ms PadmaPriya	Tech Talk Ms Sheeba Pari	Hands-On/Assignment
Tue	Placement Talk	Placement Talk		IT Latest Techgy Ms Sheeba Pari	C Pgm Ms ShanmugaPriya		Problem Solving Ms PadmaPriya	C Pgm Ms ShanmugaPriya	Hands-On/Assignment
Wed	Alumni Talk Mr Santosh	Problem Solving Ms PadmaPriya		C Pgm Ms ShanmugaPriya	Problem Solving Ms PadmaPriya		C Pgm Ms ShanmugaPriya	Tech Talk Ms Sheeba Pari	Hands-On/Assignment
Thur	IT Latest Techgy Mr Anil	C Pgm Ms ShanmugaPriya		Problem Solving Ms PadmaPriya	C Pgm Ms ShanmugaPriya		Problem Solving Ms PadmaPriya	Public Speaking Mr Anil	Hands-On/Assignment
Fri	Alumni Talk Mr Santosh	C Pgm Ms ShanmugaPriya		Problem Solving Ms PadmaPriya	C Pgm Ms ShanmugaPriya		Problem Solving Ms PadmaPriya	Public Speaking Mr Anil	Hands-On/Assignment

Figure No. 9.5.6: Placement training schedule CSE 2017

- Training schedule (CIVIL)

New Horizon College of Engineering, Bangalore
Autonomous College affiliated to VTU, Accredited by NAAC with 'A' Grade, Accredited by NBA

DEPARTMENT OF CIVIL ENGINEERING

TECHNICAL TRAINING SESSIONS FOR FINAL YEAR STUDENTS SECTION - B

Date/Time	9.30-11am	11-11.15am	11.15am-12.45pm	12.45pm-1.30-pm	1.30pm-3pm	3pm-4.30pm	
26-06-2019	Design of RCC Structural elements Mr.Surendra B.V	Break	Surveying Mr.Nitish	Lunch Break	Highway engineering Mr.Harish G.R	Environmental engineering Dr.Mahesha N	
27-06-2019	Design of RCC Structural elements Mr.Surendra B.V		Surveying Mr.Nitish		Highway engineering Mr.Harish G.R	Concrete technology Ms.Suma P	
28-06-2019	Design of RCC Structural elements Mr.Surendra B.V		Surveying Mr.Nitish		Highway engineering Mr.Harish G.R	Environmental engineering Dr.Mahesha N	
29-06-2019	Pre stressed concrete Mr.Sudhakar		Geotechnical engineering Dr.Jagadeesh C.B		Test - I		
01-07-2019	Strength of materials Mr.Snehal		Concrete technology Ms.Suma P		Alternate building materials and technology Dr.Vinay Kumar	Strength of materials Mr.Snehal	
02-07-2019	Environmental engineering Dr.Mahesha N		Strength of materials Mr.Snehal		Alternate building materials and technology Dr.Vinay Kumar	Pre stressed concrete Mr.Sudhakar	
03-07-2019	Pre stressed concrete Mr.Sudhakar		Alternate building materials and technology Dr.Vinay Kumar		Engineering Mechanics Ms.Meghana P	Test - II	
04-07-2019	Analysis of indeterminate structures Ms.Ramya H.S		Geotechnical engineering Dr.Jagadeesh C.B		Fluid mechanics Dr.Geetha Varma	Engineering Mechanics Ms.Meghana P	
05-07-2019	Engineering Mechanics Ms.Meghana P		Geotechnical engineering Dr.Jagadeesh C.B		Analysis of indeterminate structures Ms.Ramya H.S	Test - III	

Note : Two Industrial visit's will be arranged based on the available slots from the company.

Figure No. 9.5.7: Placement training schedule CIVIL 2019

New Horizon College of Engineering, Bangalore
Autonomous College affiliated to VTU, Accredited by NAAC with 'A' Grade, Accredited by NBA

DEPARTMENT OF CIVIL ENGINEERING
TECHNICAL TRAINING SESSIONS FOR FINAL YEAR STUDENTS SECTION - P1

Date/Time	9.30-11am	11-11.15am	11.15am-12.45pm	12.45pm-1.30-pm	1.30pm-3pm	3pm-4.30pm	
11/5/2018	Engineering mechanics Ms. Meghana P	Break	Strength of materials Mr. Sandeep	Lunch Break	Building Construction Mr. Sudhakar	Surveying Mr. Satish D	
12/6/2018	Fluid mechanics Ms. Satya Priya		Strength of materials Mr. Sandeep		Engineering mechanics Ms. Meghana P	Strength of materials Mr. Sandeep	
13/6/2018	Surveying Mr. Satish D		Fluid mechanics Ms. Satya Priya		Geotechnical engineering Ms. Serin Isaac	Geotechnical engineering Mr. Rajendra	Analysis of indeterminate structures Mr. Rajendra
14/6/2018	Geotechnical engineering Ms. Serin Isaac		Analysis of indeterminate structures Mr. Rajendra		Highway engineering Mr. Harish G R	Highway engineering Mr. Surendra B V	Design of RCC Structural elements Mr. Surendra B V
15/6/2018	Highway engineering Mr. Harish G R		Design of RCC Structural elements Mr. Surendra B V		Environmental engineering Dr. Mabesha N	Environmental engineering Mr. Sudhakar	Pre stressed concrete Mr. Sudhakar
18/6/2018	Pre stressed concrete Mr. Sudhakar		Concrete technology Ms. Suma P		Alternate building materials and technology Mr. Sudhakar	Alternate building materials and technology Mr. Sudhakar	Construction Management Mr. Pavan Kumar
19/6/2018	Construction Management Mr. Pavan Kumar		Environmental engineering Dr. Mabesha N		Concrete technology Ms. Suma P	Concrete technology Ms. Suma P	Advanced concrete technology Ms. Nitha Elizabeth

Principal: *M. N. Srinivas* Dear Academics. HOD: *T. Srinivas*

Figure No. 9.5.8: Placement training schedule CIVIL 2018

- Training Schedule (ECE)

New Horizon College Of Engineering
Department Of Electronics and Communication Engineering.
Technical Training Details Even Sem (Aug- Dec 2017)
SEM: 5 SEC: B

Sl.No	Technical Topics	Faculty	Date	No of Students Present
1	Analog Communication	Mr Ashutosh	21-08-2017	68
2	Analog Communication	Mr Ashutosh	28-08-2017	68
3	Analog Communication	Mr Ashutosh	04-09-2017	77
	VLSI	Mr Karthik		73
4	Analog Communication	Mr Ashutosh	11-09-2017	73
	VLSI	Mr Karthik		70
5	Analog Communication	Mr Ashutosh	18-09-2017	81
	VLSI	Ms Nayana		78
6	Analog Communication	Mr Ashutosh	25-09-2017	85
	VLSI	Ms Nayana		75
7	Analog Communication	Mr Ashutosh	02-10-2017	78
	VLSI	Ms Nayana		70
8	Analog Communication	Mr Ashutosh	09-10-2017	82
	VLSI	Ms Nayana		76
9	Analog Communication	Mr Ashutosh	16-10-2017	83
	VLSI	Ms Nayana		70

Figure No. 9.5.9: Placement training schedule ECE 2017

NEW HORIZON COLLEGE OF ENGINEERING
Autonomous college affiliated to VTU , Accredited by NAAC with 'A' grade and Accredited by NBA
DEPARTMENT OF ELECTRONICS AND COMMUNICATION
TIME TABLE FOR TECHNICAL TRAINING

Date / Time	Days	09:00 - 12:00	12.45 - 3.45	Date / Time	Days	09:00 - 12:00	12.45 - 3.45
01-06-2018	Friday	Batch 4 (ECE A) MCA LAB 1	Batch 4 (ECE A) MCA LAB 1	06-06-2018	Wednesday	Batch 4 (ECE A) MCA LAB 1	Batch 4 (ECE A) MCA LAB 1
		Batch 5 (ECE B) ISE LAB 2	Batch 5 (ECE B) ISE LAB 2			Batch 5 (ECE B) ISE LAB 2	Batch 5 (ECE B) ISE LAB 2
		Batch 6 (ECE C) MCA LAB 2	Batch 6 (ECE C) MCA LAB 2			Batch 6 (ECE C) MCA LAB 2	Batch 6 (ECE C) MCA LAB 2
02-06-2018	Saturday	Batch 4 (ECE A) MCA LAB 1	Batch 4 (ECE A) MCA LAB 1	07-06-2018	Thursday	Batch 4 (ECE A) MCA LAB 1	Batch 4 (ECE A) MCA LAB 1
		Batch 5 (ECE B) ISE LAB 2	Batch 5 (ECE B) ISE LAB 2			Batch 5 (ECE B) ISE LAB 2	Batch 5 (ECE B) ISE LAB 2
		Batch 6 (ECE C) MCA LAB 2	Batch 6 (ECE C) MCA LAB 2			Batch 6 (ECE C) MCA LAB 2	Batch 6 (ECE C) MCA LAB 2
04-06-2018	Monday	Batch 4 (ECE A) MCA LAB 1	Batch 4 (ECE A) MCA LAB 1	07-06-2018	Friday	Batch 4 (ECE A) MCA LAB 1	Batch 4 (ECE A) MCA LAB 1
		Batch 5 (ECE B) ISE LAB 2	Batch 5 (ECE B) ISE LAB 2			Batch 5 (ECE B) ISE LAB 2	Batch 5 (ECE B) ISE LAB 2
		Batch 6 (ECE C) MCA LAB 2	Batch 6 (ECE C) MCA LAB 2			Batch 6 (ECE C) MCA LAB 2	Batch 6 (ECE C) MCA LAB 2
05-06-2018	Tuesday	Batch 4 (ECE A) MCA LAB 1	Batch 4 (ECE A) MCA LAB 1				
		Batch 5 (ECE B) ISE LAB 2	Batch 5 (ECE B) ISE LAB 2				
		Batch 6 (ECE C) MCA LAB 2	Batch 6 (ECE C) MCA LAB 2				

Figure No. 9.5.10: Placement training schedule ECE 2018

NEW HORIZON COLLEGE OF ENGINEERING
Autonomous college affiliated to VTU , Accredited by NAAC with 'A' grade and Accredited by NBA
DEPARTMENT OF ELECTRONICS AND COMMUNICATION

Section A,B,C

Room No. : A217

Semester: VI

Wef:11.01.2018

Period		I	II	III	IV	V	VI		
Day/ Time	8.00 -9.00	9.00 -10.00	10.00 - 11.00	11.00 - 11.10	11.10 - 12.10	12.10 -1.10	1.10 -1.50		
						12.50 - 1.10	1.50 -2.50		
Monday				BREAK			2.50 -3.50		
Tuesday						Technical Aptitude		3.50 -4.50	
Wednesday						Technical Aptitude	LUNCH		
Thursday									
Friday									
Saturday						Technical Aptitude			

Figure No. 9.5.11: Placement training schedule ECE 2017/18

• **Training Schedule (ME)**

NEW HORIZON COLLEGE OF ENGINEERING
DEPARTMENT OF TRAINING & PLACEMENTS
PRE-PLACEMENT RE-TRAINING

Batch 3 (ME & AU)																		
Name	Branch	Aptitude	Technical	Aptitude	Life Skills	Aptitude	Technical	Life Skills	Aptitude	Life Skills	Aptitude	Technical	Life Skills	Aptitude	Technical	Aptitude/Technical / Lifeskills		
		27.8.18	27.8.18	28.8.18	28.8.18	29.8.18	29.8.18	29.8.18	30.8.18	30.8.18	31.8.18	31.8.18	31.8.18	1.9.18	1.9.18	Total hours attended	Total hours conducted	Attendance %
Chatura S	ME	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42	0
Rupak karki	ME	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42	0
Shebeeb V K	ME	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42	0

Figure No. 9.5.12: Placement training schedule ME 2018

New Horizon College of Engineering								
Dept of Training & Placements								
2018 Batch Phase-1 Vacation Training Schedule								
		28th July 2017 (Friday)					29th July 2017 (Saturday)	
Branch	9 to 11 am	11:10 - 01:40 pm	2:10 - 5:10pm		9 to 11 am	11:10 - 01:40 pm	2:10 - 5:10pm	
ME - A	Softskills - Batch MEA1	Technical - Batch MEAT1	Aptitude		Technical - Batch MEAT1	Softskills - Batch MEA1	Aptitude	
	Softskills - Batch MEA2	Technical - Batch MEAT2			Technical - Batch MEAT2	Softskills - Batch MEA2		
		Technical - Batch MEAT3			Technical - Batch MEAT3			
ME - B	Technical - Batch MEBT1	Aptitude	Softskills - Batch MEB1		Softskills - Batch MEB1	Aptitude	Technical - Batch MEBT1	
	Technical - Batch MEBT2		Softskills - Batch MEB2		Softskills - Batch MEB2		Technical - Batch MEBT2	
ME - C	Aptitude	Softskills - Batch MEC1	Technical - Batch MECT1		Aptitude	Technical - Batch MECT1	Softskills - Batch MEC1	
		Softskills - Batch MEC2	Technical - Batch MECT2			Technical - Batch MECT2	Softskills - Batch MEC2	
		31st July 2017 (Monday)					1st Aug 2017 (Tuesday)	
Branch	9 to 11 am	11:10 - 01:40 pm	2:10 - 5:10pm		9 to 11 am	11:10 - 01:40 pm	2:10 - 5:10pm	
ME - A	Technical - Batch MEAT1	Softskills - Batch MEA1	Aptitude		Softskills - Batch MEA1	Technical - Batch MEAT1	Aptitude	
	Technical - Batch MEAT2	Softskills - Batch MEA2			Softskills - Batch MEA2	Technical - Batch MEAT2		
	Technical - Batch MEAT3					Technical - Batch MEAT3		
ME - B	Softskills - Batch MEB1	Aptitude	Technical - Batch MEBT1		Technical - Batch MEBT1	Aptitude	Softskills - Batch MEB1	
	Softskills - Batch MEB2		Technical - Batch MEBT2		Technical - Batch MEBT2		Softskills - Batch MEB2	
ME - C	Aptitude	Technical - Batch MECT1	Softskills - Batch MEC1		Aptitude	Softskills - Batch MEC1	Technical - Batch MECT1	

		Technical - Batch MECT2	Softskills - Batch MEC2			Softskills - Batch MEC2	Technical - Batch MECT2
		2nd Aug 2017 (Wednesday)				3rd Aug 2017 (Thursday)	
Branch	9 to 11 am	11:10 - 01:40 pm	2:10 - 5:10pm		9 to 11 am	11:10 - 01:40 pm	2:10 - 5:10pm
ME - A	Aptitude	Softskills - Batch MEA1	Technical - Batch MEAT1		Technical - Batch MEAT1	Softskills - Batch MEA1	Aptitude
		Softskills - Batch MEA2	Technical - Batch MEAT2		Technical - Batch MEAT2	Softskills - Batch MEA2	
			Technical - Batch MEAT3		Technical - Batch MEAT3		
ME - B	Technical - Batch MEBT1	Aptitude	Softskills - Batch MEB1		Softskills - Batch MEB1	Aptitude	Technical - Batch MEBT1
	Technical - Batch MEBT2		Softskills - Batch MEB2		Softskills - Batch MEB2		Technical - Batch MEBT2
ME - C	Softskills - Batch MEC1	Technical - Batch MECT1	Aptitude		Aptitude	Technical - Batch MECT1	Softskills - Batch MEC1
	Softskills - Batch MEC2	Technical - Batch MECT2				Technical - Batch MECT2	Softskills - Batch MEC2
		5th Aug 2017 (Saturday)				7th Aug 2017 (Monday)	
Branch	9 to 11 am	11:10 - 01:40 pm	2:10 - 5:10pm		9 to 11 am	11:10 - 01:40 pm	2:10 - 5:10pm
ME - A	Softskills - Batch MEA1	Technical - Batch MEAT1	Technical - Batch MEAT1		Technical - Batch MEAT1	Softskills - Batch MEA1	Technical - Batch MEAT1
	Softskills - Batch MEA2	Technical - Batch MEAT2	Technical - Batch MEAT2		Technical - Batch MEAT2	Softskills - Batch MEA2	Technical - Batch MEAT2
		Technical - Batch MEAT3	Technical - Batch MEAT3		Technical - Batch MEAT3		Technical - Batch MEAT3
ME - B	Technical - Batch MEBT1	Softskills - Batch MEB1	Online Aptitude Test		Softskills - Batch MEB1	Technical - Batch MEBT1	Technical - Batch MEBT1
	Technical - Batch MEBT2	Softskills - Batch MEB2			Softskills - Batch MEB2	Technical - Batch MEBT2	Technical - Batch MEBT2
ME - C	Technical - Batch MECT1	Technical - Batch MECT1	Softskills - Batch MEC1		Technical - Batch MECT1	Softskills - Batch MEC1	Technical - Batch MECT1

	Technical - Batch MECT2	Technical - Batch MECT2	Softskills - Batch MEC2		Technical - Batch MECT2	Softskills - Batch MEC2	Technical - Batch MECT2
	8th Aug 2017 (Tuesday)				9th Aug 2017 (Wednesday)		
Branch	9 to 11 am	11:10 - 01:40 pm	2:10 - 5:10pm		9 to 11 am	11:10 - 01:40 pm	2:10 - 5:10pm
ME - A	Softskills - Batch MEA1	Technical - Batch MEAT1	Softskills - Batch MEA1		Technical - Batch MEAT1	Technical - Batch MEAT1	Softskills - Batch MEA1
	Softskills - Batch MEA2	Technical - Batch MEAT2	Softskills - Batch MEA2		Technical - Batch MEAT2	Technical - Batch MEAT2	Softskills - Batch MEA2
		Technical - Batch MEAT3			Technical - Batch MEAT3	Technical - Batch MEAT3	
ME - B	Technical - Batch MEBT1	Softskills - Batch MEB1	Technical - Batch MEBT1		Technical - Batch MEBT1	Softskills - Batch MEB1	Technical - Batch MEBT1
	Technical - Batch MEBT2	Softskills - Batch MEB2	Technical - Batch MEBT2		Technical - Batch MEBT2	Softskills - Batch MEB2	Technical - Batch MEBT2
ME - C	Technical - Batch MECT1	Softskills - Batch MEC1	Technical - Batch MECT1		Softskills - Batch MEC1	Softskills - Batch MEC1	Technical - Batch MECT1
	Technical - Batch MECT2	Softskills - Batch MEC2	Technical - Batch MECT2		Softskills - Batch MEC2	Softskills - Batch MEC2	Technical - Batch MECT2
	10th Aug 2017 (Thursday)				11th Aug 2017 (Friday)		
Branch	9 to 11 am	11:10 - 01:40 pm	2:10 - 5:10pm		9 to 11 am	11:10 - 01:40 pm	2:10 - 5:10pm
ME - A	Technical - Batch MEAT1	Softskills - Batch MEA1	Softskills - Batch MEA1		No Class	Technical - Batch MEAT1	Online Aptitude Test
	Technical - Batch MEAT2	Softskills - Batch MEA2	Softskills - Batch MEA2			Technical - Batch MEAT2	
	Technical - Batch MEAT3					Technical - Batch MEAT3	
ME - B	Technical - Batch MEBT1	Softskills - Batch MEB1	Softskills - Batch MEB1		Technical - Batch MEBT1	Softskills - Batch MEB1	Softskills - Batch MEB1 Till 5:40pm
	Technical - Batch MEBT2	Softskills - Batch MEB2	Softskills - Batch MEB2		Technical - Batch MEBT2	Softskills - Batch MEB2	Softskills - Batch MEB2 Till 5:40pm

ME - C	Softskills - Batch MEC1	Softskills - Batch MEC1	Technical - Batch MECT1		Softskills - Batch MEC1	Online Aptitude Test	Softskills - Batch MEC1 Till 3:40pm
	Softskills - Batch MEC2	Softskills - Batch MEC2	Technical - Batch MECT2		Softskills - Batch MEC2		Softskills - Batch MEC2 Till 3:40pm

9.5(A): 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.

Table 9.5.5: Placement details

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
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	Gray Matter 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	Service Now	2

48	Simeio Solutions	5
49	SonicWALL Technology Systems India Pvt Ltd	2
50	Speridian Technologies	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 9.5.6: Pay Package offered to students

2019-20	Maximum Salary	3000000
	Average Salary	908934.6613
2018-19	Maximum Salary	1100000
	Average Salary	683714.5385
2017-18	Maximum Salary	950000
	Average Salary	622649.9143

9.5(B) 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 techno-managerial 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.

Table 9.5.7: No. of students opted for Higher Education

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:

Table 9.5.8: Members of the Placement Committee

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

(c) 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
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

Table 9.28: Pay Package offered to students

1	Maximum Salary	14,63,000
2	Average Salary	5,50,000

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.

Table 9.29. List of MoUs with Industries

Sl. 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 9.30: 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	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
2	Tech Mahindra	16
3	Capgemini	9
4	Mindtree	1
5	Amazon	1
6	Microland	2

7	NTT Data	10
8	Sigma infosolutions	1
9	Wipro	6
10	Thomson Reuters	4
11	Speridian	2
12	Cyient	1
13	Servion Global Solutions	1
14	Sprinklr	11
15	Anora Semiconductors	11
16	Sankalp Semiconductors	11
17	Epsilon	4
18	Torry Harris	2
19	Global Logic	21
Total Students Placed		115

Table 9.32: Pay Package offered to students

2018-19	Maximum Salary	1463000
	Average Salary	786188
2017-18	Maximum Salary	1200000
	Average Salary	724680
2016-17	Maximum Salary	950393
	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

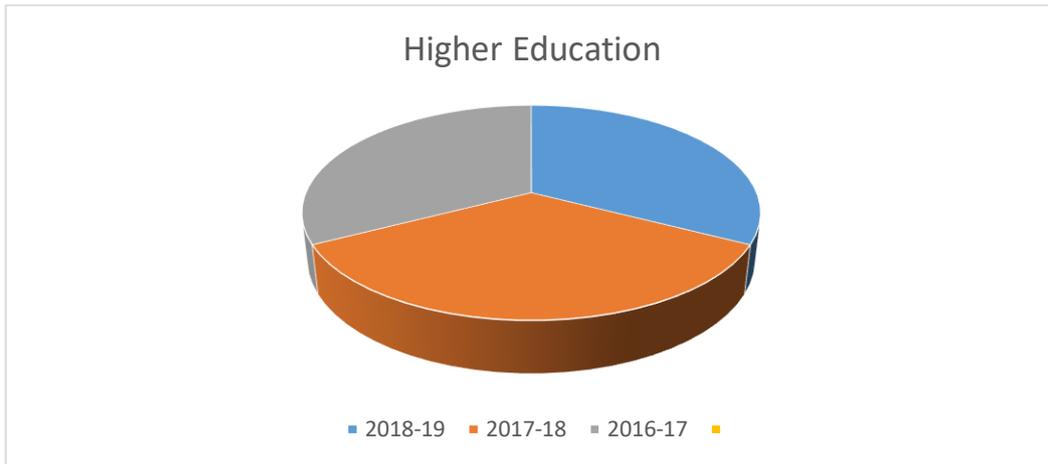


Figure No 9.29: Higher Studies Statistics

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

Table 9.34: Impact of career guidance, training, placement and certification

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

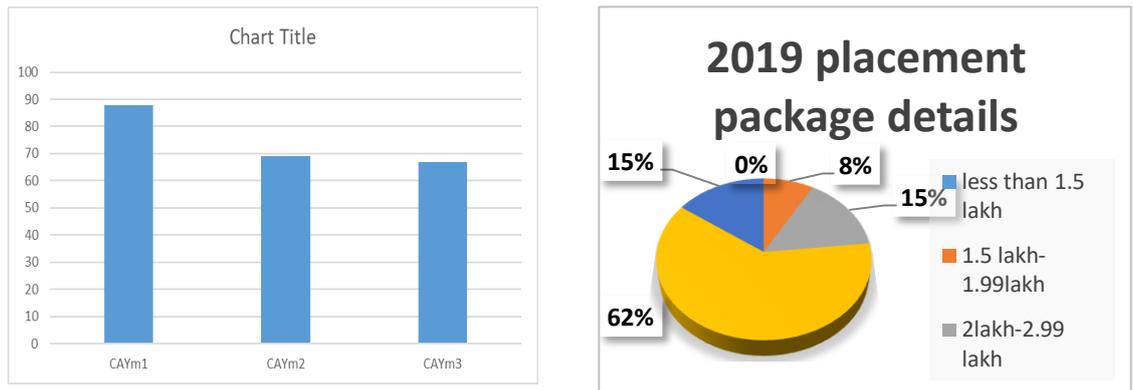


Figure No 9.30: Placement Statistics

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 9.37 Entrepreneurship Development Cell 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

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.

Table 9.38: List of Events (Computer science)

Event	Date	Venue
Talk on “ Motivation for starting own 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 association with Global	8/2/2020	Department of Management Studies

Entrepreneurs Grid (GEG)		
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.

Table 9.39: List of Entrepreneurship Initiatives

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/ Technology/ 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@gmail.com	2019-20	GEEKSPACE Inc™ Dr.K. Gopalakrishnan, Dean (R&D)	Providing High-tech Services and Solutions, Professional Training/Internships and Project Solutions etc. in the emerging IT/ITES domains	Networked with IBM Open POWER, Object Automation, Nvidia. Started Doing Trainings/Events 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	Patents Filed. "IBM Watson IoT and Power AI Developer Conference" scheduled on 3 rd November 2017 at an Auditorium, IIT Madras Research Park, Chennai-

				Management.	600113
3	G. Vishwa & Sanketh S Huddar BE (CSE) 3 Sem “C” Sec (9740496061) 1NH16CS751 proxy.sudo@gmail.com	2019-20	Career ReadyWizard™ 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 sivan.sundar@gmail.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 (9401333313) 1NH16CS123, Nishant Jha BE (Mech) 3 Sem “C” Sec (9481015089) 1NH16ME732	2019-20	Bhoral Solutions	Advanced Web Design/App Development and Providing Turnkey Solutions for Data Analytics	Currently Active in the Business, since last 3 years!
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 used on individual competency and skill mapping	Patent Draft under Review/Filing in Progress (30 Dec 2017). "IBM Watson IoT and Power AI Developer Conference" scheduled

					on 3 rd November 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.

Table 9.40: List of Events (Civil Engineering)

Events	Date	Venue	Number of students
Dept. of MBA Organized a visit to Cheemasandhra and to Nimbakayapura for Rural development	13/04/2018 - 16/04/2018	MBA Seminar Hall	MBA Seminar Hall
Dept. of MBA Organised a visit to SWANTHANA, Care for mentally and physically challenged female children.	12/04/2018	MBA Seminar Hall	MBA Seminar Hall

1St World Entrepreneurship Summit	02/02/2018	Falconry Seminar Hall	Falconry Seminar Hall
Entrepreneurship awareness program by Mr. Prakash Choudhary, co-founder entrepreneurship garage	06/02/2020	C-202, Department of Civil Engineering, NHCE	C-202, Department of Civil Engineering, NHCE
World Entrepreneurship Summit	02/02/2019	New Horizon Auditorium	New Horizon Auditorium
Global family business summit	12/06/2020	Webinar	Webinar



Figure 9.31: Entrepreneurship events

Table 9.41: Number of students opted for entrepreneurship (Civil Engineering)

Entrepreneurship	2016 - 2017	2017 - 2018	2018 - 2019
	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.

Table 9.42: List of Entrepreneurship Initiatives (ECE)

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



Figure 9.32: Entrepreneurship events (ECE)

Table 9.43: List of Entrepreneurs for academic year 2018-19 (ECE)

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

Table 9.44: List of Entrepreneurs for academic year 2017-18 (ECE)

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 9.45: List of Entrepreneurs for academic year 2016-17 (ECE)

S.No.	Enrollment no.	Name of the 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	2018	Amar Kumar Bhatt	1NH14ME017	Hydraulic Hose and Fittings	Hydraulic Hose and Fittings	New Bombay Hydraulic
2		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



Figure No. 9.33: Incubation Collaboration(ME)



Figure No. 9.34: Faculty orientation on entrepreneurship skills(ME)

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.

Table 9.7.1: List of Sporting Events Participated in by Students of CSE

Event Name	Name & USN of Student	Semester of Student	Tournament	Event Date
Academic Year 2019 – 2020				
Basket Ball(M)	Anurag Rajshekar 1NH16CS701	VII/VIII	Court Wars	1/9/2019 to 8/9/2019
			RIT	9/9/2019 to 11/09/2019
			VTU(BCZ)	16/09/2019 to 17/09/2019
	Mohan Sai Krishna 1NH17CS082	V/VI	VTU(IZ)	25/09/2019 to 28/09/2019
			KreeDostava	1/10/2019 to 4/10/2019
			PESIT	14/10/2019 to 16/10/2019
	Nitish Naik 1NH19CS421	III/IV	Association Cup	3/11/2019 to 9/11/2019
			Malleshwaram	25/1/2020 to

			Cup	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)	Muskan Agrawal 1NH18CS117	III/IV	Court Wars	1/9/2019 to 8/9/2019
			RIT	9/9/2019 to 11/09/2019
			KreeDostava	1/10/2019 to 4/10/2019
			PESIT	14/10/2019 to 16/10/2019
Kabaddi (M)	Banu Prathap Reddy 1NH17CS022	V/VI	Spradha 2019	26/9/2019 to 28/9 /2019
			PESIT	14/10/2019 to 16/10/2019
			SJCC	24/2/2020 to 25/2/2020
Wrestling Judo	Banu Prathap Reddy 1NH17CS022	V/VI	VTU	5/9/2019 to 7/9/2019
	Purshotham 1NH17CS002	V/VI		
Hockey	Joydeep Singh (1NH18CS220)	III/IV	St. John's	25/9/2019 to 28/9/2019
Badminton(M)	Mushtaq Ahmed KS 1NH17CS086	V/VI	VTU	24/8/2019 to 25/8/2019
			Spradha 2019	26/9/2019 to 27/09/2019
			KreeDostava	1/10/2019 to

				4/10/2019
Badminton(W)	Preksha 1NH17CS102	V/VI	VTU	24/8/2019 to 25/8/2019
	KN Sripriya 1NH17CS060	V/VI	Spradha 2019	26/9/2019 to 27/09/2019
			KreeDostava	1/10/2019 to 4/10/2019
Handball(M)	Ashwij Kumar 1NH18CS031	III/IV	CHRI-SPO	12/09/2019
	Devendra Desai 1NH18CS057	III/IV	Basavangudi	24/02/2020 to 25/02/2020
	Jayesh Naidu 1NH18CS080	IV	CUFEE	28/02/2020 to 29/02/2020
Football	Tanith T 1NH18CS194	III/IV	CHRI-SPO	14/09/2019 to 17/09/2019
			SPRADHA 2019	26/09/2019 to 27/09/2019
			KREEDOSTAVA	1/10/2019 to 4/10/2019
			RVCE	22/02/2020 to 24/02/2020
			CUFE	27/02/2020 to 29/02/2020
Academic Year 2018-2019				
Volleyball(M)	Abhishek 1NH14CS001	VII/VIII	BTL	11/09/2018
			KREEDOSTAVA	22/09/2018 to 24/09/2018
			SPARDHA	3/10/2018 to 4/10/2018
			RVCE	9/2/2019 to 10/02/2019
			CUFE	28/02/2019 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
			NEWHORIZON CUP	3/4/2019 to 5/4/2019
Volleyball(W)	Kavya A S 1NH16CS050	VI	VTU(IZ)	18/3/2019 to 19/3/2019
			VTU(BCZ)	15/3/2019 to 16/3/2019
	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
Athletics	Abhishek 1NH14CS001	VII	VTU	25/10/2018 to 29/10/2018
	Mailaresh S 1NH15CS072	VII		
Basketball(M)	Mohan Sai Krishna 1NH17CS082	III/IV	St. Johns	5/9/2018 to 9/9/2018
			VTU(BCZ)	14/9/2018 to 15/9/2018
			VTU(IZ)	17/9/2018 to 18/9/2018
			KREEDOSTAVA	21/9/2018 to 24/9/2018
			MS RAMAIIH	22/9/2018 to 24/9/2018
			SPRADHA	3/10/2018 to 4/10/2018
			Malleshwaram	26/1/2019 to 3/2/2019
			RVCE	8/2/2019 to

				10/2/2019
			Spiel	11/2/2019 to 15/2/2019
			New Horizon Cup	28/3/2019 to 5/4/2019
			CUFE	28/2/2019 to 2/3/2019
			CMP	25/3/2019
Basketball (W)	Madhuri Mandlem 1NH15CS067	VII/VIII	NHPS	1/8/2018 to 4/8/2018
			St. Johns	5/9/2018 to 9/9/2018
			MS RAMAIIH	22/9/2018 to 24/9/2018
			SPRADHA	3/10/2018 to 4/10/2018
			Malleshwaram	26/1/2019 to 3/2/2019
	Tulasi Somaiah 1NH16CS078	V/VI	RVCE	8/2/2019 to 10/2/2019
			Spiel	11/2/2019 to 15/2/2019
			New Horizon Cup	28/3/2019 to 5/4/2019
			VTU(BCZ)	10/4/2019
			VTU(IZ)	11/4/2019 to 12/4/2019
Kabbadi(M)	Banu Prathap Reddy 1NH17CS022	III/IV	SPRADHA	3/10/2018 to 5/10/ 2018
			INFINI	10/10/18 to 13/10/ 18
			St. Joseph's	6/3/2019 to 7/3/2019
			REVA University	23/3/2019 to

				25/3/2019
			New Horizon Cup	3/4/2019 to 5/4/2019
			RNSIT	10/4/2019 to 11/4/2019
Wrestling(M)	Banu Prathap Reddy 1NH17CS022	III/IV	VTU	15/10/2018 to 17/10/2018
			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	VTU	9/10/2018
		VII		
Badminton	Mushtaq Ahmed 1NH17CS086 G Naveen Sai Kaanth 1NH15CS041 Preksha 1NH17CS177 KN Sripriya 1NH17CS060	III/IV	VTU	27/8/2018 to 28/8/2018
		VII/VIII	RVCE	8/2/2019 to 10/2/2019
		III/IV		
		III/IV		
Football	Sujay Hazra 1NH17CS127	III/IV	St. John's	5/9/2018
			SPRADHA	3/10/2018 to 4/10/2018
	Kartikey 1NH17CS726	III/IV	CUFE	28/2/2019 to 2/3/2019
			NITTE	6/3/2019 to 8/3/2019

Softball	Thejus B 1NH16CS116	V		
	Naman Gupta 1NH17CS731	III		
	Akash Kumar 1NH17CS701	III		
	MohithTeppola 1NH17CS084	III	VTU	4/10/2018 to 5/10/2018
	M Gopinath 1NH17CS721	III		
Cricket	S Jagadeesh 1NH17CS125	III	PES	6/10/2018 to 13/10/2018
			MSRIT	29/10/2018 to 9/11/2018
Academic Year 2017 – 18				
Basketball(M)	Anurag Rajshekar 1NH16CS701	IV	VIE	25/1/ 2018 to 28/1/2018
			Malleshwaram	4/2/2018 to 11/2/2018
			SPIEL	19/2/2018 to 21/2/2018
			Devdan Cup	1/3/2018 to 3/3/2018
			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

Basketball(W)	Madhuri Mandlem 1NH15CS067	IV	VIE	25/1 / 2018 to 28/1/2018
			Malleshwaram	4/2/2018 to 11/2/2018
			SPIEL	19/2/2018 to 21/2/2018
			RV Momentum	17/2/2018 to 18/2/2018
			KREEDOSTAVA	8/3/2018 to 10/3/2018
			AZURA 2018	14/3/2018 to 4/4/2018
			Dr.AIT	12/4/2018 to 13/4/2018
			BLDEACET	14/4/2018 to 16/4/2018
Kabaddi(M)	Arun Kumar 1NH15CS708	VI	BGS Cup	22/3/2018 to 23/3/2018
			Azura2018	2/4/2018 to 4/4/2018
			SAI LIO	17/4/2018 to 18/4/2018
Football	Tenzin Namdol 1NH14CS136	VIII	RVCE	17/2/2019 to 19/2/2018
	Prajan Adhikary 1NH16CS138	IV	VTU	20/2/2018 to 21/2/2018
	Roshan Jimi 1NH14CS157	VIII	Devandan Cup	1/3/2018 to 3/3/2018
			AZURA 2018	2/4/2018 to 4/4/2018
Chess	Subin Pandey 1NH14CS159	VIII	RVCE	16/3/2018 to 17/3/2018

	Kaushik 1NH14CS743	VIII		
Badminton(M)	G Naveen Sai Kanth 1NH15CS041	VI	RVCE	17/2/2019 to 19/2/2018
	Bhavan A 1NH14CS021	VIII	AZURA 2018	2/4/2018 to 4/4/2018
Volleyball(W)	B L Shraadha 1NH14CS020	VIII	VTU	7/3/2018
	Amrutha H R 1NH15CS016	VI		
	Nayana K 1NH15CS081	VI	BMSCE	8/3/2018 to 10/3/2018
	Priyanka Dubey 1NH15CS735 Ashwini S 1NH15CS022	VI VI	AZURA 2018	2/4/2018 to 4/4/2018
Throwball (W)	B L Shraadha 1NH14CS020	VIII	VTU	7/3/2018
	Amrutha H R 1NH15CS016	VI		
	Nayana K 1NH15CS081	VI	BMSCE	8/3/2018 to 10/3/2018
	Aishwarya 1NH15CS700	VI	AZURA 2018	2/4/2018 to 4/4/2018
KHO KHO	Abhishek 1NH14CS011	VI	RVCE	17/2/2019 to 19/2/2018
			CIT	6/4/2018 to 7/4/2018
	Mailresh 1NH15CS072	VI	NHCE	13/3/2018
			AZURA 2018	2/4/2018 to 4/4/2018

Handball	Naveen Raj 1NH13CS732	VIII	Star Shooters	15/2/2018 to 16/2/2018
			Devdan Cup	1/3/2018 to 2/3/2018
			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

Table 9.7.2: List of Inter College and Intra College Events Participated

Sl No	Event	Name of Participating Student	Semester	Date
Academic Year 2019-2020				
1.	One Tree One Student	Akshaya P Nayak	7	29.08.2019
		Harshini K	7	
		Inducuri Sweetha	7	
		Ishitha Nilesh Joshi	7	
		Sandhya M N	7	
		Sowmya P B	7	
2.	Donation Camp for the Flood Victims of	Nikita Upadhyay	7	10.08.2019

	North Karnataka and Kerala			
3.	Times Fresh Face by Times of India	Nikita Upadhyay	7	09.10.2019
4.	Bangalore Medical College Fest (Play Team)	Keerthana	5	16.10.2019
		Sreehari N R	5	
		Joel Chacko	3	
		Neeharika	3	
5.	St. John's Fest Autumn	Akshaya Suresh	3	27.09.2019
		Siri	5	
		SeeHari NR	5	
		Emmanuel Leo	3	
		Joel CC	3	
6.	Orphanage visit	Anshika Singh	3	26.10.19
7.	Spartan Race	Diwakar P	5	26.10.19
		Thanush	5	
		Ashwij	3	
		Jayesh Naidu	3	
		Rathod Akash Ashok	3	
		Stuti	3	
8.	Litrary Club - NHMUN Event	Sivan Chakravarthy	7	25.10.19, 26.10.19
		Deeksha S	5	
		Deepthi S	5	
		NikshithaBollineni	3	
		Arohi Jain	3	
		Harshith Pant	3	
		Bhoomika	5	
		Jeshav	7	

		Anurag	7	
9.	Kannada Rajyotsava	Keerthana	5	04.11.2019
		Srihari NR	5	
		Joel CC	3	
		Kavya	7	
Academic Year 2018-2019				
1.	PES fest	Abhishek	7	11.08.2018
		Srivardhan Bandi	7	
		Huma Farheen	7	
		Nitin Shashi	7	
		Rahul Prem	7	
2.	Nagarjuna Fest	Srivardhan Bandi	7	28.08.2018
		Huma Farheen	7	
		Nitin Shashi	7	
		Rahul Prem	7	
		Salman M G	5	
3.	Jain Fest	Nitin Shashi	7	27.9.2018
		Rahul Prem	7	
4.	Kannada Rajyaotsava	Prathiksha	5	3.11.2018
		Sanjana Anand	7	
		Kurthana	5	
5.	MUN Event	Rahul Prem	7	6.11.2018
6.	Club Activities- Media club	Suhasendra	7	2.2.2019
		Sanket S Huddar	5	
7.	Rashtriya Ekta Diwas	Rohit Mullay	5	31.10.2018
		Sivan Chakraborty	5	
8.	PINK DAY	Sri Raksha G	5	23.6.2018
		Kuwa Saurya	5	
		Keshav		

		Salman M G	5	
9.	MAAYA 2018	Akhil	5	30.7.2018
		Ramachandran		
		Renuka P	5	
10.	Independence Day /Cultural Event	Suhasendra	5	15.8.2018
11.	Woman's day Celebrations	Keshav	6	8.3.2019
		Aditya RV	8	
		Suhasendra N B	6	
		Salman	6	
		Akhil	6	
		Sanjana Anand	8	
		Aditya RV	8	
12.	Birth Anniversary of Chhatrapati Shivaji	Keshav	6	19.2.2019
13.	Christ Univ Fest	Gopinath	4	6.3.2019
		Siri	4	
		Sreehari	4	
		Akshaya	2	
		Nithin S	8	
		Srinivas R	4	
		Likhith Suresh	8	
14.	NIFT Fest	Keshav	6	4.04.2019
		Gopinath	4	
15.	ICAT Fest	Keshav	6	26.3.2018
		Gopinath	4	
		Anurag G	6	
		Sivan Chakravarthy	6	
		Sujay Hazra	4	

16.	NMIT Fest	Rahul Prem	8	25.02.2019
		Huma Farheen	8	
		Swapnil	8	
		Mohan	4	
		Siri	4	
		Sreehari	4	
		Akshaya	2	
		Keerthan K Bhat	4	
		Likhith Suresh	8	
		Sanjana Ramesh	8	
17.	IIM-B Fest	Huma Farheen	8	26.08.2018
		Swapnil	8	
		Mohan	4	
		Sanketh	4	
18.	Presidency University Fest	Huma Farheen	8	30.03.2019
		Swapnil	8	
		Mohan	4	
19.	Ambedkar Institute of Technology	Huma Farheen	8	4.03.2019
		Swapnil	8	
		Mohan	4	
20.	Dayananda Sagar Fest	Huma Farheen	8	16.07.2018
		Mohan	4	
		Siri	4	
		Sreehari	4	
		Akshaya	2	
		Keerthan K Bhat	4	
21.	International School of Management	Huma Farheen	8	20.09.2018
		Mohan	4	
		Abhishek	8	
22.	SJBIT Fest	Huma Farheen	8	7.10.2018

		Swapnil	8	
		Mohan	4	
		Abhishek	8	
23.	Karunanidhi College Fest	Huma Farheen	8	21.10.2018
		Swapnil	8	
		Mohan	4	
24.	RVCE	Sreehari	4	12.11.2018
		Siri	4	
		Akshaya	2	
		Keerthan K Bhat	4	
25.	CMRIT College Fest	Suhasendra N B	6	15.03.2019
		Akhil	6	
		Renu	6	
26.	Ramaiah Institute of Technology	Keshav	6	25.04.2019
		Suhasendra N B	6	
		Salman	6	
		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.

Table 9.7.3: List of Club Activities organized

Sl. No	Event	Name of Club	Date
Academic Year 2019-2020			
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
6.	Code storm	ACE	07-02-2020
7.	Tech talk Advanced CSS	ACE	13-09-2019
8.	Hour of Code	ACE	23-08-2019
Academic Year 2018-19			
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.

Table 9.7.4: List of Inter-College Technical Events Participated

Sl. No	USN	Name of the Student	Event Date	Event Details	Institution/ Organization	Achievement
1	1NH17CS112	Ruman Ahmed Shaikh	3-20-2020 & 4-02-2020	IBM - Hacker verse Hackathon	Kristu Jayanti College, Bangalore	1st Prize
2	1NH17CS127	Sujay Hazra	3-02-2020 & 4-02-2020	IBM - Hacker verse Hackathon	Kristu Jayanti College, Bangalore	1st Prize
3	1NH18CS120	Gulsan Borbhiya	3-20-2020 & 4-02-2020	IBM - Hacker verse Hackathon	Kristu Jayanti College, Bangalore	1st Prize
4	1NH18CS706	Ankit Datta	14-02-2020 & 15-02-2020	Code Connect	Maharaja Institute of Technology, Thandavapura	Participation
5	1NH18CS006	Abhay Thoppal Shiva	14-02-2020 & 15-02-2020	Code Connect	Maharaja Institute of Technology, Thandavapura	Participation
6	1NH18CS069	Goutham Shanbhag	14-02-2020 & 15-02-2020	Code Connect	Maharaja Institute of Technology, Thandavapura	Participation
7	1NH18CS229	Shreyas B	14-02-2020 & 15-02-2020	Code Connect	Maharaja Institute of Technology, Thandavapura	Participation
8	1NH18CS742	Sajjan Kumar	14-02-2020 & 15-02-2020	CodeConnect	Maharaja Institute of Technology,	Participation

					Thandavapura	
9	1NH18CS057	Devendra Desai	14-02-2020 & 15-02-2020	CodeConnect	Maharaja Institute of Technology, Thandavapura	Participation
10	1NH18CS103,	Kundana R	29-02-2020	Open Day'2020 - Blind coding	HSC - Bangalore	1st Prize
11	1NH18CS108,	Madhura K	29-02-2020	Open Day'2020 - Blind coding	HSC - Bangalore	2nd prize
12	1NH18CS203	Yagna Vikas Parvatikar	29-02-2020	Open Day'2020 - Blind coding	HSC - Bangalore	3rd Prize
13	1NH18CS177	Ms Shreya Pradeep	18-10-2019	Sap Semicolon Hackathon	SAP LABS Office, Whitefield, Bangalore	Participation
14	1NH17CS127	Sujay Hazra	21-12-2019	CSI programming contest	CSI 2020 Convention, Bhubanewswar	Participated

Hackathon

Students of our department also participated in the Hackathon. The details are given below

Table: 9.7.5 Participation in Hackathon

Event	Team Name	Name	USN	Role	Remarks
SIH - 2019	Mind Benders	Gulsan Borbhuiya	1NH18CS720	Team Leader	Participated
		Manasa A	1NH18CS110	Team Member	Participated
		Harshit Pant	1NH18CS072	Team Member	Participated
		Muskan Agrawal	1NH18CS117	Team Member	Participated
		K Ashwin Athappan	1NH18CS085	Team Member	Participated

SIH - 2019	S-team	Sathish Kumar s	1NH17CS114	Team Leader	Participated
		PayelPattanayak	1NH17CS147	Team Member	Participated
		Sushmitha G. S	1NH17CS131	Team Member	Participated
		Niveditha c b	1NH17CS094	Team Member	Participated
		Praveen C	1NH17CS100	Team Member	Participated
SIH - 2019	SMARTS	Madhumitha R	1NH16CS745	Team Leader	Participated
		Shubham Chaudhary	1NH16CS752	Team Member	Participated
		Ayush Bhardwaj	1NH16CS739	Team Member	Participated
		RAHUL	1NH16CS085	Team Member	Participated
		ToshBir Singh	1NH16CS756	Team Member	Participated
		Suhas S Kamath	1NH16CS754	Team Member	Participated
SIH - 2019	Xite	N Kavya	1NH18CS118	Team Leader	Participated
		Kolisetty Krishna Himaja	1NH18CS096	Team Member	Participated
		P. Lakshmi Sumana	1NH18CS132	Team Member	Participated
		Priyadharshini. S	1NH18CS144	Team Member	Participated
		Ramya Shree S	1NH18CS156	Team Member	Participated
SIH - 2019	Code Breakers	Deepthi.s	1NH17CS035	Team Leader	Participated
		Harini.M	1NH17CS050	Team Member	Participated
		Deeksha.S	1NH17CS033	Team Member	Participated
		Chandana Menon	1NH17CS712	Team Member	Participated
SIH - 2019	Team 1-up	Gopinath M	1NH17CS721	Team Leader	Participated
		Santoshi	1NH17CS740	Team Member	Participated
		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

9.7.2 Co- Curricular and extra- curricular activities of CV

The college encourages the students to take part in both co-curricular and extra-curricular activities. The students are allowed to take part in various sport activities also.

Table 9.7.6: List of Co-Curricular Activities

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	3.09.2018
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 9.7.7: List of Extra-Curricular Activities

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.

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	Caroms	8	Students Recreation Centre	Yes
2	Chess	8		
3	Table tennis	3		
4	Madison ball	12		
5	Yoga mats	6		

Table 9.7.10: List of outdoor games available in the campus

Sl. No.	Name of the sport facility	Numbers available	Place of availability	Whether available beyond
1	Volley ball	12	Open ground	YES
2	Basket ball	24		
3	Throw ball	6		
4	Hand ball	10		
5	Kho-Kho	2		
6	Football/Cricket	12		
7	Shot put	2		

8	Badminton	10		
---	-----------	----	--	--

Table 9.7.11: List of students participated in sports-2015-16

Sl. 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 16 to 18 Oct 2015	ST. JOHN'S MC CHRIST UST RVCE	03 03 03	Participation Participation Participation
2	Prashanth	1NH14CV137	III	Foot Ball	27 to 29 Aug 2015 12 to 14 Sept 2015 16 to 18 Oct 2015	ST. JOHN'S MC CHRIST UST RVCE	03 03 03	Participation Participation Participation
3	Sahana R Reddy	1NH13CV104	V	Basket Ball (W) Swimm ing	27 to 29 Aug 2015 1 to 3 Oct 2015 4 to 6 Oct 2015 28 to 30 Oct 2015 23 rd Sept 2015	ST. JOHN'S MC BMSCE MSRIT PES U VTU IC	03 03 03 03 01	Participation Participation Second Runner Up Runner Up Participation
4	Nawazulla N	1NH14CV072	III	Volley Ball Cricket Volley Ball	27 to 29 Aug 2015 03 & 04 Sept 2015 28 to 30 Oct 2015 1 st to 3 rd Oct 2015 16 to 18 Oct 2015	ST. JOHN'S MC MSRIT PES U BMSCE RVCE	03 02 03 03 03	Participation Participation Participation Participation Participation
5	Rakesh S	1NH14CV693	III	Volley	27 to 29	ST.	03	Participation

				Ball	Aug 2015 1 st to 3 rd Oct 2015 16 to 18 Oct 2015	JOHN'S MC BMSCE RVCE	03 03	Participation Participation
6	Rajesh Kosuri	1NH13CV088	V	Chess	30 & 31 Aug 2015	VTU B'LORE ZONE	02	5 th Place
7	Rishabh Mahara	1NH13CV096	V	Cricket	03 & 04 Sept 2015	MSRIT	02	Participation
8	Sumith Kumar Dey	1NH13CV121	V	Badminton	23 & 24 Aug 2015 16 to 20 Aug 2015 1 to 3 Oct 2015	VTU B'LORE C Z STATE CHAMP BMSCE	02 04 03	Participation Participation Participation
8	Monish N Raj	1NH14CV068	III	Badminton	23 & 24 Aug 2015 1 to 3 Oct 2015	VTU B'LORE C Z BMSCE	02 03	Participation Participation
9	Abhishek Kukreti	1NH12CV001	V	Power Lift	29 to 31 Oct 2015	VTU IC	03	Participation

Table 9.7.12: List of students participated in sports -2017-18

Sl. No	Name	USN	Sem	Event	Date	Tournament	No. of Days	Achievements
1	Amr Nazeer Ahmed	17CV100	I	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	VIE MALLES HWARA M RV MOMENT UM SPIEL DEV DAN CUP	04 07 02 03 03 03 22	Participation Participation Participation Participation Runners Runners

					Mar 2018 2 nd to 4 th Apr 2018 17 th Apr 2018 18 th Apr 2018	STAV AZURA 2018 SAI LIO AMC		
5	Rajesh Sah	1NH14CV138	VIII	Cricket	17 th to 20 th Mar 2018	SAMBHR AM	03	Participation
6	Abdul Husain	1NH14CV146	VI	Cricket	17 th to 20 th Mar 2018	SAMBHR AM	03	Participation
7	Prashant Thapa	1NH14CV137	VIII	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 DEVAND AN CUP AZURA 2018	03 02 03 03	Participation Participation Participation Runners
8	Tejas	1NH15CV130	VI	Foot Ball	1 st to 3 rd Mar 2018 2 nd to 4 th Apr 2018	DEVAND AN CUP AZURA 2018	03 03	Participation Runners
9	B Lathlamua na	1NH14CV013	VIII	Foot Ball	2 nd to 4 th Apr 2018	AZURA 2018	03	Runners
10	Lalremisia ma	1NH14CV021	VIII	Foot Ball	2 nd to 4 th Apr 2018	AZURA 2018	03	Runners
11	Benjamin	1NH14CV016	VIII	Foot Ball	2 nd to 4 th Apr 2018	AZURA 2018	03	Participation
12	Anand S Kotnoor	1NH16CV013	IV	Table Tennis	8 th to 10 th Mar 2018	BMSCE	03	Participation
13	Monish Raj	1NH14CV068	VIII	Badmin ton (M)	17 th to 19 th Feb 2018 2 nd to 4 th Apr 2018	RVCE AZURA 2018	03	Participation Runners
14	Amal Thomas	1NH16CV011	IV	Badmin ton (M)	2 nd to 4 th Apr 2018	AZURA 2018	03	Runners
15	Kishore Kumar	1NH16CV403	VI	Kho Kho	17 th to 19 th Feb 2018	RVCE CIT(VTU)	03 02	Participation Participation

	Nayak				6 th & 7 th Apr 2018			
16	Sanjay H R	1NH16CV096	IV	Handball	15 th & 16 th Feb 2018 1 st & 2 nd Mar 2108 6 th to 10 th Mar 2018 13 th to 14 th Mar 2018 16 th & 17 th Mar 2018 2 nd to 4 th Apr 2018	STAR SHOOTER S DEV DAN CUP STAR SHOOTER S VTU (BCZ) VTU (IZ) AZURA 2018	02 02 05 02 02 03	Participation Participation Participation Winners Participation Participation
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 KREEDO STAVA SPARDH A 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 3 rd & 4 th Oct 2018	VTU KREEDO STAVA SPARDH A 2018	02 03 02	Participation Participation Participation
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	ST.	02	Participation

					Sep 2018	JOHNS		
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	Badminton	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(NATIONALS)	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
22	Dhiraj T	1NH15CV034	VII	Cricket	6 th to 13 th Oct 2018	PES MSRIT	08 12	Participation Participation

					29 th Oct to 9 th Nov 2018			
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
25	Sanjay HR	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
26	Newton Buragohain	1NH16CV072	IV	Basketball(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 5 th April 2019	MALLES HWARA M RVCE SPIEL/ JNC CUFE CMP NEW HORIZON CUP	9 3 5 3 1 9	Participated Participated Participated Participated Participated Runners
27	Amal	1NH16CV011	IV	Badmint	8 th to 10 th	RVCE	3	Participated

	Thomas			on	Feb 2019			
28	Manu K H	1NH18CV410	IV	Kho-Kho	1 st & 2 nd Mar 2019	VTU	2	Participated
29	Kishore Kumar Nayak	1NH16CV403	VIII	Kho-Kho	1 st & 2 nd Mar 2019	VTU	2	Participated
30	Dhiraj T	1NH15CV034	VIII	Cricket	16 th to 23 rd Feb 2019 7 th ,11 th , 13 th & 14 th Mar 2019	CUFE & RVCE VTU	6 4	Participated Participated
31	Sahas A S	1NH17CV099	IV	Cricket	16 th to 23 rd Feb 2019 7 th ,11 th , 13 th & 14 th Mar 2019	CUFE & RVCE VTU	6 4	Participated Participated
32	Rohan Bopanna N M	1NH15CV100	VIII	Hockey	15 th to 17 th Mar 2019 15 th & 16 th Apr 2019 22 nd & 23 rd Apr 2019	IISC VTU (BCZ) VTU (IZ)	3 2 2	Participated Runners Participated
33	Somanna N B	1NH15CV124	VIII	Hockey	15 th to 17 th Mar 2019 15 th & 16 th Apr 2019 22 nd & 23 rd Apr 2019	IISC VTU (BCZ) VTU (IZ)	3 2 2	Participated Runners Participated
34	Sourav	1NH15CV126	VIII	Hockey	15 th to	IISC	3	Participated

	Das				17 th Mar 2019 15 th & 16 th Apr 2019 22 nd & 23 rd Apr 2019	VTU (BCZ) VTU (IZ)	2 2	Runners Participated
35	Udit Kumar	1NH15CV130	VIII	Hockey	15 th to 17 th Mar 2019 15 th & 16 th Apr 2019 22 nd & 23 rd Apr 2019	IISC VTU (BCZ) VTU (IZ)	3 2 2	Participated Runners Participated
36	Vineeth	1NH15CV139	VIII	Hockey	15 th to 17 th Mar 2019	IISC	3	Participated
37	Sachin Patil	1NH15CV108	VIII	Hockey	15 th to 17 th Mar 2019	IISC	3	Participated
38	Tejwanth S	1NH15CV150	VIII	Hockey	15 th to 17 th Mar 2019	IISC	3	Participated
39	Nikhil H A	1NH17CV072	IV	Volunteer	1 st to 5 th Apr 2019	NEW HORIZON CUP	5	Participated

9.7(C) Co- Curricular and Extra-Curricular Activities of EC

The college encourages the students to take part in both co-curricular and extra-curricular 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.

Table 9.7.14: Electronics Hobby Club Activities

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 Oct 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
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 Oct 2019	Participants were given the kits from EFY which consisted of different circuits.
A & D Circuit Analysis	06-03-2020	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

Table 9.7.16: Professional Connect Club Activities

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	Sl. No.	Name of the Event
1	Republic Day	13	Birthday of Shaheed Bhagat Singh
2	Independence day	14	Birthday of Swami Vivekananda

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

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”
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.

Table 9.7.18: List of indoor games available in the campus

Sl. No.	Name of the sport facility	Numbers available	Place of availability	Whether available beyond regular timings
1	Caroms	08 boards	Students Recreation Centre	YES
2	Chess	08 boards		
3	Table Tennis	03 boards		
6	Madison ball	12		
7	Yoga mats	06		

Table 9.7.19: List of outdoor 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	Open ground	YES
2	Basket ball	24 balls		
3	Throw ball	06 balls		
4	Hand ball	10 balls		
5	Kho-Kho	2 poles		
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.

Table 9.7.20: Summary of achievement in sports activities (2017 – 18)

Sl. No	Name	USN	Sem	Event	Date	Tournament	No. of Days	Achievements
1	J Ruth Sharon	17ECE086	I	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 Mar 2018 4 th to 6 th Mar 2018 7 th & 8 th Mar 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

					2 nd to 4 th Apr 2018 17 th Apr 2018 18 th Apr 2018			
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 Runners Winners Winners Winners Winners
4	Bhavana Savanth	1NH15EC011	VI	Basketball (W)	25 th to 28 th Jan 2018 4 th to 11 th Feb 2018 17 th to 19 th Feb 2018 19 th to 21 st Feb 2018 8 th to 10 th Mar	VIE MALLESH WARAM RV MOMENTU M SPIEL KREEDOST AVA AZURA 2018 Dr. AIT(VTU)	04 07 03 03 03 22 02 03	Participation Runners Winners Participation Winners Winners Runners Runners

					2018 14 th Mar to 4 th Apr 2018 12 th & 13 th Apr 2018 14 th to 16 th Apr 2018	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

Table 9.7.21: Summary of achievement in sports activities (2018 – 19)

Sl.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
2	Ritvik	1NH16EC725	V	Basket Ball(M)	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	ST. JOHN'S VTU(BCZ) VTU(IZ) KREEDOST AVA MS RAMAIAH SPARDHA	05 02 02 04 03 02	Participation Runners Participation Participation Participation
3	Giridhar U	1NH17EC112	III	Kabaddi (M)	3 rd & 5 th Oct 2018 10 th to 13 th Oct 2018	SPARDHA INFINI	03 04	Winners Participation
4	J Ruth Sharon (Played VTU Nationals)	1NH17EC033	III	Basketball(W)	1 st to 4 th Aug 2018 5 th to 9 th Sep 2018 21 st to 24 th Sep 2018	NHPS CUP ST JOHN'S KREEDOST AV MS RAMAIAH COURT	04 05 04 04 08 02 07	Participation Participation Winners Winners Participation Winners Participation

					2018 22 nd to 25 th Sep 2018 25 th Sep to 2 nd Oct 2018 3 rd & 4 th Oct 2018 22 nd to 28 th Oct 2018 29 th Oct to 9 th Nov 2018	WARS SPARDHA FIBA VTU(NATI ONALS)	12	Participation
5	Giridhar V	1NH17EC112	IV	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
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	VI	Volleyball (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 29 th to 30 th Mar 2019 3 rd to 5 th Apr 2019	RVCE CUFE VTU (BCZ) VTU SELECTIO NS FISA AMC NEW HORIZON CUP	2 3 2 2 1 2 3	Participated Participated Participated Participated Winners Winners Winners
8	Janardhana T	1NH17EC408	VI	Volleyball (M) Cricket	9 th &10 th Feb 2019 28 th Feb to 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 &	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

					14 th Feb 2019			
9	Bhavana Savanth	1NH15EC011	VIII	Basketball (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 5 th 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	Basketball (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 5 th 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	Basketball (M)	26 th Jan to 3 rd Feb 2019 8 th to 10 th	MALLESH WARAM RVCE SPIEL/JNC	9 3 5 3	Participated Participated Participated Participated

					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 5 th April 2019	CUFE CMP NEW HORIZON CUP	1 9	Participated Runners
12	Akhilesh Varma	1NH16EC006	VI	Football	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
13	Vinod K	1NH18EC421	IV	Football	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	Meghashree 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	VTU (BCZ) VTU (IZ) AMC FISA NEW HORIZON CUP	2 2 1 2 3	II Runners Up Participated Winners Winners Runners

					3 rd to 5 th April 2019			
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

Table 9.7.22: Summary of achievement in sports activities (2019 – 20)

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	COURT WARS RIT VTU (BCZ) VTU (IZ) KREEDO STAVA PESIT CMP PRACTICE ASSOCIA TION CUP	08 03 02 04 04 03 03 07	Participation Runners Runners Winners Participation Participation Participation

					Nov 2019			
2	J Ruth Sharon	1NH17EC033	V	Basket Ball (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) KREEDO STAVA PESIT ASSOCIATION CUP	02 08 03 02 04 03 07	Participation Participation Winners Participation III Place Participation Participation
3	Chirag S	1NH16EC713	VII	Volley Ball (M)	26 th & 27 th Sep 2019 1 st to 4 th Oct 2019	SPARDH A 2019 KREEDO STAVA	02 04	Participation Iii Place
4	Janardhana T	1NH17EC408	VII	Volley Ball (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 KREEDO STAVA PESIT RIT	02 04 05 03	Participation III Place Participation Participation
7	Aditya Choudhary	1NH17EC003	V	Table Tennis	26 th & 27 th Sep 2019	SPARDHA 19 KREEDO	02 01	Runners Participation

					1 st Oct 2019	STAVA		
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 KREEDO STAVA	04 02 04	Participation Runners Participation
10	Milan Rao	1NH17EC051	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 KREEDO STAVA	04 02 04	Participation Runners Participation
11	M Sachit	1NH16EC046	VII	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 KREEDO STAVA	04 02 04	Participation Runners Participation
12	Akhilesh Varma	1NH16EC006	VII	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 KREEDO STAVA	04 02 04	Participation Runners Participation
13	Rajeev Kumar	1NH18EC741	III	Football	14 th to 17 th Sep 2019 26 th & 27 th Sep 2019	CHRI-SPO SPARDHA 19 KREEDOS TAVA	04 02 04	Participation Runners Participation

					1 st to 4 th Oct 2019			
14	Ritvik Msvv	1NH16EC725	VIII	Basket Ball (M)	25 th Jan to 3 rd Feb 2020 10 th to 15 th Feb 2020 22 nd to 24 th Feb 2020 28 th & 29 th Feb 2020	Mallesha ram Cup SPIEL RVCE DEVADA N CUP	10 06 03 02	Participation Participation Participation Winners
15	J Ruth Sharon	1NH17EC033	VI	Basket Ball (W)	25 th Jan to 3 rd Feb 2020 10 th to 15 th Feb 2020 22 nd to 24 th Feb 2020	Mallesha ram Cup SPIEL RVCE	10 06 03	3 rd PLACE RUNNERS WINNERS
16	Chirag S	1NH16EC713	VIII	Volley Ball (M)	1 st and 2 nd Feb 2020 23 rd and 24 th Feb 2020 28 th and 28 th Feb 2020 5 th and 6 th Mar 2020 9 th and 1 th Mar 2020	UMANG RVCE CUFEE VTU (BCZ) VTU (IZ)	02 02 02 02 02	Runners Runners Participation Runners II Runners

17	Janardhana T	1NH17EC408	VIII	Volley Ball (M)	1 st and 2 nd Feb 2020 23 rd and 24 th Feb 2020 28 th and 28 th Feb 2020 5 th and 6 th Mar 2020 9 th and 11 th Mar 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	UMANG RVCE CUFEE VTU (BCZ) VTU (IZ) CUFEE RVCE VTU	02 02 02 02 02 04 04 02	Runners Runners Participation Runners II Runners Participation Participation Participation
18	Tanmaya Sh	1NH18EC112	IV	Volley Ball (W)	13 th to 15 th Mar 2020	VTU(Bcz)	03	2 nd RUNNER UP
19	Meghashree 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

Table 9.7.23: List of Inter College and Intra College Events Participated

Sl No	Event	Name of Participating Student	Semester	Date
Academic Year 2019-2020				
1.	One Tree One Student	Madhunitha R	5	29.08.2019
		Monika K Reddy	5	
		Rishita S	5	
		Syale Rajkumar	5	
		Prajval T J	5	
2.	Donation Camp for the Flood Victims of North Karnataka and Kerala	Preshika J M	7	10.08.2019
		Prithipa A	7	
		Pavan Raj R	7	
3.	Times Fresh Face by Times of India	Naini Reddy	5	09.10.2019
4.	Bangalore Medical College Fest (Play Team)	Dhayana Sree Reddy	5	16.10.2019
		Shakthi A	5	
		Raksha Krishi	3	
5.	Spartan Race	Shakti A	5	26.10.19
		Harsha E	7	
		Akhilesh	7	
		Joshua	1	
		Gridar	5	
		Kevin	1	

		Chirag Sharma	5	
		Janardhan	5	
		Deeksha S	5	
		Deepthi S	5	
		Nikshitha Bollineni	3	
		Arohi Jain	3	
		Harshith Pant	3	
		Bhoomika	5	
		Jeshav	7	
		Anurag	7	
		Rakshitha	7	
		Shakthi A	5	
		Syale Rajkumar	5	
6.	Kannada Rajyotsava	Rakshitha	7	04.11.2019
		A Anil Bharat	5	
		Dhayana Sree Reddy	5	
		Madhunitha R	5	
		Monika K Reddy	5	
		Sowmiya A	5	
		Syale Rajkumar	5	
		Vignesh R	4	
		Manisha	3	
Academic Year 2018-2019				
1.	PES fest	Akshitha R	5	11.08.2018
		Sahib	7	
		Jitin Jain	7	
		Mathew		

		Anju	7	
2.	Nagarjuna Fest	Jitin Jain Mathew	7	28.08.2018
		Anju	7	
3.	Jain Fest	Jitin Jain Mathew	7	27.9.2018
		Akshitha R	5	
4.	Kannada Rajyaotsava	Prathiksha	5	3.11.2018
		Sanjana Anand	7	
		Kurthana	5	
5.	MUN Event	Jitin Jain Mathew	7	6.11.2018
6.	Independence Day /Cultural Event	Abhishekh VP	5	15.8.2018
		Ashwin	5	
		Megha	5	
		Achal	7	
		Bhavana Savant	7	
		Anju	7	
7.	Christ Univ Fest	Bhavana	8	6.3.2019
		Ashwin S	8	
		Soumya	4	
8.	NIFT Fest	Bhavana	8	4.04.2019
		Ashwin S	8	
		Anju	6	
		Kevine P Kumar	4	
9.	ICAT Fest	Bhavana	8	26.3.2018
		Ashwin S	8	
		Anju	6	
		Kevine P Kumar	4	

10.	NMIT Fest	Kushi Ponnamma	6	25.02.2019
		Soumya	4	
		Dhanyashree V Reddy	4	
11.	IIM-B Fest	Kushi Ponnamma	6	26.08.2018
12.	Presidency University Fest	Kushi Ponnamma	6	30.03.2019
13.	International School of Management	Kushi Ponnamma	6	20.09.2018
		Sahib Arora	4	
14.	SJBIT Fest	Kushi Ponnamma	6	7.10.2018
		Sahib Arora	4	
15.	Krupanidhi College Fest	Kushi Ponnamma	6	21.10.2018
		Sahib Arora	4	
16.	RVCE	Soumya	4	12.11.2018
		Dhanyashree V Reddy	4	
17.	CMRIT College Fest	Anju	6	15.03.2019
		Bhavana	8	
		Ashwin S	8	
18.	Ramaiah Institute of Technology	Anju	6	25.04.2019

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

Table 9.7.24: List of Inter-College Technical Events Participated

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	International 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	1NH17EC052	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 Jayakumar 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
8	1NH15EC019 1NH15EC062	Denzel Abraham George, Nikhil Riyaz	30 Nov - 05 Dec 2018	UNISEC-India at the 7th annual UNISEC-Global conference	Tokyo, Japan	Participation in outside country event

9	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
10	1NH16EC036	K Girivardhan	05-09-2019	Indian Technology Congress 2019 - Human Digitalization: Future Intelligence(Seminar)	NIMHANS Convention Centre, Bengaluru	Participation
11	INH17EC092	Shoaib Ahmed	01-11-2019	India Innovation Challenge Design Contest	Texas Instruments – Online Event	Participation
12	INH17EC011	Bharath M	29-02-2020 & 01-03-2020	Technical Symposium	Indian Institute of Technology, Chennai, Tamil Nadu	Participation (Outside state event)
13	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)
14	1NH15EC062 1NH15EC727 1NH15EC019	Nikhil Riyaz, Hariraj R, 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
15	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

Table: 9.7.25: Participation in Hackathon

Event	Name	USN	Conducted	Remarks
Ideathon	Shashank B	1NH16EC095	CISCO	Winner
	T E Habishek	1NH16EC106	CISCO	Winner
	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.

Table 9.7.26: List of Annual activities

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)



Figure 9.39: Sargam 2019



Figure 9.40: Sargam 2019



Figure 9.41: Alumni meet 2019

9.7(D) 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:

Table 9.7.27: List of 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)



Figure No 9.42: Glimpses of “Sargam”

TechHorizon 2019



New Horizon College of Engineering organized National Level Project exhibition **TechHorizon 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”

SL NO	NAME OF THE STUDENT	USN	DEPT	SEM	EVENT AND REASON	DATE	TIME
1	Pavan Kumar Reddy	1NH14ME091	ME	7th	Club Meeting	14.08.2019	3.50 Pm to 4.50 Pm
					Krishna Janmastami	24.08.2019	Full Day
					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 TC	1NH16ME055	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
4	Sammed Patil	1NH16ME094	ME	7	Donation Camp for the Flood Victims of North Karnataka and Kerala	10.08.2019	Full Day
					KANNADA RAJYOTSAVA	22/10/2019, 23.10.19	2:50 TO 4:50
					KANNADA RAJYOTSAVA	04/11/2019, 05.11.19	10.00am onwards
5	Vaij Nath	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
11	Arjun Kumar	1NH17ME407	ME	7th	Krishna Janmastami	24.08.2019	Full Day
					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:

Table 9.7.28: Summary of achievements in Co-curricular activities

Sl. No.	Name of the activity	No. of students participated		
		2016-17	2017-18	2018-19
1	Project Expo / Paper presentation	67	100	100
2	Technical workshops	03	03	03
3	Industrial Visit	5	07	07



At Bangalore Metallurgical PVT. LTD



At Bangalore Metallurgical PVT. LTD



At UNNATHI CNC Technologies



At Vishnu Forging Industries Limited



At TRINITY NDT

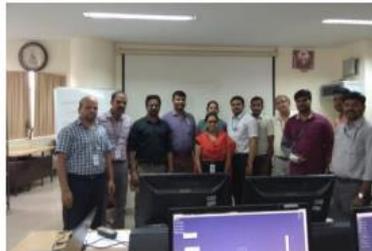
Industrial Visit

Indian Machine Tool Manufacturers' Association (IMTMA) organized an inter college Quiz contest on manufacturing technology for mechanical engineering students coinciding with IMTEX-2019 and Tooltech-2019 from 25-01-2019 to 29-01-2019 at Hall 3C-IMTEX 2019, (I2 ACADEMIA PAVILION), Bangalore International Exhibition Centre. The quiz focused on the students to understand, get acquainted with the latest technologies emerging in manufacturing industry, make them competitive to build their professional career and become industry ready. The topics of the quiz mainly involved questions on Machine Design, Automation, cutting tools, Industry 4.0, Production Engineering, Additive Manufacturing etc. Around 50 institutes all across India did participate in the event. Department of Mechanical Engineering students secured runner-up position.

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:

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"
11	Birthday of Jhansi Rani	24	Fresh Face
12	Birthday of Chatrapathi Shivaji	25	IT Quiz
13	Birthday of Dr. APJ Abdul Kalam		



Figure No. 9.48: Kannada Rajyotsava



Figure No 9.49: Birthday of Dr. APJ Abdul Kalam

Table 9.7.30: List of indoor games available in the campus

Sl. No.	Name of the Sport Facility	Numbers Available	Place of Availability	Whether Available beyond Regular Timings
1	Caroms	08 boards	Students Recreation Centre	YES
2	Chess	08 boards		
3	Table Tennis	03 boards		
4	Madison Ball	12		
5	Yoga Mats	06		

Table 9.7.31: List of outdoor 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	Open ground	YES
2	Basket ball	24 balls		
3	Throw ball	06 balls		
4	Hand ball	10 balls		
5	Kho-Kho	2 poles		
6	Football/Cricket	12 balls		
7	Shot put	02		
8	Badminton	10 bats		

Achievements in sport activities

Table 9.7.32: Summary of achievements in sport activities

Sl.No.	Name of the sport	No. of students		
		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	-	-

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 of 2016-19

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
ELECTRONICS &
COMMUNICATION ENGINEERING**

CRITERION 10

**GOVERNANCE, INSTITUTIONAL SUPPORT
AND FINANCIAL RESOURCES**

CRITERION 10	GOVERNANCE, INSTITUTIONAL SUPPORT AND FINANCIAL RESOURCES	(120)
---------------------	--	--------------

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 the 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 HoDs, Faculties, Supporting staff, Students, Parents and Alumni were held for the same.

Following key points about institute were discussed to carry out the analysis

- Infrastructure/Laboratory/Equipment/Workshop
- Research/Consultancy

- Placement Cell
- Industry interaction
- Workshop/Training Programme for Faculty/Staff/Students
- Mentorship Programme for the students
- Active & Innovative Learning Process
- Outcome based Curriculum
- Admission policies/Fee Structure
- MoU with Reputed Institutes/Industries
- E-Learning/Library
- Skill Development Programme
- Unnat Bharat Abhiyan
- Sports/clubs/Activities/social Service
- Awards/Scholarships
- IT Infrastructure/ digital technology
- Security
- Woman grievance & redressal

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 recognized technical institute.

SI No	Strategic Plan	Implementation	Monitoring
1	To improve teaching learning environment	<ul style="list-style-type: none"> •Set up of new Smart Class Rooms •Adoption of Moodle •Use Moocs/NPTEL for e - learning •Arrange Expert Talks •Interaction with industry person •Provide Career Guidance to students •Use service of Adjunct faculty •Successful implementation of OBE 	Dean academic of the institute, Deans, and HoDs visit the class rooms, labs daily in order to make healthy academic environment and make sure successful implementation of outcome based education in the campus. In additions to the regular classes, expert talks on emerging areas also arrange weekly in the institute. Daily attendance, assignment, quizzes are uploaded on software and noticed by Dean-Academics and HoDs
2	To improve laboratory/ library	<ul style="list-style-type: none"> • To setup new labs on emerging areas. 	Meeting of HODs , Dean academic, Dean research arrange once in each semester for setting

		<ul style="list-style-type: none"> To setup modern Lab for research Rich library resources such as reputed journals/ new books 	up new labs or purchasing of new equipment. In-charge library regularly ask for new books/e-journal from faculties & students and arrange them in the library.
3	To enhance research culture	Funds/Workshop/Training have been arranged for the faculty/students in order to attract funded research project/consultancy	Every month Dean research arrange the meeting with Principal of the institute and encourage the faculty to create the research culture in the institute, arrange the workshop/training/expert talk on emerging areas
4	To enhance interaction with reputed institute	MoU with reputed institute/company has been set up to joint research & exchange of human resources	MoU with reputed institute / industry is decided in the meeting of BOG/ACM
5	To provide mentorship to students	Proper assistance is provided by Mentors to the needy students in all areas such as study, financé, career, etc	Meeting between Mentors & students takes place daily and resolve various problems of students
6	To start new programs in emerging areas	For enhancement of research culture of the institute	Principal of the institute arrange the meeting every month with Dean Academic, Dean Research and HODs and try to find the emerging areas for with new courses can be launched
7	To obtain accreditation for various courses	NAAC and Applied for NBA accreditation and prepared for that	Coordinator of NBA arrange the meeting once in a fortnight of Head of the departments to be accredited with Principal, Dean-Academics, and assess the status of preparation of accreditation
8	To improve quality of campus	Various steps have been taken to provide world class infrastructure in the institute such as digital technology used in every section/ high speed wi-fi/	In-charge of various section such as building section, hostel warden, computer maintenance , security officer, electrical maintenance etc continuously supervise the concern

		lush green campus/ smart class rooms/ central library/ computer centre/ hygenic hostels/ playgrounds/ indoor stadium/ auditorium /security/electrical maintenance	section and keep the campus up-to-date for easy and better life
9	To improve students placement	Communication has been setup with various MNCs both National and International for campus drives at the institute	Placement team continuously interact with HR of various MNCs for campus recruitment, arrange various career oriented programme at Institute
10	To increase Sports activity/social services	National level sports and cultural & technical activities have been organized. Institute participates and organize various national and international level activities	Sports officer interact regularly with students and arrange facilities of sports, encourage the students for participation at national level competitions. Coordinators of each clubs meet weekly and decide activities to be performed at institute level.
11	Trained students under Skill Development Program	More students have been trained under various schemes of central and state government.	Coordinator interact regularly and assess the performance of trainee, and arrange better environment to improve themselves.
12	To improve the quality of rural areas under the “Unnat Bharat Abhiyan”	Institute is participating in full sprit under “Unnat Bharat Abhiyan” for the development and betterment of rural area	Coordinator of Unnat Bharat Abhiyan takes the meeting of concern faculty & students and make the plan weekly for the betterment of rural areas

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;

Table 10.1.3.1 Governing Council

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
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. Ganesh 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, Kadubisanahalli, Bangalore- 560 103	Executive Director – Training & Placements	Member
8	Dr. B.V. Ravishankar	Principal BMS & EC Member VTU	Educationist	Member

9	Prof. H Devraj UGC Nominee	New No. 23/2 III Main Road, Gandhi Nagar, Adyar Chennai – 600 020	Commission (UGC) Nominee	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, Marathalli, Outer Ring Road, Kadubisanahalli, Bangalore- 560 103	Principal	Ex Officio Member Secretary

Academic Council

Structure/Constitution	Functions/Responsibilities	Frequency of Meetings
<p>Academic Council constituted with</p> <ul style="list-style-type: none"> •Institution’s distinguished Principal as Council Chairman •Dean- Academic affairs as Member Secretary •All Heads of the Departments as Council Members •1-Professor, 1-Associate Professor or 1- Assistant Professor(as per 	<ul style="list-style-type: none"> •Recommend and approve faculty boards, academic regulations, curriculum-scheme and syllabi, teaching & learning practices •Frame regulations regarding students admission into programmes and to conduct of examinations 	

<p>seniority in institution) from each department as representing council members(for a period of 2-years)</p> <ul style="list-style-type: none"> •4(Min.)-External experts from engineering education or Industry as council members nominated by Board of Governors(B.O.G) •1-External expert for each major engineering discipline nominated by vice chancellor, VTU, Belgaum as council member •Institution’s controller of examination(COE) as council member 	<ul style="list-style-type: none"> •Suggest and recommend proposed teaching methods/techniques(LCD projector, Smart Board, Online etc..) and student performance evaluation metrics to enhance quality education •Approve students for conferment of degrees, diplomas or certificates by the University. •Recommend to the B.O.G for about 1. Institute new programmes of study 2. Student scholarships, fellowships, medal, prizes with the guideline of relevance •Promote and verify research activities of the institution 	<p>Twice in a Year</p>
---	--	------------------------

Table 10.1.3.2 Academic Council

Sl No.	Category	Sl No.	Name
I	Principal of the College – Chairman	1	Dr. Manjunatha
II	All Heads of the Dept. – Members	1	Dr. M S Ganesh Prasad
		2	Dr. Niranjan P S
		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
		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
IV	Teachers of the College representing different level of teaching staff	1	Dr. Mohan Kumar
		2	Prof. Aravinda
		3	Dr. Adhikari
		4	Dr. A R Sainath
		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		
VI	Nominees of University (VTU)	1	Dr. Shadashive gowda, Principal- Vidya Vardhaka College of Engineering, Mysuru

		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

Meetings:

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	21-09-2019	21	3
	29-06-2019	24	-
CAY m1(2018-19)	05-10-2018	18	8
	23-06-2018	22	4
	22-01-2018	21	2
CAY m2(2017-18)	03-08-2017	20	2
	28-01-2017	20	-
CAY m3(2016-17)	23-07-2016	22	3
	22-01-2016	20	1
CAY m4(2015-16)	16-12-2015	22	2
	09-11-2015	20	1
	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 10.1.3.3 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
7	Community Development Center (Public Welfare Committee)	Mr. H N Suryaprakash Ms. Deepa Ganesh	Registrar HOD- Marketing & Branding
8	Counselling Committee	Dr. Reena Jain	Head-Counselling
9	Cultural Committee	Dr. Anitha S. Rai	Head- Library & Information Center
10	Curriculum Development Committee	Dr. C S R Prashanth	Dean- Academics
11	Disciplinary Committee	Mr. H N Suryaprakash	Registrar
12	Energy Conversion Audit Committee	Dr. Ram Kumar S Mr. Karthik	HOD-EEE Estate Manager
13	Examination Committee	Dr. Vijilius Helena Raj	Controller of Examinations

14	Finance Committee	Mrs. Malathi Madhusudan	Senior Executive Director – Accounts & Finance
15	Hostel (Boys) Development & Welfare Committee	Mr. H N Suryaprakash	Registrar
16	Girls Hostel Development & Welfare Committee	Ms. Aruna	Head- Admissions
17	Infrastructure Development Committee	Dr. P S Niranjan Mr. Rao	Head- GPE Program & HOD- Civil Engg. Project Manager
18	In-Plant Training/ Industrial/ Career Guidance/ Placement Committee	Prof. Gurucharan Singh	Executive Director- Training & Placements
19	Instrumentation Cell	Dr. Sanjeev Sharma	HOD- ECE
20	Internal Quality Assessment & Assurance Cell	Dr. Gopal Krishna Mr. Anil Kumar Hangal	Dean – R&D Head – Quality Assurance
21	Library Committee	Dr. Anitha S. Rai	Head- Library & Information Center
22	NCC Committee	Dr. M. S. Ganesha Prasad Mr. H N Suryaprakash	Dean & Head – Department of Mechanical Engineering Registrar
23	NSS Committee	Dr. Anitha S. Rai	Head- Library & Information Center
24	News Letter Committee	Dr. S. Mohan Kumar	Associate Professor, Department of ISE
25	Physical Education & Sports Committee	Dr. Ganesh Prasad Mr. Vinay	Dean & Head – Department of Mechanical Engineering

			Physical Education Director
26	Professional Societies	Dr. K. Gopala Krishnan	Dean- R & D
27	Public Relations & Marketing Committee	Mr. Adarsh J Navale	HOD- Marketing & Branding
28	Purchase Committee	Mrs. Malathi Madhusudan Mr. H N Suryaprakash	Senior Executive Director – Accounts & Finance Registrar
29	Recruitment Cell	Ms. Manjula V.	Head- HR
30	Research & Development Committee	Dr. K. Gopala Krishnan	Dean- R & D
31	SC/ST Welfare Cell	Mr. H N Suryaprakash	Registrar
32	Software / Hardware Training Committee	Dr. C S R Prashanth	Dean- Academics
33	College Internal Complaints Committee (CICC)	Ms. Manjula V.	Head- HR
34	Staff Welfare Committee	Ms. Manjula V.	Head- HR
35	Value Added Programs Committee	Dr. M. S. Ganesha Prasad	Dean & Head – Department of Mechanical Engineering
36	Women Empowerment Committee	Dr. R.J. Anandhi	Professor & Head – ISE
37	Student Mentoring Committee	Dr. Anusuya	Professor & Head- Chemistry
38	Student Grievances Redressal	Mr. Suryaprakash	Registrar
39	Universal Human Values Committee	Dr. Anusuya	Professor & Head- 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.

Table 10.1.3.3.1 Accreditation Committee

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

Meetings:

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	14-07-2020	All	Nil
	18-06-2020	All	Nil
	10-06-2020	All	Nil
	05-06-2020	All	Nil
	01-06-2020	All	Nil
	27-05-2020	All	Nil
	22-01-2020	All	Nil
	20-07-2019	All	Nil
CAY m1(2018-19)	18-01-2019	All	Nil
	06-09-2018	All	Nil
CAY m2(2017-18)	08.08.2017	5	2
	12.06.2017	All	NIL
CAY m3(2016-17)	10.02.2017	All	NIL
	19.08.2016	All	NIL
	05.07.2016	All	NIL

CAY m4(2015-16)	25.02.2016	6	1
	19.08.2015	All	NIL
CAY m5(2014-15)	11.05.2015	All	NIL
	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 10.1.3.3.2 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

Meetings:

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.

Table 10.1.3.3.3 Alumni Committee

Sl. No.	Name	Designation	Position
1	Dr. Manjunatha	Principal	Chairman
2	Dr. C S R Prasanth	Dean – Academics	Member
3	Dr. Niranjana	HoD – Civil	Member
4	Dr. Ram Kumar S	HOD- EEE	Member
5	Dr. R.J. Anandhi	HOD- ISE	Member
6	Dr. Sheelan Misra	HOD – MBA	Member
7	Dr. Asha V	HOD – MCA	Member
8	Dr. Revathi V	HoD – BSH (Physics Cycle)	Member
9	Dr. M S Ganesha Prasad	Dean, Professor & HoD – ME	Member-Secretary

Meetings:

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	20-02-2020	All	Nil
	29-07-2019	All	Nil
CAY m1(2018-19)	19-03-2019	8	1
	20-11-2018	All	Nil
CAY m2(2017-18)	04.08.2017	7	2
	05.07.2017	5	4
CAY m3(2016-17)	11.01.2017	8	1
	14.12.2016	9	Nil
	10.08.2016	8	1
CAY m4(2015-16)	12.05.2016	19	2
	19.11.2015	18	3
CAY m5(2014-15)	09.04.2015	20	1
	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 10.1.3.3.4 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	Members
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

Meetings:

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	17.01.2020	All	Nil
	22.07.2019	All	Nil
CAY m1(2018-19)	17.01.2019	All	Nil
	20.07.2018	All	Nil
CAY m2(2017-18)	22.01.2018	14	01
	20.07.2017	13	02
CAY m3(2016-17)	11.01.2017	14	01
	23.07.2016	13	02
CAY m4(2015-16)	21.01.2016	14	01
	22.07.2015	13	02
CAY m5(2014-15)	20.01.2015	14	01
	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.

Table 10.1.3.3.5 Anti-Sexual Harassment Committee

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-Secretary

Meetings:

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
	20.09.2017	09	01
CAY m3(2016-17)	17.09.2016	All	Nil
	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
	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.

Table 10.1.3.3.6 Co-curricular Committee

Sl. No.	Name	Designation	Position
1	Dr. Manjunatha	Principal	Chairman
2	Prof. Sreeja	Associate Professor – MCA	Member
3	Prof. Manjesh C	Asst. Prof.– ME	Member
4	Prof. Aravinda	Sr. Asst. Professor – ECE	Member
5	Keshav	VIII Sem-CSE	Student Member
6	Chandan Kumar V T	VI Sem-Automobile	Student Member
7	Santhosh Kadali	VI Sem- MCA	Student Member
8	Dr. Anitha S Rai	Head-Library	Member Secretary

Meetings:

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	20.01.2020	All	Nil
	24.07.2019	All	Nil
CAY m1(2018-19)	13.01.2019	All	Nil
	16.07.2018	08	01
CAY m2(2017-18)	17.01.2018	All	Nil
	14.08.2017	08	01
CAY m3(2016-17)	19.01.2017	08	01
	19.12.2016	08	01
	11.10.2016	All	Nil
CAY m4(2015-16)	18.07.2016	All	NIL
	08.12.2015	All	NIL
	21.07.2015	07	02
CAY m5(2014-15)	15.12.2014	All	Nil
	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 10.1.3.3.7Public Welfare 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	Mr. Adarsh J Navale	Head- Marketing & Branding	Member-Secretary

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)	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 committee was constituted to help distracted, diverted and students who lack concentration in studies to get back to studying. The committee includes the counselors who assist and guide the students to get back to the curriculum.

Table 10.1.3.3.8 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

Meetings:

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	04.02.2020	All	Nil
	07.08.2019	All	Nil
CAY m1(2018-19)	07.02.2019	All	Nil
	10.08.2018	All	Nil
CAY m2(2017-18)	05.02.2018	07	01
	08.11.2017	07	01
	02.08.2017	06	02
CAY m3(2016-17)	23.01.2017	05	03
	26.10.2016	08	Nil
	15.09.2016	07	01
	03.08.2016	07	01
CAY m4(2015-16)	10.05.2016	07	01
	18.10.2015	06	02
CAY m5(2014-15)	23.04.2015	07	01
	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.

Table 10.1.3.3.9 Cultural Committee

Sl. No.	Name	Designation	Position
1	Dr. Manjunatha	Principal	Chairman
2	Dr. Revathi V	HOD-Physics	Member
3	Dr. Asha V.	Prof.-MCA	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

Meetings:

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	22.01.2020	All	Nil
	05.08.2019	All	Nil
CAY m1(2018-19)	10.01.2019	All	Nil
	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
	07.10.2015	08	01
CAY m5(2014-15)	21.08.2015	All	Nil
	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.

Table 10.1.3.3.10 Curriculum Development Committee

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. Niranjana	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. M.S. Ganesh 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

Meetings:

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	23.07.2020	All	Nil
CAY m1(2018-19)	28.06.2019	All	Nil
	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
	10.06.2015	All	Nil
CAY m5(2014-15)	02.02.2015	All	Nil
	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.

Table 10.1.3.3.11 Disciplinary 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

Meetings:

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	13.02.2020	All	Nil
	16.08.2019	All	Nil
CAY m1(2018-19)	12.02.2019	All	Nil
	26.08.2018	All	Nil
CAY m2(2017-18)	02.02.2018	12	01
	16.08.2017	All	Nil
CAY m3(2016-17)	09.05.2017	All	Nil
CAY m4(2015-16)	07.04.2016	11	02
	10.09.2015	All	Nil
CAY m5(2014-15)	13.05.2015	All	Nil
	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.

Table 10.1.3.3.12 Energy Conversation Committee

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.Vinod Kumar.S	Sr. Asst.Prof-EEE	Member
7	Mr.Lithesh.J	Asst.Prof-EEE	Member

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
CAY m3(2016-17)	31.03.2017	All	Nil
	13.02.2017	All	Nil
	13.10.2016	All	Nil
CAY m4(2015-16)	02.02.2016	07	01
	06.01.2016	All	Nil
	03.08.2015	All	Nil
CAY m5(2014-15)	16.02.2015	06	02
	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.

Table 10.1.3.3.13 Examination Committee

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

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
CAY(2019-20)	05.02.2020	All	Nil
	03.01.2020.	All	Nil
	15.11.2019	All	Nil
	10.10.2019	All	Nil
CAY m1(2018-19)	04.05.2019	All	Nil
	11.02.2019	All	Nil
	20.11.2019	All	Nil
	29.10.2018	All	Nil
CAY m2(2017-18)	23.02.2018	All	Nil
	26.09.2017	All	Nil
CAY m3(2016-17)	13.02.2017	All	Nil
	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.

Table 10.1.3.3.14 Finance Committee

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. K. Gopalakrishnan	Dean- R & D	Member
6	Dr. Sheelan Misra	HOD – MBA	Member
7	Ms. Geetha	Senior Accounts Executive	Member
8	Mrs. Malathi Madhusudan	Senior Executive Director – Accounts & Finance	Member-Secretary

Meetings:

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	14.03.2020	All	Nil
	17.09.2019	All	Nil
CAY m1(2018-19)	19.03.2019	All	Nil
	19.09.2018	All	Nil
CAY m2(2017-18)	10.03.2018	All	Nil
	20.09.2017	All	Nil
CAY m3(2016-17)	14.03.2017	All	Nil
	19.09.2016	All	Nil
CAY m4(2015-16)	18.03.2016	All	Nil
	15.09.2015	All	Nil
CAY m5(2014-15)	19.03.2015	All	Nil
	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.

Table 10.1.3.3.15 Hostel (Boys) Development & Welfare Committee

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
6	Mr. Suryaprakash	Registrar	Member Secretary

Meetings:

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	22.01.2020	All	Nil
	23.07.2019	All	Nil
CAY m1(2018-19)	23.01.2019	All	Nil
	25.07.2018	All	Nil
CAY m2(2017-18)	29.01.2018	All	Nil
	25.07.2017	All	Nil
CAY m3(2016-17)	20.01.2017	06	01
	06.10.2016	All	Nil
CAY m4(2015-16)	25.02.2016	All	Nil
	28.07.2015	06	01
CAY m5(2014-15)	30.01.2015	All	Nil
	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.

Table 10.1.3.3.16 Hostel (Girls) Development & Welfare Committee

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

Meetings:

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	22.01.2020	All	Nil
	23.07.2019	All	Nil
CAY m1(2018-19)	23.01.2019	All	Nil
	25.07.2018	All	Nil
CAY m2(2017-18)	30.01.2018	05	01
	24.07.2017	All	Nil
CAY m3(2016-17)	23.01.2017	All	Nil
	06.10.2016	05	01
CAY m4(2015-16)	27.01.2016	All	Nil
	27.07.2015	All	Nil
CAY m5(2014-15)	13.02.2015	05	01
	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.

Table 10.1.3.3.17 Infrastructure Development 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

Meetings:

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	08.01.2020	All	Nil
	09.05.2019	All	Nil
CAY m1(2018-19)	18.01.2019	All	Nil
	16.05.2018	All	Nil
CAY m2(2017-18)	04.10.2017	All	Nil
	05.06.2017	All	Nil
CAY m3(2016-17)	05.04.2017	All	Nil
	10.02.2017	All	Nil
	02.12.2016	All	Nil
	10.08.2016	All	Nil
CAY m4(2015-16)	06.05.2016	All	Nil
	01.02.2016	All	Nil
	05.10.2015	All	Nil
CAY m5(2014-15)	25.02.2015	All	Nil
	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.

Table 10.1.3.3.18 In-Plant Traing/Industrial/Career Guidance/Placement Committee

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	TPO	Member
15	Mr. Mahesh	TPO	Member
16	Mr. Rajendra	TPO	Member
17	Mr. Pavan Kumar M	Executive – HR (Corporate Relations)	Member
18	Mr. Rajendra	TPO	Member
19	Ms. Manisha Joshi	Sr. Executive – HR (Corporate Relations)	Member
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

Meetings:

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	06.07.2020	All	Nil
	02.05.2020	All	Nil
CAY m1(2018-19)	30.04.2019	All	Nil
	22.01.2019	All	Nil
CAY m2(2017-18)	02.02.2018	25	02
	10.11.2017	All	Nil
CAY m3(2016-17)	04.02.2017	26	01
	07.11.2016	All	Nil
	18.07.2016	All	Nil
CAY m4(2015-16)	06.02.2016	All	Nil
	07.11.2015	All	Nil
	18.07.2015	All	Nil
CAY m5(2014-15)	07.11.2014	All	Nil
	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 10.1.3.3.19 Instrument Cell 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
6.	Prof. Aravinda K	Sr. Asst Professor	Member

Meetings:

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
	10.11.2017	All	Nil
CAY m3(2016-17)	04.02.2017	26	01
	07.11.2016	All	Nil
	18.07.2016	All	Nil
CAY m4(2015-16)	06.02.2016	All	Nil
	07.11.2015	All	Nil
	18.07.2015	All	Nil
CAY m5(2014-15)	07.11.2014	All	Nil
	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.

Table 10.1.3.3.20 Internal Quality Assessment & Assurance Cell Committee

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. Ganesh 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

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	All	Nil
	26.09.2018	All	Nil
CAY m2(2017-18)	09.08.2017	All	Nil
CAY m3(2016-17)	10.05.2017	All	Nil
	22.03.2017	All	Nil
	25.01.2017	All	Nil
	06.09.2016	All	Nil
CAY m4(2015-16)	07.07.2016	All	Nil
	05.05.2016	All	Nil
	28.03.2016	All	Nil
	16.01.2016	All	Nil
CAY m5(2014-15)	09.07.2015	All	Nil
	17.04.2015	All	Nil
	26.02.2015	All	Nil
	10.12.2014	All	Nil
	15.10.2014	All	Nil

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 Principal ensures 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 10.1.3.3.21 Library Committee

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

Meetings:

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	14.07.2020	All	Nil
	08.04.2019	All	Nil
CAY m1(2018-19)	12.12.2018	All	Nil
	04.04.2018	All	Nil
CAY m2(2017-18)	15.12.2017	All	Nil
CAY m3(2016-17)	13.05.2017	All	Nil
CAY m4(2015-16)	13.12.2016	All	Nil
	03.05.2016	All	Nil
	14.12.2015	All	Nil
CAY m5(2014-15)	05.05.2015	09	02
	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 Tri-services 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.

Table 10.1.3.3.22 NCC Committee

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. Ganesh Prasad	Dean, Professor & HoD – ME	Member-Secretary

Meetings:

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	12.02.2020	All	Nil
	04.10.2019	All	Nil
CAY m1(2018-19)	14.03.2019	All	Nil
	24.09.2018	All	Nil
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
	21.09.2015	All	Nil
CAY m5(2014-15)	12.05.2015	All	Nil
	16.10.2014	All	Nil

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.

Table 10.1.3.3.23 NSS Committee

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	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 Center	Member Secretary

Meetings:

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	18.01.2020	All	Nil
	20.08.2019	All	Nil
CAY m1(2018-19)	20.01.2019	All	Nil
	08.07.2018	All	Nil
CAY m2(2017-18)	19.01.2018	All	Nil
CAY m3(2016-17)	08.07.2017	All	Nil
	09.01.2017	All	Nil
CAY m4(2015-16)	04.01.2016	All	Nil
	07.07.2015	All	Nil
CAY m5(2014-15)	01.01.2015	All	Nil
	04.07.2015	All	Nil

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.

Table 10.1.3.3.24 News Letter 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

Meetings:

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
CAY m2(2017-18)	02-02-2018	All	Nil
	07-08-2017	05	01
CAY m3(2016-17)	03-01-2017	All	Nil
CAY m4(2015-16)	03-05-2016	05	01
	02-01-2016	All	Nil
	14-12-2015	All	Nil
CAY m5(2014-15)	05-05-2015	All	Nil
	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 students, 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.

Table 10.1.3.3.25 Physical Education and Sports Committee

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 – ME	Member Secretary
14	Mr. Vinay J T	Physical Education Director	Member

Meetings:

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	17-02-2020	All	Nil
	15-10-2019	All	Nil
CAY m1(2018-19)	04-04-2019	All	Nil
	01-12-2018	All	Nil

CAY m2(2017-18)	17.01.2018	All	Nil
	27.06.2017	All	Nil
CAY m3(2016-17)	16.01.2017	All	Nil
	20.06.2016	All	Nil
CAY m4(2015-16)	20.01.2016	All	Nil
	10.06.2015	All	Nil
CAY m5(2014-15)	02.02.2015	All	Nil
	27.10.2014	All	Nil

Professional Societies Committee

Membership in professional societies is very essential to and individual as well as institute as a whole. Amongst the various state, national and international 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.

Table 10.1.3.3.26 Professional Societies Committee

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

Meetings:

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	12.03.2020	All	Nil
	29.01.2020	All	Nil
	24.10.2019	All	Nil
CAY m1(2018-19)	03.07.2019	All	Nil
	04.04.2019	All	Nil
	02.02.2019	All	Nil
CAY m2(2017-18)	17.10.2017	All	Nil
	09.08.2017	All	Nil
CAY m3(2016-17)	10.04.2017	All	Nil
CAY m4(2015-16)	05.05.2016	All	Nil
	08.03.2016	All	Nil
	20.10.2015	All	Nil
CAY m5(2014-15)	10.05.2015	All	Nil
	06.04.2015	All	Nil
	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.

Table 10.1.3.3.27 Public Relation Committee

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

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
	12.08.2017	All	Nil
CAY m3(2016-17)	28.02.2017	All	Nil
CAY m4(2015-16)	03.05.2016	All	Nil
	14.12.2015	All	Nil
CAY m5(2014-15)	05.05.2015	All	Nil
	13.12.2014	All	Nil

Purchase Committee

This committee of the college is constituted to meet all the hardware requirements for the smooth running of the institute. Requisitions given by all the departments for its running are provided by this committee.

Table 10.1.3.3.28 Purchase 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

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	Nil

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.

Table 10.1.3.3.29 Recuritment Committee

Sl. No.	Name	Designation	Position
1	Dr. Mohan Manghnani	Chairman-NHEI	Chairman
2	Dr. Manjunatha	Principal	Member
3	Dr. C S Ra 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

Meetings:

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	03.02.2020	All	Nil
	06.01.2020	All	Nil
CAY m1(2018-19)	08.03.2019	All	Nil
	04.02.2019	All	Nil
	14.12.2018	All	Nil
	11.10.2018	All	Nil
	03.09.2018	All	Nil
CAY m2(2017-18)	22.02.2018	All	Nil
	12.02.2018	All	Nil
	18.10.2017	All	Nil
	10.10.2017	All	Nil
	21.08.2017	All	Nil
CAY m3(2016-17)	26.07.2017	All	Nil
	17.04.2017	All	Nil
	20.02.2017	All	Nil
	12.12.2016	All	Nil
	22.08.2016	All	Nil
CAY m4(2015-16)	14.01.2016	All	Nil
CAY m5(2014-15)	14.01.2015	All	Nil

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 papers 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.

Table 10.1.3.3.30 Research & Development Committee

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

Meetings:

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	12.03.2020	All	Nil
	29.01.2020	All	Nil
	25.10.2019	All	Nil
CAY m1(2018-19)	03.07.2019	All	Nil
	04.04.2019	All	Nil
	02.02.2019	All	Nil

CAY m2(2017-18)	09.02.2018	All	Nil
	01.12.2017	All	Nil
	17.10.2017	All	Nil
	17.08.2017	All	Nil
CAY m3(2016-17)	19.04.2017	All	Nil
	27.03.2017	All	Nil
	09.02.2017	All	Nil
	28.10.2016	All	Nil
CAY m4(2015-16)	03.06.2016	All	Nil
	18.05.2016	All	Nil
	27.04.2016	All	Nil
	31.03.2016	All	Nil
	16.02.2016	All	Nil
	29.02.2016	All	Nil
	13.01.2016	All	Nil
	09.11.2015	All	Nil
	13.10.2015	All	Nil
	04.09.2015	All	Nil
CAY m5(2014-15)	06.05.2015	All	Nil
	13.04.2015	All	Nil
	06.03.2015	All	Nil
	31.10.2014	All	Nil
	02.09.2014	All	Nil

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.

Table 10.1.3.3.31 SC/ST Welfare Committee

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

Meetings:

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	10.02.2020	All	Nil
	06.08.2019	All	Nil
CAY m1(2018-19)	04.02.2019	All	Nil
	02.08.2018	All	Nil
CAY m2(2017-18)	26.02.2018	All	Nil
	01.09.2017	All	Nil
CAY m3(2016-17)	20.02.2017	All	Nil
	17.08.2016	All	Nil
CAY m4(2015-16)	10.02.2016	All	Nil
	35.08.2015	All	Nil
CAY m5(2014-15)	24.02.2015	All	Nil
	08.09.2014	All	Nil

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.

Table 10.1.3.3.32 Software/Hardware Training Committee

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

Meetings:

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	24.08.2020	All	Nil
	10.01.2020	All	Nil
CAY m1(2018-19)	09.04.2019	All	Nil
	09.08.2018	All	Nil
CAY m2(2017-18)	08-03-2018	All	Nil
	11-12-2017	All	Nil
CAY m3(2016-17)	13-04-2017	All	Nil
	13-12-2016	All	Nil
CAY m4(2015-16)	05-03-2016	05	01
	14-12-2016	All	Nil
CAY m5(2014-15)	05-05-2015	All	Nil
	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.

Table 10.1.3.3.33 College Internal Complaints Committee

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

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
CAY m3(2016-17)	07-03-2017	All	Nil
	06-02-2017	All	Nil
CAY m4(2015-16)	16-04-2016	All	Nil
	22-03-2016	All	Nil
	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.

Table 10.1.3.3.34 Staff Welfare Committee

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

Meetings:

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	25.08.2020	All	Nil
	27.04.2020	All	Nil
CAY m1(2018-19)	22.04.2019	All	Nil
CAY m2(2017-18)	01 .12.2018	All	Nil
CAY m3(2016-17)	27-03-2017	All	Nil
	08-03-2017	All	Nil
	23-01-2017	All	Nil
CAY m4(2015-16)	02-04-2016	All	Nil
	13-10-2015	All	Nil
	11-08-2015	All	Nil
	09-06-2015	All	Nil
CAY m5(2014-15)	09-12-2014	All	Nil
	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.

Table 10.1.3.3.35 Value Added Programs 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. Niranjana	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

Meetings:

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	10-01-2020	All	Nil
	18-07-2019	All	Nil
CAY m1(2018-19)	28-03-2019	All	Nil
	12-10-2018	All	Nil
CAY m2(2017-18)	05.10.2017	All	Nil
CAY m3(2016-17)	08.05.2017	10	01
	05.10.2016	All	Nil
CAY m4(2015-16)	05.05.2016	10	01
	05.10.2015	All	Nil
CAY m5(2014-15)	02.05.2015	10	01
	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.

Table 10.1.3.3.36 Women Empowerment Committee

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

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)	12.10.2018	All	Nil
CAY m2(2017-18)	12.02.2018	All	Nil
	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
	11.09.2015	08	02
CAY m5(2014-15)	27.03.2015	All	Nil
	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.

Table 10.1.3.37 Student Mentoring Committee

Sl. No.	Name	Designation	Position
1	Dr. Manjunatha	Principal	Chairman
2	Dr. C S R Prashanth	Dean- Academics	Member
3	Dr. P S Niranjana	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

Meetings:

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	20.05.2020	All	Nil
	25.10.2019	All	Nil
CAY m1(2018-19)	02-04-2019	All	Nil
	22-10-2018	All	Nil
CAY m2(2017-18)	17-01-2018	07	03
	01-08-2017	08	02
CAY m3(2016-17)	09-01-2017	067	03
CAY m4(2015-16)	12-04-2016	All	Nil
	20-10-2015	All	Nil
CAY m5(2014-15)	30-04-2015	All	Nil
	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 learning. 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.

Table 10.1.3.3.38 Student Grievances Redressal 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

Meetings:

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	26-09-2019	All	Nil
CAY m1(2018-19)	01-04-2019	All	Nil
	30-08-2018	All	Nil
CAY m2(2017-18)	01-02-2018	17	01
	29-08-2017	16	02
CAY m3(2016-17)	17-01-2017	All	Nil
	27-10-2016	16	02
CAY m4(2015-16)	01-03-2016	All	Nil
	04-11-2015	All	Nil
CAY m5(2014-15)	02-04-2015	All	Nil
	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.

Table 10.1.3.3.39 Universal Human Values Committee

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

Meetings:

Academic Year	Date of Meeting	No. of Members Attended	No. of Members Absent
CAY(2019-20)	09.01.2020	All	Nil
	07.08.2019	All	Nil
CAY m1(2018-19)	11.01.2019	All	Nil
	08.08.2018	All	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.

Table 10.1.4.1: Delegation of Powers

Sl No	Department	Delegation Of Power To	Common Responsibility	Exclusive Responsibility
1	Mechanical Engineering	Dean & Professor	Administrative work	Sports Activities Alumni
2	Civil Engineering	HoD & Professor	Administrative work	Global Trips, GPE Program
3	Electronics & Communication	HoD & Professor	Administrative work	Professional body Activities(IEEE)
4	Computer Science & Engineering	HoD & Professor	Administrative work	IT infrastructure
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 in 10.1.3

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.

Table 10.1.5.1: Financial Powers

SI 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 & Finance	5,00,000

- 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)

HR Policies: <http://newhorizonindia.edu/nhengineering/wp-content/uploads/2020/07/HR-POLICIES-2019-NHCE-10-Copy.pdf>

Students: <http://newhorizonindia.edu/nhengineering/academic-guidelines/>

Antiragging rules: <http://newhorizonindia.edu/nhengineering/ragging-free-campus-2/>
(<http://newhorizonindia.edu/nhengineering/wp-content/uploads/2020/07/HR-POLICIES-2019-NHCE-10-Copy.pdf>) (<http://newhorizonindia.edu/nhengineering/academic-guidelines/>)

Department BOS/BOE Procedures:

<http://newhorizonindia.edu/nhengineering/department-of-electronics-and-communication-engineering/wp-content/uploads/2020/05/ECE-BOS-BOE-Constitution.pdf>

http://newhorizonindia.edu/nhengineering/department-of-electronics-and-communication-engineering/wp-content/uploads/2020/07/BOS-list_2020.pdf

<http://newhorizonindia.edu/nhengineering/department-of-electronics-and-communication-engineering/wp-content/uploads/2020/05/ECE-BOE-2018-19-Members.pdf>

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)

Table 10.2a: Institute Income and Expenditure for CFY 2019-20

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 10.2a1: 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

Table 10.2a2: Institute Income and Expenditure for CFYm2 2017-18

Total Income				Actual Expenditure (till 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 10.2a3: 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

Table 10.2b: Institute Budget and Expenditure 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)
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	292120180
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	20688631
Misc	102257000	91986693	98405000	93139460	82555000	127899831	76100000	83616686
Total	622539500	582926755	575155000	600261561	535035000	604834711	461850000	699590807

10.2.1. Adequacy of budget allocation (5)

(The institution needs to justify that the budget allocated during assessment years was adequate)

Table 10.2.1: Institute planned budget and expenditure

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 10.2.2.: Utilisation of allocated funds (5)

(The institution needs to state how the budget was utilised during assessment years)

Table 10.2.2.: 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 audited statements is available on the institution website and the link is as follows:

<http://newhorizonindia.edu/nhengineering/audited-statements/>

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).

Table 10.3a: Program specific budget allocation for CFY 2019-20

Total Budget: 87500000		Adequate Expenditure (till 31.03.2020):85881243		Total No of Students:791
Non-Recurring	Recurring	Non-Recurring	Recurring	Expenditure per Student
14000000	73500000	13740999	72140244	108573

Table 10.3a1: Program specific budget allocation for CFY 2018-19

Total Budget: 90000000		Adequate Expenditure (till 31.03.19): 88459280		Total No of Students:812
Non-Recurring	Recurring	Non-Recurring	Recurring	Expenditure per Student
14400000	75600000	14153485	74305795	108940

Table 10.3a2: Program specific budget allocation for CFY 2017-18

Total Budget:85000000		Adequate Expenditure (till 31.03.18) : 83118840		Total No of Students:795
Non-Recurring	Recurring	Non-Recurring	Recurring	Expenditure per Student
13600000	71400000	13299014	69819826	104552

Table 10.3a3: Program specific budget allocation for CFY 2016-17

Total Budget:68000000		Adequate Expenditure (till 31.03.17):67097402		Total No of Students:758
Non-Recurring	Recurring	Non-Recurring	Recurring	Expenditure per Student
10880000	57120000	10735584	56361818	88519

Table 10.3b: 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	1260000	1236690	1620000	1609959	731000	673262.6	700400	677684
Software	840000	824459.9	1080000	1070357	484500	448841.7	469200	449553
Laboratory Consumables	1207500	1150809	1026000	964206.2	765000	681574.5	476000	422714
Maintenance & spares	6536250	6209214	8388000	8164792	6145500	5967933	4107200	4079522
R & D	1505000	1477157	1800000	1795723	1997500	1986540	1407600	1409045
Training & Travel	3010000	2662319	1674000	1574575	1530000	1404708	1169600	1301689
Miscellaneous (Items to be mentioned)	73141250	72320595	74412000	73279668	73346500	71955980	59670000	58757195
Total	87500000	85881243	90000000	88459280	85000000	83118840	68000000	67097402

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)

Table 10.3.1.: Program budget and expenditure

Sl No	Assessment Year	Budget Allocated in Rs.	Actual Expenditure in Rs.	Adequate/ Non Adequate
1	CFY	87500000	85881243	Adequate
2	CFYm1	90000000	88459280	Adequate
3	CFYm2	85000000	83118840	Adequate
4	CFYm3	68000000	67097402	Adequate

10.3.2.: Utilisation of allocated funds (20)

(Program needs to state how the budget was utilised during the last three assessment years)

10.3.2.: Utilisation of allocated funds

Sl No	Assessment Year	Budget Allocated in Rs.	Actual Expenditure in Rs.	Percentage of Utilisation
1	CFY	87500000	85881243	98.14%
2	CFYm1	90000000	88459280	98.29%
3	CFYm2	85000000	83118840	97.79%
4	CFYm3	68000000	67097402	98.67%

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
Number of seats Reading Space	450
Number users issue book per day	220
Number of users visits per day	600
Timings : Ground Floor Lower Level	24/7, 365 days 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 Services	Yes
Availability of Digital Library Contents	Yes
Number of Courses	10
Number of eBooks	25589
Availability of Exclusive Server	Yes
Availability of Intranet /Internet	Yes

Availability of Exclusive Space/Room	Yes
Number of users per day	250
Digital Library is provided in the Central Library where students can access all kinds of e-journals	<p>E-Journals Links</p> <p>Elsevier - https://www.sciencedirect.com/ Taylor & Francis - http://www.tandfonline.com/ Springer Nature - http://link.springer.com/ Institution of Civil Engineers - https://www.ice.org.uk/ Emerald - https://www.emeraldinsight.com/ ASME - https://asmedigitalcollection.asme.org/journals</p> <p>E-Books Links</p> <p>Elsevier - https://www.sciencedirect.com/ McGraw Hill Education - http://mcgrawhilleducation.pdn.ipublishcentral.com/ Taylor & Francis - http://www.crcnetbase.com/ Springer Nature - http://link.springer.com/ New Age Publishers- https://digital.elib4u.com/ Packt - https://prod.packtpub.com/in</p>
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.

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

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 shall 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

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 an engineering specialization to the solution of complex engineering problems in Electronics and Communication Engineering.
- 2. Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems in Electronics and Communication Engineering reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- 3. Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes of Electronics and Communication Engineering that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- 4. Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments in Electronics and Communication Engineering, 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 in Electronics and Communication 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 in Electronics and Communication Engineering.
- 7. Environment and sustainability:** Understand the impact of the professional engineering solutions of Electronics and Communication Engineering 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 in 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 reports 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.

Program Specific Outcomes (PSOs)

Graduates of Electronics and Communication Engineering will be able :	
PSO1	To demonstrate the ability to design and develop complex systems in the areas of next generation Communication Systems, IoT based Embedded Systems, Advanced Signal and Image Processing, latest Semiconductor technologies, RF and Power Systems
PSO2	To demonstrate the ability to solve complex Electronics and Communication Engineering problems using latest hardware and software tools along with analytical skills to contribute to useful, frugal and eco-friendly solutions.



NEW HORIZON
EDUCATIONAL INSTITUTION



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: principalhpuc@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
