Mandatory Disclosure 31-12-2023

1	**Name of the Institution**	Maharshi Karve Stree Shikshan Samstha's Cummins College of Engineering for Women
	Address of the Institution	Karvenagar, Pune – 411052
	Telephone	020-25311000
	Email	administrator@cumminscollege.in
2	**Name of the Trust**	Maharshi Karve Stree Shikshan Samstha
	Address including	Karvenagar, Pune – 411 052.
	Telephone,	020 25313000 /
	E-mail	mksssho@gmail.com
	Trustees	1) Shri. Rajendra Jog 2) Shri. Purushottam Lele
3	**Name of the Principal**	Dr. Madhuri Khambete
	Address	Maharshi Karve Stree Shikshan Samstha's Cummins College of Engineering for Women Karvenagar, Pune – 411 052.
	Phone number with STD Code	020 – 25311100
	Fax number with STD Code	020 – 25311499
	Mobile No.	9225517613
	E-mail	principal@cumminscollege.in
4	**Name of Affiliating University**	Savitribai Phule Pune University, Pune

5 Governance

5.1 Members of the Governing Body

Sr. No.	Name	Designation	Category
1	Mr. Jayant Inamdar Management Committee Member, MKSSS	Chairman Governing Body	Management
2	Shri. Ravindra Deo Chairman, MKSSS	Member	Management
3	Shri Rajendra Jog Trustee, MKSSS	Member	Management
4	Dr Dhananjay Kulkarni, Management Committee Member,MKSSS	Member	Management
5	Mr Atul Nagras Management Committee Member,MKSSS	Member	Management
6	Dr. P.V.S. Shastry Secretary, MKSSS	Member	Management

7	UGC Nominee	Member	University Grant Commission (UGC) Nominee
8	DTE Nominee	Member	State Government Nominee
9	Prof. Shruti Tambe Head , Dept. of Sociology Center for Advanced studies SPPU Director, Euroculture, SPPU, Pune	Member	Savitribai Phule Pune University Nominee
10	Dr Pradheepram Ottikkutti, Executive Director and Chief Technical Officer, Cummins India Ltd.	Member	Industry Expert Management Nominee
11	Shri Nagaranjan Balanaga Vice-President- HR Cummins India Ltd.	Member	Industry Expert Management Nominee
12	Dr. Anand Bewoor Dean Academics Professor, Cummins College	Member	Teachers of the College Nominated by the Principal
13	Dr. Sandeep Musale Dean Administration Professor, Cummins College	Member	Teachers of the College Nominated by the Principal
14	Dr Madhuri Khambete Principal, Cummins College	Member	Principal of the College

5.2 Members of Academic Advisory Body

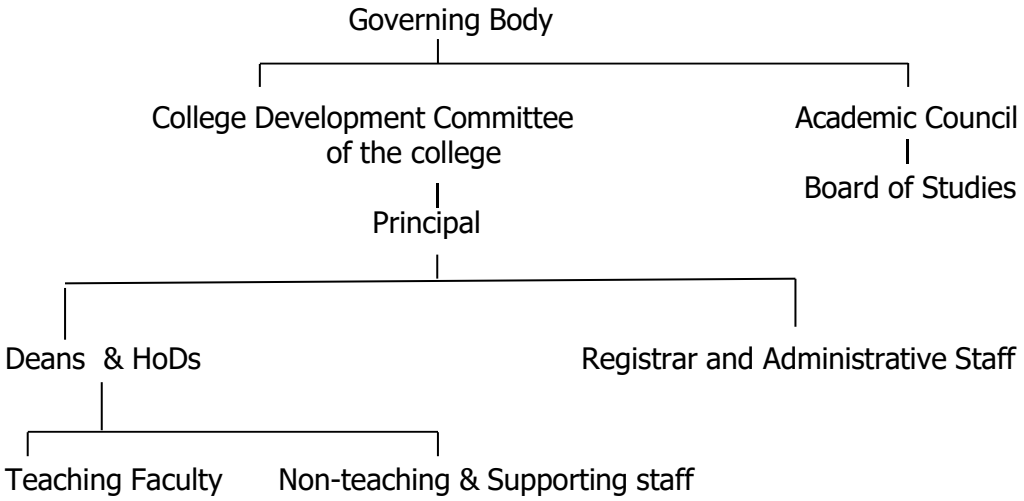
Sr. No.	Name	Designation	Category
1	Dr. Madhuri Khambete Principal, Cummins College of Engineering	Chairman	Principal
2	Dr. B.B. Ahuja Director, College of Engineering , Pune	Member	University Nominee
3	Dr. Sunil Thakre Principal, Anantrao Pawar College ofEngineering , Pune	Member	University Nominee
4	Prof. Dr. Kalyani Joshi Principal, PES's Modern College ofEngineering	Member	University Nomine
5	Dr. Bhalchandra Puranik HoD, IIT, Bombay (Academic Expert,Mechanical Engineering Domain)	Member	G.B. Nominee
6	Dr. Nilesh Powar Cummins India Ltd. (Industry Expert – AI &ML (Comp/IT) Domain)	Member	G.B. Nominee
7	Mr. Ajay Deshmukh Executive Director, PWC(India) (Industry Expert- Instru. & Control Domain)	Member	G.B. Nominee
8	Dr. Sharda Ohatkar HOD - Electronics & Telecommunications Engineering Dept.	Member	Chairman, BoS, E&TC

9	Dr. Sunita Jahirabadkar HOD - Computer Engineering Dept.	Member	Chairman, BoS, Computer
10	Dr. Dipali Ramdasi HOD –Instrumentation & Control Engineering Dept.	Member	Chairman, BoS, Instru.
11	Dr. Anagha Kulkarni HOD - Information Technology Dept	Member	Chairman, BoS, Info. Tech.
12	Dr. Ajit Bhosale HOD - Mechanical Engineering Dept.	Member	Chairman, BoS, Mech.
13	Dr. Madhuri Purandare HOD - Basic Sciences & Humanities Dept.	Member	Chairman, BoS, BSH
14	Prof. Amit Rajurkar Training & Placement Officer	Member	T&P Officer
15	Dr. Anand Bewoor Dean Academics Professor, Cummins College	Member	Member Secretary
16	Dr. Ashok Khedkar	Member	Den Examination
17	Dr. Dipti Patil	Member	Dean Student Affairs
18	Dr. Prachi Mukherji	Member	Dean R&D
19	Prof. Hitendra Khairnar	Member	Dean Quality Assurance
20	Dr. Anita Patil	Member	Associate Professor, E&TC
21	Dr. Sandeep Musale	Member	Dean Administration

1.1 Frequency of the Board meetings and Academic Advisory Body meetings

Twice in a year (Minimum)

1.2 Organization Chart



1.3 Grievance Redressal mechanisms for faculty, staff & students

1. College has 'Teacher mentor' scheme. Under this scheme students can approach their mentor for any grievance.

2. College has also Anti-ragging committee, cell for SC/ST, staff grievance committee students' grievance redressal committee and Internal complaint committee for grievance redressal of staff and students.

1.4 Establishment of Anti Ragging Committee

Sr.No.	Name	Designation
1	Dr. Madhuri Khambete	Principal, Cummins College of Engineering for Women(Chairperson)
2	Police Inspector Warje Malwadi Police Station	Representative of Civil and Police administration
3	Mrs. Asha Bapat	Representative of Non- Government Organization
4	Prof. Vaishali Salgar	Nodal Officer, Coordinator
5	Dr. Madhuri Purandare	Representative of Faculty Members
6	Mrs. Doundkar Manjusha	Rector Girls Hostel
7	Shri Saurabhe Mangale	Representative of Parents
8	Shri. Renushe Prashant	Registrar, Cummins College of Engineering for Women
9	Ms. Rucha Joshi	Representative of Students' (Senior Student)
10	Ms. Sanika Kulkarni	Representative of Students' (Senior Student)
11	Ms.Vanshika Raina	Representative of Students' (Hostel)
12	Ms.Hrushita Mulaokar	Representative of Students' (Junior Student)

1.4 Establishment of Online Grievance Redressal Mechanism

College has established online Grievance procedure. Link for registering the grievance is published on the website. Students can file their grievance anonymously. Grievances are analyzed and appropriate actions are taken to sort out grievances.

1.5 Establishment of Grievance Redressal Committee in the Institution and Appointment of OMBUDSMAN by the University

SN	Name	Post	E-mail
1	Dr. Madhuri Khambete	Chairman	principal@cumminscollege.in
2	Dr. Manoj S. Nagmode	Member	manoj.nagmode@gmail.com
3	University Nomineee	Member	To be nominated by VC
4	Dr. Ajit Bhosale	Member	ajit.bhosale@cumminscollege.in
5	Mr. Prashant Renushe	Member	registrar@cumminscollege.in

1.6 Establishment of Internal Complaint Committee (ICC)

SN	Name	Designation	E-Mail
1	Dr. Supriya Kelkar	Associate Professor, Cummins College of Engineering for Women (Chairperson)	supriya.kelkar@cumminscollege.in
2	Mrs. Asha Bapat	Representative of NGO	asnbapat@gmail.com
3	Prof. Meenal Kamlakar	Assistant Professor, Cummins College of Engineering for Women	meenal.kamalkar@cumminscollege.in
4	Prof. Ashok Khedkar	Associate Professor, Cummins College of Engineering for Women	ashok.khedkar@cumminscollege.in
5	Shri. Anand Bhosale	Storekeeper, Cummins College of Engineering for Women	anand.bhosale@cumminscollege.in
6	Shri. Prashant Renushe	Registrar, Cummins College of Engineering for Women	registrar@cumminscollege.in
7	Ms. Rucha Joshi	Student representative	rucha.v.joshi@cummin scollege.in
8	Ms. Sanika Kulkarni	Student representative	sanika.kulkarni@cumminscollege.in
9	Ms. Roza Gaikwad	Student representative	roza.gaikwad@cumminscollege.in

1.6 Establishment of Committee for SC/ ST

SN	Name	Post	E-mail
1	Prof. Shashikant Sahare	Assistant Profesor, Cummins College ofEngineering for Women (Chairman)	shashikant.sahare@cumminscollege.in
2	Prof. Prachi Waghmare	Assistant Profesor, Cummins College of Engineering for Women	prachi.waghmare@cumminscollege.in
3	Prof. HarishShinde	Assistant Profesor, Cummins College ofEngineering for Women	harish.shinde@cumminscollege.in
4	Shri Arvind Shirsat	Non-teaching Staff Member, CumminsCollege of Engineering for Women	arvind.shirsat@cumminscollege.in
5	Shri. Santosh Waghmare	Non-teaching Staff Member, CumminsCollege of Engineering for Women	santosh.waghmare@cumminscollege.in

1.7 Internal Quality Assurance Cell

SN	Name	Designation
1	Dr. Madhuri Khambete	Principal, Cummins College of Engineering for Women, Pune
2	Dr. Anand Bewoor	Dean academics
3	Dr. Prachi Mukherji	Dean R & D
4	Dr. Nivedita Daimiwal	Associate Dean, Quality Assurance
5	Dr. Ashok Khedkar	Dean Examination

6	Dr. Sandeep Musale	Dean - Administration
7	Dr. Mrudul Dixit	Dean - Alumnae
8	Dr. Supriya Kelkar	Dean - International Relations
9	Dr. Dipti Patil	Dean - Student Affairs
10	Dr. Sharda Ohatkar	HoD, Electronics & Telecom
11	Dr. Sunita Jahirabadkar	HoD, Computer Engineering
12	Dr. Dipali Ramdas	HoD, Instrumentation & Control
13	Dr. Anagha Kulkarni	HoD, Information Technology
14	Dr. Ajit Bhosale	HoD, Mechanical Engineering
15	Dr. Madhuri Purandare	HoD, Basics Sciences & Humanities
16	Mrs. Jyoti Chitale	Librarian
17	Dr. Kishor S. Desarda	Member, management Committee of MKSSS
18	Dr. P.V.S. Shastry	Secretary, Management Committee of MKSSS
19	Shri. Prashant Renushe	Registrar, Cummins College of Engineering for Women
20	Ms. Meghana Vaidya	President, Alumnae Association
21	Shri C. Shekhar Dhamankar	Industry- Nominee
22	Ms. Sakshi Khaire	Technical Secretary
23	Miss. Shivani Jamdade	Operations Secretary
24	Miss. Sakshi Todmal	Cultural Secretary
25	Prof. Hitendra Khairnar	IQAC-Co-ordinator

1.8 Equal Opportunity Cell:

SN	Name	Designation
1	Dr. Madhuri Khambete	Principal, Cummins College of Engineering for Women(Chairperson)
2	Prof. Shashikant Sahare	Assistant Professor
3	Dr. Gosavi Chhaya Santosh	Associate Professor
4	Dr. Madhe Swati Prashant	Assistant Professor
5	Mrs. Anuradha Kolekar	Head Clerk

6. Programmes

6.1 Name of the Programs approved by AICTE:- Engineering & Technology

6.2 Name of the Courses Accredited by NBA:-

Following programs are accredited by National Board of Accreditation (NBA)

- B.Tech. (Electronics &Telecommunication Engineering)
- B.Tech. (Computer Engineering)
- B.Tech. (Instrumentation & Control Engineering)
- B.Tech. (Mechanical Engineering)

All Courses are accredited by NAAC, valid up to 1st June 2028 with Grade "A".

6.3 Status of Accreditation of the courses: -

NBA Accredited Status		
1	Courses Accredited	B.Tech Electronics & Telecommunications Engineering Accreditation valid up to 30th June, 2025
		B.Tech Computer Engineering Accreditation valid upto 30th June, 2025
		B.Tech Instrumentation & Control Engineering Accreditation valid upto 30th June, 2025
		B.Tech Mechanical Engineering - Accreditation valid upto 30th June, 2025
2	Applied for Accreditation	NA
	A. Applied but visit not happened	NA
	B. Visit happened but result awaited	NA
NAAC Accredited Status		
1	Accredited	B.Tech Electronics & Telecommunications Engineering
		B.Tech Computer Engineering
		B.Tech Instrumentation and Control Engineering
		B.Tech Information Technology
		B.Tech Mechanical Engineering Accreditation of all the above courses are valid upto1 st June,2028 with Grade - A
2	Applied for Accreditation	NA
	A. Applied but visit not happened	NA
	B. Visit happened but result awaited	NA

6.3 Program Details:-B.Tech. Programs

SN	Details			
1	Name of the Programme	B. Tech. Electronics and Telecommunications Engineering		
2	Number of Seats	180		
3	Duration	Four Year		
4	Cut-off Marks /Rank of Admission during last three year	2021-22	2022-23	2023-24
		94.15	95.95	96.97
5	Fees	175000/-	175000/-	166000
6	Placement Facilities	College is having independent training and placement cell. To enhance the communication skills of the students College conduct the mandatory training to the students through employability enhancement program and garnishing talent. Companies visit to the college for campus placement. Infrastructure is provided to conduct the online tests as well as interviews.		
7	Campus Placement	2021-22	2022-23	2023-24
	Students placed	181	201	164
	Minimum salary	3.1	4.0	4.5
	Maximum salary		50	50
	Average salary	8.88	12.90	11.51

1	Name of the Programme	B. Tech. Computer Engineering		
2	Number of Seats	180		
3	Duration	Four Year		
4	Cut-off Marks / Rank of Admission during last three year	2021-22	2022-23	2023-24
		97.91	98.29	98.66
5	Fees	175000/-	175000/-	166000/-
6	Placement Facilities	College is having independent training and placement cell. To enhance the communication skills of the students College conduct the mandatory training to the students through employability enhancement program and garnishing talent. Companies visit to the college for campus placement. Infrastructure is provided to conduct the online tests as well as interviews.		
7	Campus Placement	2021-22	2022-23	2023-24
	Students placed	205	214	207
	Minimum salary	3.5	4.25	4.50
	Maximum salary	37.28	55.75	50
	Average salary	12.95	16.27	16.71

1	Name of the Programme	B. Tech. Instrumentation & Control Engineering		
2	Number of Seats	60		
3	Duration	Four Year		
4	Cut-off Marks / Rank of Admission during last three year	2021-22	2022-23	2023-24
		83.69	90.16	92.31
5	Fees	175000/-	175000/-	166000/-
6	Placement Facilities	College is having independent training and placement cell. To enhance the communication skills of the students College conduct the mandatory training to the students through employability enhancement program and garnishing talent. Companies visit to the college for campus placement. Infrastructure is provided to conduct the online tests as well as interviews.		
7	Campus Placement	2021-22	2022-23	2023-24
	Students placed	53	52	51
	Minimum salary	3.5	4.2	3.5
	Maximum salary	10.08	23	16.5
	Average Salary	5.78	8.15	6.15

1	Name of the Programme	B. Tech. Information Technology		
2	Number of Seats	60		
3	Duration	Four Year		
4	Cut-off Marks / Rank of Admission during last three year	2021-22	2022-23	2023-24
		97.06	97.67	98.33
5	Fees	175000/-	175000/-	166000/-
6	Placement Facilities	College is having independent training and placement cell. To enhance the communication skills of the students College conduct the mandatory training to the students through employability enhancement program and garnishing talent. Companies visit to the college for campus placement. Infrastructure is provided to conduct the online tests as well as interviews.		
7	Campus Placement	2021-22	2022-23	2023-24
	Students placed	71	73	63
	Minimum salary	3.5	4.25	4.5
	Maximum salary	26.57	39.13	50
	Average salary	11.03	14..96	15.20

1	Name of the Programme	B. Tech. Mechanical Engineering		
2	Number of Seats	60		
3	Duration	Four Year		
4	Cut-off Marks / Rank of Admission during last three year	2021-22	2022-23	2023-24
		88.75	90.02	92.93
5	Fees	175000/-	175000/-	166000/-
6	Placement Facilities	College is having independent training and placement cell. To enhance the communication skills of the students College conduct the mandatory training to the students through employability enhancement program and garnishing talent. Companies visit to the college for campus placement. Infrastructure is provided to conduct the online tests as well as interviews.		
7	Campus Placement	2021-22	2022-23	2023-24
	Students placed	66	62	58
	Minimum salary	3.3	4	5
	Maximum salary	11.41	14.36	14.36
	Average salary	7.62	8.79	8.82

M.Tech Programmes

SN	**Details**	
1	Name of the Programme	M.Tech. Electronics and Telecommunications Engineering Artificial Intelligence
2	Number of Seats	18

3	Duration	Two Year		
4	Cut-off Marks / Rank of Admission during last three year	2021-22	2022-23	2023-24
		15.67	14.67	25.33
5	Fees	1,50,000/-	1,50,000/-	93,000/-
6	Placement Facilities	College is having independent training and placement cell. To enhance the communication skills of the students College conduct the mandatory training to the students through employability enhancement program and garnishing talent. Companies visit to the college for campus placement. Infrastructure is provided to conduct the online tests as well as interviews.		
7	Campus Placement	2021-22	2022-23	2023-24
	Students placed	1	-	-
	Minimum salary	9.5	-	-
	Maximum salary	9.5	-	-
	Average salary	9.5	-	-

1	Name of the Programme	M.Tech. Mechanical Engineering Design		
2	Number of Seats	30		
3	Duration	Two Year		
4	Cut-off Marks / Rank of Admission during last three year	2021-22	2022-23	2023-24
		7.56	23.62	3.0
5	Fees	1,77,000/-	1,50,000/-	93,000/-
6	Placement Facilities	College is having independent training and placement cell. To enhance the communication skills of the students College conduct the mandatory training to the students through employability enhancement program and garnishing talent. Companies visit to the college for campus placement. Infrastructure is provided to conduct the online tests as well as interviews.		
7	Campus Placement	2021-22	2022-23	2023-24
	Students placed	04	-	-
	Minimum salary	7	-	-
	Maximum salary	10.02	-	-
	Average salary	8.70	-	-

Name and duration of program (s) having **Twinning and Collaboration** with Foreign University(s) and being run in the same Campus along with status of their AICTE approval. If there is Foreign Collaboration, give the following details: **- NA**

7 – Faculty

Branch wise list of faculty members	**www.cumminscollege.org** Department wise staff profile is on college website viz.
Permanent faculty	109
Total Faculty	148
Adjunct faculty (Visiting)	04
Permanent faculty: student ratio	1:17

8 Profile of the Principal/Faculty

Profile of Principal/Faculty	**www.cumminscollege.org** **Profile is on college website viz.**

9 Fees

1. Fees approved by State Fee Committee (Fee Regulating Authority)

a. U.G.- Rs.166000/- p.a. (Tuition Fee – 144347/-+Development Fee – 21653/-)
b. P.G. - Rs.93000/- p.a. (Tuition Fee – 80870/- + Development Fee –12130/-)

2. Time schedule for payment of fee for the entire program

At the beginning of the year / semester.

3. No. of Fee waivers granted with amount and name of students

Tuition fee waiver is given to 104 students and SC, ST, NT1, NT2, NT3,OBC, EBC & SBC concession is given to 1504 students as per DTE rules.

4. Number of scholarship offered by the Institution, duration and amount

Partial concessions, scholarships, fee waivers are given by the trust to approximately for 110 students. Total financial assistance given is Rs.10,00,000/

5. Criteria for fee waivers/scholarship

Fee waiver is as per DTE rules. Financial assistance is given to the needy students.

6. Estimated cost of Boarding and Lodging in Hostels

Hostel Fee - Rs. 98836/- (Lodging and Boarding)

10 Admission

i) Number of seats sanctioned with the year of approval :

No. of seats sanctioned - 540 + 54 +27

Year of Approval - 2023-24

ii) Number of Students admitted under various categories each year in the last three years

Year	SC	ST	NT/VJ	OBC	SBC	OPEN
2019-20	43	05	41	143	03	377
2020-21	42	12	37	100	11	417
2021-22	39	13	38	106	10	372
2022-23	48	10	46	132	13	379
2023-24	56	21	56	126	11	364

iii) Number of applications received during last two years for admission under Management Quota and number admitted

Year	Application Received	Admitted Student
2020-21	134	98
2021-22	112	88
2022-23	127	95
2023-24	Seats surrender	Seats surrender

11 Admission Procedure

As per the rules laid down by Admission Regulating Authority, CET Cell Maharashtra & Director of Technical Education Government of Maharashtra

11.1 Mentioned the admission test being followed, name and address ofthe test agency and its URL

Test being followed - MHT-CET, JEE
Name and address of the test agency - Maharashtra Government, CBSE
URL - www.mahacet.org
JEE - https://jeemain.nic.in

11.2 Number of seats allotted for different test qualified candidates separately (JEE/CET) : As per ARA / DTE rules.

11.3 Calendar for admission against management / vacant seatsFor Academic year 2023-24 these seats are surrender

As per the rules laid down by Admission Regulating Authority & Director of Technical Education Government of Maharashtra.

11.4 Last Date of request for application – As per ARA/CET cell rule 2023-24.

11.5 Last date of Submission of application - As per ARA/CET cell rule 2023-24.

11.6 Date of announcing the result -

11.7 Release of admission list - College website

11.8 Date for acceptance by the candidates - As per ARA/CET cell rule 2023-24.

11.9 Last date of closing the admission - As per ARA/CET cell rule 2023-24.

11.10 Starting of the academic session - As per ARA/CET cell rule 2023-24.

11.11 The policy for refund of fees, in case of withdrawal shall be clearly notified - As per ARA/CET cell rule 2023-24.

12 Criteria and Weightages for Admission

As per the rules laid down by Admission Regulating Authority & Director of Technical Education Government of Maharashtra.

13 List of Applicants

Admission Regulating Authority & Director of Technical Education regulates admission procedure. Applications are received by these authorities.

14 Results of Admission Under Management seats/Vacant seats

As per the rules laid down by Admission Regulating Authority & Director of Technical Education Government of Maharashtra procedure is followed. Admissions are approved by competent authority.

15 Information of Infrastructure and Other Resources Available

- **Number of Class Rooms and size of each :** 31 (Size as per AICTE norms)
- **Number of Tutorial rooms :** 7 (Size as per AICTE norms)
- **Number of Laboratories :** 52 (Size as per AICTE norms)
- **Number of Drawing Halls :** 2
- **Capacity of each** 50
- **Number of Computer Centers:** 2
- **Capacity of each:** 50
- **Central Examination Facility, Number of rooms and capacity of each:**
- **Number of rooms** - 2
- **Capacity of each**- 50
- **Barrier Free Built Environment for disabled and elderly persons** : Facilities are available for disabled and elderly persons. Barrier free built environment is provided.
- **Occupancy Certificate** : Available
- **Fire and Safety Certificate:** Certificates are received from competent authority
- **Hostel Facilities**: Hostel facility available for 950 students.
- **Online examination facility** – (No. of Nodes, Internet Band width, etc.)
- **List of Experimental setup in each laboratory/workshop**. - As per AICTE /SPPU Norms

Department of Basic Sciences and Humanities

Chemistry Laboratory

List of Experimental Setup:

1. Determine Total hardness of water by EDTA Method (complexometric titration).
2. Determine Total alkalinity of sample water. [Expt. 1 & 2: Titration setup: burette, pipette, conical flak]
3. Predict spontaneity of a cell reaction by measuring EMF of cell and calculating Gibb's freeenergy as well as equilibrium constant.[Setup includes different metal strips and multi meter]
4. Determine Molecular weight of a Polymer by viscometry method.

[Setup includes Ostwald's viscometer]

5. Estimation of sodium from given solution using flame photometry.

[Setup includes Flame photometer]

6. Colorimetric estimation of $KMnO_4$ from solution.

[Setup includes single beam spectrophotometer/ colorimeter]

7. Determine moisture and ash content in coal sample by proximate analysis.

[Setup includes Ostwald's viscometer]

8. Potentiometric estimation of acetic acid in vinegar.

[Setup includes potentiometer with two electrodes, burette, stirrer]

9. Estimation of acid from given sample using pH metry.

[Setup includes pH meter with two electrodes, burette, stirrer]

- **List of Major Equipment:**

Sr. No.	Equipment	Quantity
1	Colorimeters	10
2	Digital conductivity meters	6
3	Distilled water plant	2
4	Electric oven	1
5	Electronic balance (portable)	1
6	Electronic balance	2
7	Muffle furnace	2
8	PH meters (pocket)	32
9	Ultrasonic bath (sonicator)	1
10	Centrifuge	1
11	Water bath	2
12	Digital Potentiometer with elerodes	6
13	Flame photometer	1

Physics Laboratory

List of Experimental Setup:

1. Polarization of light: Malus law

[Setup: Law of Malus setup, Digital Luxmeter]

2. Determination of Planck's constant by LED method[Setup: Planck's constant by LED setup]

3. Diffraction Grating: Emission Spectra of Mercury

[Setup: Mercury Arc lamp, Spectrometer and student grating]

4. Magnetic Permeability of free space

[Setup: Variable DC Voltage Power supply, Hall probe, electromagnet and digital Gaussmeter]

5. Newton's rings

[Setup: Newton's rings arrangement, sodium vapour lamp and travelling microscope.]

6. Capacitance and dielectric constant of given material[Setup: Dielectric constant kit]

7. I-V characteristics of LED

[Setup: Planck's constant by LED setup]

- **List of Major Equipment**

Sr. No.	Equipment	Quantity
1	Dielectric Constant Kit	2
2	Faraday's law & Induced emf	2
3	Polarization of Light	2
4	Michelson Interferometer	2
5	Planck's Constant by LED	2
6	Balmer Series & Emission Spectra	2
7	Specific Heat of Solids	2
8	B-H Curve Experiment	2
9	Dia, Para, Ferro Magnetism	2
10	Zeeman Effect	1
11	Cathode Ray Oscilloscope	5
12	Digital Gaussmeter	2
13	Hall Effect	4
14	Half Shade Polarimeter	3
15	Laser Expt. Set-up	4
16	Law of Malus Set-up	4
17	Michelson Interferometer	1
18	Newtons rings experiment	5
19	Signal Generator	6
20	Ultrasonic Interferometer	2

Basic Electrical & Electronics Engineering Laboratory

List of Experimental Setup:

1. Introduction of different electronics components and instruments.
[Apparatus: Various types of wires, switches, fuses, lamp holders, plugs, resistors, capacitors, inductors, Transformers, Connectors, Digital multimeters(DMM), Function Generators, Cathod Ray Oscilloscope(CRO)]
2. To determine output voltage and ripple voltage of half wave, full wave rectifier with center tap transformerand bridge rectifier with and without filter.
[Apparatus: Chassis of Rectifier, CRO, Probes, Multimeter, Patch cords].
3. Assemble and build simple DC regulated power supply
[Apparatus: Circuit Board (Rectifier), DMM, CRO, Rheostat, Breadboard, IC7812, Patch cords]
4.To determine frequency response of CE amplifier.
[Apparatus: Chassis, Function generator, DC Power supply, CRO, connecting patch-cords, Probes]
5.Assemble and build Half Adder Circuit & Full Adder circuit.
[Apparatus: Fixed 5V D.C. Supply, Circuit board with ICs 7486, 7408, 7432, patch cords.]
6.To perform Load test on single phase transformer to
determineregulation and efficiency
[Apparatus: Transformer -1 Ph,230V/110V,1 KVA, Ammeter,0-5A, 0-10 A Voltmeter, 0-300 V,0-150 V, Wattmeter 0-300 V, 5A, Lamp Bank]
7. To determine phase angle of L-C-R series circuit.
[Apparatus: Dimmerstat, Ammeter, Voltmeter, Inductive Coil Capacitor, Resistor.]
8. To perform electrical wiring to control lamps using one way and two-way switches
[Apparatus: Wiring Circuit Boards, Lamps, Patch cords]
9. To verify Thevenin's theorem & superposition theorem.
[Apparatus: DC power sources, DC ammeter, DC voltmeter, resistors, DC power source, digital multimeters, esistors.]

List of Major Equipment:

Sr. No.	Name of Equipment	Quantity
1.	DC shunt motor 1HP	3
2.	DC shunt motor-generator set 0.5 HP	1
3.	DC series motor-generator set 1HP	1
4.	3 ph alternator-DC compound motor set 3 kva	1
5.	3 ph induction motor -alternator set 1HP	1
6.	3 ph synchronus motor – DC compound motor set 3.5 kva	1
7.	motor-generator set 2 HP	1
8.	3 ph synchronus motor 3 HP	1
9.	Digital oscilloscope	1
10	AC Ammeter	31
11	DC Ammeter	18
12	AC Voltmeter	23
13	DC Voltmeter	14
14	Wattmeter	24
15	Transformer (1 KVA, 1-PH)	7
16	DC Power Supply	12
17	DC Power Supply(220v,10A)	1
18	Rheostat	49
19	Dimmerstat (1-Phase)	18
20	Dimmerstat (3-Phase)	2
21	Tachometer	10
22	Megger	2

Department of Electronics and Telecommunication Engineering

Laboratory Summary

Sr.No.	Name of Laboratory
1	Research Lab
2	Computer Lab-I
3	Computer Lab-II
4	Computer Lab-III
5	Computer Lab -IV
6	Project Lab
7	Basic Electronics Lab
8	Analog Lab
9	Power Lab
10	Fiber Optic Lab
11	Communication Lab -I
12	Communication Lab-II
13	Artificial Intelligence Lab (Exclusive For M.Tech)

1. Research Lab (LEC-I)

Hardware Configuration: Processor: Intel core i3, 3.30Ghz,500GB HD,4GB RAM
Intel core i7,8th Gen.,1TB HD, 4GB RAM
Intel core i7,8th Gen.,1TB HD, 16 GB RAM
Printers : Network Printer - 02

Software Installed : Ubuntu , Eclipse, C++, Java(free software)

Utilization of Laboratory – Second Year Engineering Electronics first year & Telecommunication Engineering students.

Courses Conducted in Semester -I	Courses Conducted in Semester -II
1. Data Structure and Algorithms (Second Year, B. Tech) 2. Fundamental Programming Language Lab (First Year, B.Tech)	Object Oriented Programming Lab (Second Year, B. Tech)

2. Computer Lab-I (LEC-II)

Hardware Configuration: Processor: Intel® Core™ i7-8700 CPU @ 3.20GHz × 12
Printers : Canon Network Printer - 01

Software Installed: Windows 10, Ms Office 365, Eclipse ,Ubuntu 18.04

Utilization of Laboratory – Second Year & Third Year Electronics & Telecommunication Engineering student

Courses Conducted in Semester -I	Courses Conducted in Semester -II
Digital Image Processing Lab (Third Year, B. Tech)	Machine Learning With Python Lab (Second Year , B. Tech)

3. Computer Lab-II (LEC-III)

Hardware Configuration: Processor: Intel Core -i7,8th gne-8700K@3.70GHzx12, 64 Bit
Printers : Canon LPB 2900B Printer - 02

Software Installed: Windows10, MS Office365, Xilinx ISE 8.1, Xilinx ISE 14.1, Vivado, Mentor Graphics HEP-2, Microwind ver-3, Microwind ver-3.9, Keil Ver-5, flash magic, SST

Utilization of Laboratory – Second year and Third year Electronics & Telecommunication Engineering students.

Courses Conducted in Semester -I	Courses Conducted in Semester -II
1. VLSI Design Technology Lab (Third Year , B. Tech) 2. Digital Circuit CMOS Design Lab Honor Course (Third Year, B.Tech)	1. Embedded Systems Lab (Second Year , B.Tech.) 2. Analog CMOS Mixed Signal Design Lab 3. Verification for Verilog Design Lab Honor Course (Third Year, B. Tech)

4. Computer Lab-III (LEC-IV)

Hardware Configuration: Processor: Intel i7 and intel i3, Printers : Canon Printer - 02

Software Installed: Windows 10 and Windows7 , Ms Office 365 and MS office10, Keil(license version on 13 computers), Proteus 8.16(5 Licenses with 5 dongles)

Utilization of Laboratory – Third Year and Second Year Electronics & Telecommunication Engineering students.

Courses Conducted in Semester -I	Courses Conducted in Semester -II
Advanced Processor Lab (Third Year, B. Tech)	Embedded Systems Lab (Second Year, B. Tech) RTOS (Third Year, B. Tech)

5. Computer Lab -IV (LEC-V)

Hardware Configuration: Processor: Intel core i3, 3.30Ghz,500GB HD,4GB RAM
Intel core i7,8th Gen.,1TB HD, 4GB RAM
Intel core i7,8th Gen.,1TB HD, 16 GB RAM

Printers: Canon Laser Shot LBP - 01

Software Installed: Ms Office 365, Ms Office 7, Eclipse(Freeware) ,R Studio (Freeware), MATLAB R2021b, QGIS (Freeware) , Anaconda (Freeware)

Operating Systems : Windows 7 and Windows 10.

Utilization of Laboratory –Third Year and Final Year Electronics & Telecommunication Engineering students.

Courses Conducted in Semester -I	Courses Conducted in Semester -II
1. Digital Signal Processing (Third Year , B. Tech) 2. Data Science, Honor Course (Third Year, B.Tech)	1. Remote Sensing Lab (Final Year, B.Tech) 2. Deep Learning (Third Year, B. Tech)

6. Project Lab (LEC- VI)

Hardware Configuration: Processor: i7, Printers : Nil
Software Installed: Windows 10, Ubuntu, Ms Office 365, MATLAB 2022b
Utilization of Laboratory – Third Year and Final Year Electronics & Telecommunication Engineering students.

Courses Conducted in Semester -I	Courses Conducted in Semester -II
1. Internet of Things (IoT) (Final Year, B. Tech) 2. Mechatronics (Third Year, B. Tech)	1. Robotics (Third Year , B.Tech) 2. Industrial Automation (Final Year, B.Tech)

7. Basic Electronics Lab (LEC-VII)

Hardware Configuration: Processor: —Printers : 01 Canon Network Printer
Software Installed: Windows 7, Ms Office 7, Eclipse, Fedora 20 , CUDA
Utilization of Laboratory – Second Year and third Year Electronics & Telecommunication Engineering students.

Courses Conducted in Semester -I	Courses Conducted in Semester -II
Mini Projects (Third Year, B. Tech.)	Digital Electronics Lab (Second Year, B. Tech.)

8. Analog Lab (LEC-VIII)

Hardware Configuration: Processor:- Intel core I3(5 nos.)I5(10 nos.) , 3.30Ghz ,500GB HD , 4GB RAM.
Operating Systems : Windows 7 and Windows 10.
Printers : Canon LBP 2900B, Quantity 01.
Software Installed: Windows 7, Windows 10 , Ms Office 10 , Ms Office 365, Multisim 11 and 13.0(LICENSE), Cisco Router (Freeware), Wire shark(Freeware).
Utilization of Laboratory –Second Year and Third Year Electronics & Telecommunication Engineering students.

Courses Conducted in Semester -I	Courses Conducted in Semester -II

Electronic Circuits and Applications Lab (Second Year, B.Tech)	Computer Network and Security Lab (Third Year, B.Tech)

9. Power Lab (LEC-IX)

Hardware Configuration:- Processor: - Intel core i3 , 3.30Ghz ,500GB HD , 4GB RAM.
Operating Systems : Windows 7 and Windows 10.
Printers :- 01 HP LASERJET Network Printer.
Software Installed:- Ms Office 10, Ms Office 365 Multisim 13.0(LICENSE), Cisco Router (Freeware), Wire shark(Freeware).
Utilization of Laboratory – Second Year and Third Year Electronics & Telecommunication Engineering students.

Courses Conducted in Semester -I	Courses Conducted in Semester -II
Electronic Circuits and Applications Lab (Second Year, B. Tech)	Computer Network and Security Lab (Third Year, B.Tech)

10. Fibre Optic Lab (LEC-X)

Hardware Configuration: Processor: Intel core i3, 3.30Ghz,500GB HD,4GB RAM
Printers : Canon Printer - 02
Software Installed: Ms Office 365 and MS office10 , Keil(license version on 12 computers), Proteus 8.16 (5 Licenses with 5 dongles), Qual Net 6.1(Licensed), Flash Magic and SST Flash (Freeware)
Operating Systems : Windows 7 and Windows 10.
Utilization of Laboratory – Third Year and Final Year Electronics & Telecommunication Engineering students.

Courses Conducted in Semester -I	Courses Conducted in Semester -II
Advanced Processors Lab (Third Year, B. Tech)	Broadband Communication Systems Lab (Final Year, B. Tech)

11. Communication Lab -I (LEC-XI) (CT Lab)

Hardware Configuration: Processor: Intel core i7, 8th Gen.,1TB HD, 16 GB RAM
Printers : LaserJet pro Network Printer - 01
Software Installed: Ms Office 7, Eclipse, MATLAB 22
Utilization of Laboratory – Second Year Electronics & Telecommunication Engineering students

Courses Conducted in Semester -I	Courses Conducted in Semester -II
1. Mini Project (Third Year, B. Tech) 2. Signal and Systems (TUT) (Second Year, B. Tech)	1. Biomedical Electronics Lab (Third Year BTeach) 2. Microwave Engineering Lab (Final Year, B. Tech)

12. Communication Lab -II (LEC-XII) (TV Lab)

Hardware Configuration: Processor: Intel ^{R} Core ™ i3 4130 CPU @ 3.40 GHZ *4
Printers :HP Laserjet 1020
Software Installed: **Software Installed**: Ubuntu 18.04, Ms Office 7,MATLAB 22
Utilization of Laboratory – Second Year and Final Year Electronics & Telecommunication Engineering students

Courses Conducted in Semester -I	Courses Conducted in Semester -II
1. Signals and Systems 2. Electronic Circuit and Application Lab (Second Year ,B.Tech)	Analog and Digital Communication Lab (Second Year, B. Tech)

13. Artificial Intelligence Lab (LEC-XIII) (Exclusive For M. Tech)

Hardware Configuration: Processor: —Printers : 01 Canon Network Printer
Software Installed: Windows 7, Ms Office 7
Utilization of Laboratory – Third Year and Final Year Electronics & Telecommunication Engineering students.

Courses Conducted in Semester -I	Courses Conducted in Semester -II
Digital Image Processing (T.Y B.Tech) C2S Project	1. Deep Learning Lab (honor course Third Year, B. Tech) 2. Big Data Analytics (honor course Third Year, B.Tech) 3. Deep learning (Third Year, B.Tech) M.Tech 1. Natural Language Processing Lab 2. Data Analytics 3. Deep learning Lab

(C2S Project lab)

Hardware Configuration: Processor: Intel Core -i7,12th gen , Printers - 01 Canon LBP 2900B Printer
Software Installed: CENTOS, CADENCE, SYNOPSIS, SIEMENS, Windows10, MS Office 365, VIVADO, XILINX ISE 8.1, & XILINX ISE 14.1
Utilization of Laboratory –C2S project , Staff & Students Training

Courses Conducted in Semester -I	Courses Conducted in Semester -II
C2S project , Staff & Students Training	C2S project , Staff & Students Training

Major Equipment's:

Sr.No.	Equipments
1	Ni2 Logic Universal System
2	LAN-T Train
3	Sense Intelligent Panel 75" Mode sense Elite Panel 75'is processor 10 th generation RAM 1TB HDD 120 GB SSD sense Elite Panem 75'i5 processor, 10 th gen ,8GB RAM 1 TB HDD,120 GB SSD with License Microline India Pvt Ltd
4	MATRIX-II VLSI Protoboard Model-LGSP6
5	Zedboard zynq-7000 ARM/FPGA Development Board
6	Titan and Metis Board
7	ADSP Kit
8	DSP Trainer Kits
9	Logic Analyzer
10	Universal Source
11	DSO
12	6 ½ Digit Multimeter
13	Liquid flow measurement: Turbine flow meter
14	Electro Hydraulic Trainer
15	Electro Pneumatic Trainer
16	Signal generator
	Experimental kits
18	LVDT Trainer Kits, Digital IC Trainer Kits
19	RF Microwave Antenna kit
20	TF+TPCONPS CONTROL
21	Optical Fiber Trainers & Kits
22	Microstrip System Trainer 8501-300Mhz
23	Microwave Trainer Kits(02)
24	Satellite Communication Link

25	Licensed Softwares : Keil Vr. 5.0 for 12 Users Proteus Vr. 8.16 for 5 Users
27	Function Generator
28	Experiment Kits
29	Spectrum Analyser
30	Wobbuloscope, Wobbulator
31	RF Generator
32	DSP starter kit

Department of Computer Engineering

Laboratory Equipments

Sr.No	Laboratory Name	Equipment
1	Software Laboratory - I	Computer system, Printer, LCD, Kits, Graphics Card, Headset, Webcam
2	Software Laboratory - II	Computer system, Printer, LCD, Headset, Webcam
3	Software Laboratory - III	Computer system, Printer, LCD, Kits, Headset, Webcam
4	Software Laboratory - IV	Computer system, Printer, LCD, Headset, Webcam
5	Software Laboratory - V	Computer system, Printer, LCD, Kits, Server, Headset, Webcam
6	Software Laboratory - VI	Computer system, Printer, LCD, Headset, Webcam
7	Software Laboratory - VII	Computer system, Printer, LCD, Kits, Headset, Webcam
8	Software Laboratory - VIII	Computer system, Printer, LCD, Dell Workstation, Headset, Webcam
9	Software Laboratory - IX	Computer system, Printer, LCD, Kits, Headset, Webcam
10	Software Laboratory - X	Computer system, Printer, LCD, Kits, IBM Server, IBM SUR Server and Server Rack, Headset, Webcam
11	Project Facility	Computer system, Printer, LCD, Kits, Servers

Major Equipments on Laboratories

Sr.No.	Laboratory Name	Kits Name	Quantity
1	Softwae Laboratory-I	Beagle Bone Black	15
		Lift Elevator Cards	15
		Traffic Light Cards	15
		Stepper Motor	15
2	Software Laboratory - III	Kits (Raspberry Pi3 Development Boards) with wooden enclosure	15

		Camera Module Interface to Raspberry Pi3	15
		Sensor Interfacing Board	15
3	Software Laboratory - V	Raspberry Pi2 Model b	4
		Raspberry Pi3 Model b	5
4	Software Laboratory - VII	Oisis Metis Board	5
		OisisTritorn IDE Software	5
		Oisis Metis Board with IDE	5
		Oasis Arm Board	1
		Triton IDE editor ARM compiler Software	1
		Universal Programmer LABTOOL 48XP	1
		Digital Oscilloscope	1
		32 Bit CAN Controller with USB convertor	1
		E&A Emualator	2
		E&A Emualator	2
		E&A Emualator	1
		Master Slave controller boards(5) Display board(1) (Indicator Board (1)	7
		Master Slave controller boards with power supply	3
		VLSI Universal Trainer	3
		Explorer Boards	6
		Dynalog Educational Trainer kit	1
		Wavelet Group DSP	1
		DSP Experiment Software WG-DSP EXPT-1.0	1
		WG ADD PORT 1.1	1
5	Software Laboratory - IX	8086 (Page 56)	18
		SMPS-03 (Page 66)	
		SMPS-03 (Page 66)	23
		8086+SMPS (Page 56)	10
		8255 (Page 57)	5
		8255 (Page 57) C	15
		8251 (Page 58) D	5
		8253 (Page 59) E	5
		8259 (Page 60) F	5

		8279 (Page 61) G	5
		8051	8
		8251	5
		8251	12
		8253	5
		8253	12
		8259	5
		8259	12
		8279	5
		8279	12
		DAC	1
		DAC	5
		DAC WITH RELAY CARD	2
		RELAY CARD	1
		PARALLEL CENTRONICS CARDS	1
		PROGRAMMABLE I/O CARD	1
		NEW DAC KITS	5
			3
		ADC	5
		A TO D CONVERTER	1
		A TO D CONVERTER	1
		ADC CARD-7109	1
		A TO D CONVERTER	3
		ADC	10
		SMPS-01	7
		SMPS-01	9
		Stepper motor+Kit+SMPS	8
		Stepper motor+Kit+SMPS	15
		8051	15
		SMPS-03	15
			2
			2
		LCI	
		PC XPLORER KITS	9
			1
		CRO	3
			2
		DUAL POWER SUPLY	2

			1
		MULTIMETER	1
		8051 KITS	7
		8051 KITS	4
			1
		PARALLEL CENTRONIC CARDS	25
		8086KITS+SMPS	12
6	Software Laboartory - X	LAN Trainer kit	2
		I-securit	2
		Optical Fiber trainer kit	1
		Digisol (ranger series) access points	2
		Beagle bone board black with LCD and Camera	2
7	Project Facility	Digital Board With Cabinet	9
		Digital Board With Power Supply	7
		Digital Board Without Power Supply	25
		Digital Board With Power Supply	20

Department Instrumentation & Control Engineering

List Major Equipment List

1) Digital Signal Processing Lab

Sr.No	Item	Quantity
1	Computers	22 Nos(Intel® Core™ i7 10700 CPU @ 2.9 GHz, 8-GBRAM,)
2	LCD Projectors	1Nos
3	Network Printers	2 Nos
4	Texas DSP Starter Kit	6 Nos

2) Embedded System Lab

Sr.No.	Experimental Setup list	Quantity
1	Computers	23 Nos
2	UPS	1 Nos
3	LCD Projectors	1 Nos
4	Network Printers	2 Nos
5	5 in 1 test labs	5 Nos
6	DSO + waveform generators	5 Nos
7	AVR 8535 trainer kits-	12 Nos
8	IoT development kits	2 Nos

3) Process Lab

Sr.No.	Experimental Setup list
1	Dead weight pressure gauge tester
2	Vacuum gauge tester
3	RTD and Thermistor sensor
4	Thermocouple sensor
5	Air purge probe/capacitive for Level sensor
6	Rotameter, orifice and Electromagnetic flow meter,vortex flow meter
7	Red wood Viscometer.
8	Water level measurement using PiezoresistiveMEMS sensor.
9	Cantilever beam/load cell.
10	Speed sensor
11	LVDT
12	Computers (3 no.s)

Major Equipment List

Sr.No.	Item
1	Level and flow pilot plant
2	PLC with control panel,
3	Ultrasound Equipment
4	Flow loop
5	Steam and Water Analysis System Panel
6	Distillation Column
7	Heat Exchanger
8	Radar tank Level Gauge
9	Building Automation Setup.

Automation Lab

Major Equipment List

Sr.No.	Item
1	One Main Control Panel with MDPLUS DCS controller, 16 Analog Inputs (HART supported), 8 Analog outputs ((HART supported). 8 Discrete Inputs, 8 Discrete outputs, Two port H1Fieldbus card and 2 port serial communication card.
2	One Precision 5820XL, Tower Dual/ Quad MonitorWorkstation with DeltaV 14.0
3	Three Optiplex 3050 small Factor Tower Single MonitorWorkstations DeltaV 14.0
4	Three panels for IO distribution

Biomedical Lab

Sr.No.	Experimental Setup list
1	Bedside Monitor
2	Infusion pump
3	Electro surgical unit
4	Defibrillator

Major Equipment List

Sr.No.	Item
1	ECG Machine
2	Bio signal Test Station
3	Bedside Monitor
4	Phonocardiograph,
5	Audiometer
6	Power lab advance teaching scheme for Biomedicalengineering: 3 units
7	EEG Machine
8	Digital storage oscilloscope: 1 unit
9	Ultrasound scanner
10	Thermal Camera
11	Logic Analyser
12	Digital storage oscilloscope : 2 units
13	Ni Elvis LabView System

Project Lab

Sr.No	Experimental Setup list
1	CNC milling/drilling machine
2	Intel core PCs Tektronix DSOs
3	9-in-1 test labs
4	Universal calibrators
5	PCB drilling machine
6	Temperature controlled soldering stations and de- soldering stations
7	Presentation projector-tool
8	Optical encoders
9	Danfoss VFD with motor
10	PMDC motor with drive
11	Digital dial gauges
12	Proximity switches
13	Linear potentiometric sensors
14	Universal programmer, in-circuit emulator

Control System Lab
Major Equipment List

Sr.No	Item	Quantity
1	Computers :	22 Intel® Core™ i3-4150 CPU @ 3.50GHz × 4 8-GB RAM, 500 GB HDD, 18.5" Monitor , DVD writer
2	Printers:	1 No
3	UPS:	1 No.
4	LCD Projectors:	1 No.

5	Softwares	MATLAB 2010a, C, Python, Lab View, VILab

Analytical Instrumentation Lab
Major Equipment List

Sr.No.	Item
1	Spectrophotometer
2	Spectrofluorophotometer
3	Flame photometer
4	Photo colorimeter
5	Optical densitometer

Electronics Lab

Sr.No	Experimental Setup list
1	CRO
2	Power Supplies
3	Signal Generator
4	Pulse Generator
5	Function Generators
6	Universal Counter
7	Digital Multimeter
8	LCR meter
9	DSO
10	9 in 1
11	5 in 1
12	Arbitrary Waveform Generator

PEM Lab

Sr.No	Experimental Setup list
1	Analyze the Process Flow Diagram for the given process
2	Analyze the given P & ID
3	Prepare an Instrument Index sheet
4	Prepare specification sheet for the instruments
5	Analyze a loop wiring diagram for a given control loop

Major Equipment List

Sr.No	Item	Quantity
1	Computers :	21 Intel® Core™ i3-4150 CPU @ 3.50GHz × 4 8-GBRAM, 500 GB HDD, 18.5” Monitor , DVD writer
2	Printers:	2 No
3	UPS	1 No.

5	Softwares	Comsol Multiphysics 6.2@,Proteus,E draw

Dark Room
Major Equipment List

Sr.No	Item
1	Optical test bench with mounts
2	Optical power meter with 3 photo detectors
3	Optical time domain reflectometer (OTDR)
4	Optical sources-He-Ne lasers, Nd-YAG Laser, Argon laser
5	Monochromator

Department of Information Technology

Major Equipments 2023-24

Sr.No.	Dead stockno	Description	Location	Cost
1	CCOEW/IT/03-17/8-1-35/01-01	UPS batteries	Lab 7	64000
2		Computer- themvp, tactsuit with gloves & mesh lining, VR headset, hololens headset	Lab 1	1426882
3		AMD Ryzen 9 7900 x processor,32GB DDR5 RAM, SSD 1TB, Nvidia GFX 24 GB DDR5	Lab 2	405931
4		EPSON multifunction injet printer	Lab 2	21779
5		HP Lasetjet pro MFP-M-126Amultifunction printer	Lab 1	18300
6		HP i7 12600 IntelCore processor, 16GB RAM, 512 GB SSD	Lab 9	1682100
7		Curved Monitor	Lab 1	20000

Department of Mechnical Engineering

Major Equipment and Laboratory Experiments List

Sr. No.	Name of the Laboratory	Name of the Important Equipment	Laboratory Experiments
1.	Workshop	1) CNC (Trainer) Machine	1. A demonstration of any one welding technique out of TIG/ MIG/Resistance/Gas welding. A job drawing to be prepared by an individual institute with details of welding process parameters with weld joint design such as edge preparation, type and size of electrode used, welding current, voltage etc

		2) Radial Drilling Machine	2. Demonstration of the usage of manufacturing processes like casting, forging, sheet metal.
		3) Milling Machine	3. Manufacturing of Fibre-reinforced Composites by hand lay-up process or spray lay-up techniques.
		4) Shaping Machine	4. Demonstration on grinding operations, measurement of surface roughness produced and estimation of machining time.
2.	Metallurgy Lab	1) Computerized Universal Testing Machine	Tension, hardness and Impact tests.
		2) Metallurgical Microscope VMM4 with computer interference	Study of microstructures of ferrous and non ferrous metals and alloys
		3) Vickers Cum Brinell Hardness Tester	Dye Penetrant Test
		4) Ultrasonic Flaw Detector	Metallographic prearation of specimen
		5) Impact testing m/c	Metallurgical Microscope
		6) Muffle Furnace	Metallography Sheet
		7) Pin on Disc Maachine	
3.	Refrigeration & Air Conditioning	1)Vapor Absorption Refrigeration Tutor	Trial on vapor compression test rig.
		2)Air Conditioning Tutor	Trial on ice plant test rig.
		3)Ice Plant Tutor	Trial on air conditioning test rig.
		4) Air Compressor Test Rig	Trial on two stage reciprocating air compressor.
4.	IC Engine Lab	4)Computerized 4 Cylinder, 4 Stroke Turbo, CRDI Diesel Engine	Study and trial on petrol engine.
		5)Computerized VCR Engine Setup with Diesel Injection Pressure Sensor	Study and trial on Diesel engine
		6)ISF 3.8, B-Series 4 stroke, 4 Cylinder Diesel Engine (Skill Development Practical)	Verification of the impulse mementum principle using flat and curved vones
		7)Turn over device	
5.	Heat Transfer Lab	1) Composite Wall Apparatus	Determination of heat transfer coefficient in Natural Convention
		2) Critical Heat Flux Apparatus	Determination of heat transfer coefficient in Forced Convention
		3) Stefan Boltzmann Apparatus	Determination of Emissivity of a Test surface
6.	Fluid Mechanics Lab	1)Reynolds Apparatus	1.Measurement of Viscosity and Sp. Gravity
		2)Bernoulli's Theorem Apparatus	2.Measurement of Pressure and velocity
		3)Redwood Viscometer	3.Measurement of coefficient of orifice
		4)Ventury and Orifice meter Apparatus	4.Flow visualization using Reynolds Apparatus

		5) Fluid Property Sensor	5.Measurement of coefficient of friction in pipe
7.	Metrology & Quality Control	1) Profile Projector	Verification of dimensions & geometry of given components using Mechanical comparator.
		2)Floating Carriage Micrometer	Machine tool alignment testing on machine tool- Lathe/ Drilling/ Milling
		3)Tool Makers Microscope	Measurement of linear and angular dimensions using standard measuring instruments.
		4)Vernier Height Gauge	Error determination of linear / angular measuring instruments and determination of linear and angular dimensions of given part MSA (Gauge R & R)
		5)Monochromatic Light Source Unit	Determination of given geometry using coordinate measuring machine (CMM)
8.	Turbo Machines Lab	1) Centrifugal Pump Test Rig (6-1-31)	Verification of impulse moment principle using impact of jet on curved vane
		2) Francis Turbine Test Rig 1 KW Capacity	Study and constant head trial on any hydraulic reaction turbine and plotting of main and operating characteristics
		3)Electrohydraulic & Electro Pneumatic Trainer Kit	Study and trial on centrifugal pump and plotting operating characteristics Study and trial of rotary compressors.
		4)Gear Pump Test Rig	Study and constant head trial on impulse water turbine (Pelton wheel) and plotting of main and operating characteristics
		Transparent Hydraulic Trainer Kit	
		5)Axial Piston Pump	
		6)Steering Control Unit	
		7)Load Sense Sectional Mobile Valve	
		8)Geroler Motor	
		9) Compressio Moulding Hydrulic Press	
9.	Automation and Control Engineering	1)Temperature Control Trainer	Study of Basic circuits using Hydraulics Trainer Kit
		2)Two Channel Hotwire Anemometer.	Study of Basic circuits using Pneumatics Trainer Kit
		3)Plc Trainer Kit Automation Studio Version 6.1	Analyze Hydraulic circuit(s) and simulate for different working conditions
10.	Computer Center	1)Computers (75 Nos.) -Equipped with Latest Configuration	Program to formulate a static structural analysis of stepped bar/beams
		2)All Computers Are Connected to the Internet.	Static structural analysis of stepped bar/beam using FEA Tool
		3)HP Printers	Static structural analysis of any mechanical components using 3D elements

		4)LCD Projectors	Assignment on drawing IS conventions, threaded fasteners and riveted joints using the basics of projections and dimensioning rules. (to be completed manually) Assignment on creating production drawing with the limit, fits and tolerance representation. Write a program on projectile motion Assignment on assembly modeling using proper mating conditions and generation of exploded view. (minimum 5 assemblies)
11.	Theory of Machines Lab	1)Epicyclic Gear Train 2)CAM Analysis 3)Gyroscope 4)Multiple Signal Oscilloscope 5)Arbitrary Function Generator	Epicyclic Gear Train Cam Jump Phenomenon Gyroscopic Principle
12.	Dynamics Of Machinery	1) Vib Lab 2) Four Chancel FFT Analyser 3) 3-Axis Accelerometer, 4) Microphone 5) Modal Analysis Impact Hammer 6) Computerized Wheel Balancing Machine	Design process, design considerations, standards in design Engineering materials, their features, applications and selection Manufacturing and assembly considerations in design
13.	Center of Research and Intellectual Entrepreneurship (CeRIE)	1) 30 Lenovo P320 Series Think Station, 16 GB RAM Software	Forward kinematics and validation using suitable software (Robo Analyser/ MatLab or any other free software tool).
		2) Ansys Simulation Software 3) Creo- modeling software 4) HP Printer A3 706N	A computer program for stress analysis of beam using linear and quadratic elements Finite Volume Method code for two-dimensional conduction problem. Lid driven cavity problem using Ansys Fluent A computer program for 1-D temperature analysis for heat transfer problem Demonstration and study of NSE Solver

- **List of Major Equipment/facility in each Laboratory/workshop**. - As per AICTE /SPPU Norms
- **Compliance of Academic bank of credit(ABC)- All Student ABC ID Generated andthe credit transfer procedure is in process.**
- **To Upload the respective short video (1-2 min) of infrastructure and facilitiesavailable w.e.f the courses in the website.**

Library

Number of Library books/ Titles/ Journals available (program-wise)

S.N.	Course	Total Number of Titles	Total Number of Volumes	Number of Journals
				National
1	Electronics & Telecommunication	3493	18434	15
2	Computer Engineering	3744	16730	10
3	Instrumentation & Control	2291	8436	08
4	Information Technology	1776	5938	07
5	Mechanical Engineering	1201	4580	16
6	Basic Sciences & Humanities Department	1708	6800	03
7	Others	4037	4933	09
	Total	**18250**	**65851**	**68**

List of National Journals –

Sr.No.	Name of Journal
1	Indian Journal of Engineering and Materials Sciences
2	International Journal of Systems Assurance Engineering and Management
3	International Journal of Vehicle Structures and Systems
4	Journal of Engineering Education Transformations
5	Journal of Optics (India)
6	Journal of Scientific And Industrial Research
7	Journal of Structural Engineering (Madras)
8	Journal of the Indian Institute of Science
9	Journal of the Indian Society of Remote Sensing
10	Journal of The Institution of Engineers (India): Series C
11	Journal of The Institution of Engineers (India): Series D
12	Journal of Vibrational Engineering and Technologies
13	MAPAN-Journal of Metrology Society of India
14	Science, Technology and Society
15	Current Science
16	Defence Science Journal

17	Indian Journal of Marketing
18	Indian Journal of Biochemistry and Biophysics
19	Journal of Creative Communications
20	ICTACT Journal of Image and Video Processing (IJIVP)
21	ICTACT Journal on Microelectronics (IJME)
22	ICTACT Journal on Soft Computing (IJSC)
23	ICTACT: Journal on Communication Technology(IJCT)
24	IETE Journal of Education
25	IETE Journal Of Research
26	IETE Technical Review
27	i-manager's Journal on Pattern Recognition
28	Indian Journal of Advanced Materials Science
29	Indian Journal of Advances and Applications in Fluid Mechanics
30	Indian Journal of Advances in Communication Engineering
31	Indian Journal of Advances in Computer Sciences and Technology
32	Indian Journal of Advances in Mechanical Engineering
33	Indian Journal of Chemistry and Applications
34	Indian Journal of Computational and Applied Mathematics
35	Indian Journal of Computer Engineering and Technology
36	Indian Journal of Computer Science (ICI)
37	Indian Journal of Computing and High Speed Networks
38	Indian Journal of Design Research and Development (IJDRD)
39	Indian Journal of Engineering and Technology Research and Development
40	Indian Journal of Fluids Engineering
41	Indian Journal of Information Technology and Computer Engineering

42	Indian Journal of Mechanical Engineering Research and Development
43	Indian Journal of VLSI Design
44	Indian Journal of Wireless and Mobile Communications
45	Industrial Product Finder
46	International Journal of Advances in Embedded Systems Research
47	International Journal of Mechanical and Materials Technologies
48	International Journal of Mechanical Engineering
49	International Journal of Mechanical Engineering Research
50	IOSR Journal of VLSI and Signal Processing
51	Journal of Neural Computing Systems
52	Journal of Advanced Research in Computer Engineering
53	Journal of Computational Intelligence in Bioinformatics
54	Journal of Computer Science And Applications
55	Journal of Hybrid Computing and Research
56	Journal of Institution of Engineers (India): Series B
57	Dalal Street Investment Journal
58	Data Quest
59	Down To Earth
60	Electronics For You
61	National Geographic
62	Out Look
63	Readers Digest
64	The Week
65	University News
66	Voice And Data

67	Yojana
68	India Today

International Journals /Online journals

IEEE ASPP+POP - 214 e-journals, 1673 proceedings.

ELSEVIER ENGINEERING &COMPUTER SCIENCE-275 e-journals **ASME**- 34 e-journals

ACM Digital Library – 13 e-journals, Conference Proceeding – 994, Transaction- 45, Magazines- 12, Hosted Content- 10, SIG Newsletters- 69

E- Library facilities

Digital Library – Access to electronic resources is given through digital library.

Access Engineering – 882 e-books, Pearson Publisher-57 e-books, McGraw- Hill Publisher-17 e-books and NPTEL video lectures are available.

Open Access Content-NPTEL Video Lectures, e-PG Pathshala, National Digital Library of India, Open Access Books DOAB, Open Access Journals DOAJ, LibriVox Audio Books, e-journals by Indian Academy of Science, Open Access Publishers PLOS, Open Educational Resources OER Common Math World.

AICTE Recommended OER- Commonwealth of Learning (COL), British Columbia Open Text, Book Project, Rise University Open Stax, e-Campus Ontario, Skills Commons, LibreTexts, Saylor Academy.

Links to College Faculty Publications, College Magazines, College News, CollegeNewsletters are provided

Laboratory & Workshop

List of Major Equipment/Facilities in each Laboratory/Workshop

Computing Facilities

Internet Bandwidth	1Gbps
Number and configuration of System	1701(13procressor/15procressor/17procressor)
Total number of system connected by LAN	All 1701
Total number of system connected by WAN	All 1701
Major software packages available	System Software- 16 + Application Software59 = Total 75
Special purpose facilities available	Campus Network & Wifi for Training & Placement Companies, Mechanical Auditorium and Mechanical conference Hall

- **Innovation Cell:** Yes
- **Social Media Cell :** No

- **Compliance of the National Academic Depository (NAD)-** Registered on NAD portal.

List of facilities available

Games & Sports Facilities

- College has a playground of 2.5 acres.
- The ground has many sports facilities like volleyball, Football, Handball, Kabaddi, Kho Kho, Box Cricket, Netball and Athletic track.
- Apart from outdoor games college has made provision of indoor games such as Tabletennis, carom, chess etc.
- College also has badminton court in the premises for practice purpose.
- College has a central well equipped gymnasium with facilities such as machine exercises, free weight exercises, aerobics, Zumba, massage, steam bath and a separate hall for yoga and meditation.
- It is huge gymnasium of 5000sq. Ft. Space only for ladies.
- The gymnasium has qualified and trained instructors.
- Gymnasium also provides yoga certification courses.

Extra-Curricular Facilities

College has well equipped auditoriums for cultural activities. Audio system, band setup are available. College encourages students to participate in sports as well as cultural activities. Community development activities are also conducted. Students have form clubs such as photography club, art circle, astronomy club through which extra-curricular activities are conducted with the help of faculty members and administrative staff. College offers audit course at second year level "Self Expression". Under this students select any activity such as dance, painting, gardening, cooking etc. Experts conduct hands-on session of these activities every week.

- **Teaching Learning Process**
  - Feedbacks from all stakeholders are taken, analyzed properly. These feedback analysis, Programme Outcomes [POs] and Programme Specific Outcomes [PSOs] are referred as reference for defining Course Outcomes [COs] to define curriculum structure and detailed syllabus.
  - Course outcomes are clearly discussed with students during starting sessions of course conductions.
  - Furthermore, in line with NEP guidelines, from this academic Year 2023-24, revised curriculum structure is under the process of implementation *[in year-wise progressively manner].*
  - Curricula and syllabus for each of the programmes are approved by different statutory bodies viz. BoS, the Academic Council and the Governing Body – Available on Website : www.cumminscollege.org – Click here

- Academic Calendar – Available on Website : www.cumminscollege.org – Click here

- Teaching Load of each Faculty

Evaluation System

System for continuous evaluation of students, internally is in place. Every student is assessed for her academic performance in theory course through In- Semester Examination (ISE) and End Semester Examination (ESE).

- Detailed explanation w.r.to assessment processes used aspects is presented as follows

Process for students' performance evaluation through formative and summative assessments in case of the theory courses

- Evaluation is performed by subject teachers via different modes viz. written examination, practical examination and oral examination.
- The assessment of In-Semester Examination has two components i.e. Test-1 [T1]and Test -2 [T2].

  - The mode of conducting T1 is designed and announced by the Course Instructor at the beginning of the course and is mentioned in the commitment chart. The different modes for conducting of T1 can be viva-voce, quizzes, puzzles, crosswords, seminars, model building, written test, multiple choice questions, group discussions, online test etc.
  - Written (descriptive) examination is conducted for T2 and ESE.
  - All the examinations are conducted as per schedule given in the academic calendar.

Continuous Assessment in case of the laboratory courses

- A list of experiments and the conduction plan is communicated to students before the commencement of the semester.
- Course outcomes are clearly discussed with students during starting sessions of course conductions.
- Regular assessment is based on the understanding of experiments, conceptual clarity, regularity and timely completion of the journal.
- Journals are assessed after every practical and orals are conducted throughout the semester. Attendance and assessment record is maintained. Based on continuous assessment final term-work marks are given by the internal examiners.

Student performance evaluation during Internship duration

- In line with guidelines for AICTE and on the strong recommendations received through stake holder's feedback, CCEW have launched 6 months Internship program. Adopting an impactful internship based strategy at CCEW, Pune is with intent for creating a future talent pool for the industry.
- We expect, it will not only helps fresh passing-outs in gaining professional know-how but also benefits, corporate on fresh perspectives on business issues and evendiscovering future business leaders.

- The process of examination scheme and credit allotment are clearly defined and communicated to all concerns. Student performance evaluation during Internship duration is done jointly by Industry mentor and mentors at CCEW, Pune.

❖ **Co and Extra-Curricular Facilities**

- College has well equipped auditoriums for cultural activities. Audio system, band setups are available. College encourages students to participate in sports as well as cultural activities. Community development activities are also conducted.

- Students have form clubs such as photography club, art circle, astronomy club through which extra-curricular activities are conducted with the help of faculty members and administrative staff.

- College offers audit course at second year level "Self Expression". Under this students select any activity such as dance, painting, gardening, cooking etc. Experts conduct hands-on session of these activities every week.

❖ **Student's feedback system for Faculty is in place**

- At the end of every semester, students give feedback on teaching. These feedbacks are analyzed. The Principal and Head of Department discuss the feedback with each faculty member.

- Through this discussion, the strengths and areas of improvement are conveyed to each faculty member. Head of Department reviews areas of improvements and suggestions are given to the faculty members.

For each Post Graduate Courses give the following:

Sr. No	Name of the Course
1	M. Tech. Electronics and Telecommunications Engineering
2	M. Tech. Mechanical Engineering

Laboratory facilities exclusive to the Post Graduate Course : As per AICTE Norms

16 Enrollment and placement details of students in the last 3 years

Under Graduate Courses

Sr.No.	Branch	2021-22		2022-23		2023-24	
		Enroll	Placement	Enroll	Placement	Enroll	Placement
1	E&TC	209	181	228	201	228	164
2	COMPUTER	223	205	229	214	242	207
3	INSTRU	69	53	66	52	67	51
4	I.T.	78	71	78	73	74	63
5	MECH	74	66	71	62	74	58
	Total	**653**	**576**	**672**	**602**	**685**	**543**

Post Graduate Courses

Sr.No.	Branch	2021-22	2021-22	2023-24

		Enroll	Placement	Enroll	Placement	Enroll	Placement
1	E&TC	5	0	5	01	2	0
2	INSTRU	1	0	1	00	0	0
3	MECH	12	13	12	04	2	0

17 17.1 List of Research Projects/ Consultancy Works –

S.NO.	Particulars	Grant Rs.
1.	AICTE SPDC Grant (Watvisave Sir)	525,512/-
2.	DST Grant (Watvisave Sir)	709,897/-
3.	C2S NIELIT Grant (Mukherji Madam)	379,750/-
	Total	**16,15,159/-**
	Consultancy	
1.	Hortus Rudra Pvt. Ltd. (Mandke Madam)	2,118/-
2	Tridiagonal Solutions Pvt. Ltd. (Chaware Sir)	36,000/-
3	Scorpius Trackers Pvt. Ltd.	100,000/-
	Total Rs.	**138,118/-**

17.2 Publications out of research in last three years out of master projects

- Presented in 2023 – 24 -Nil
- Presented in 2022 – 23 -01
- Presented in 2021 - 22 -02

17.3 Industry Linkage:

College has very good interaction with many industries for activities such as: students' projects, internships, lab development, curriculum development and faculty training.

- College has very close association with Cummins India Ltd and Cummins Inc. Cummins India Ltd has declared Cummins College as their 'Signature Project'.
- Under this project many initiatives towards infrastructure development, faculty development and student development are undertaken.
- College is autonomous since 2016-17. Experts from renowned industries are members of Board of Studies, Academic Council and Governing Body. Their inputs help to frame curriculum as per the industry needs.
- EATON, Citi Bank, Persistent Systems Ltd, Avaya, Ericson are closely working with the college for students' industrial training and students' projects.

- Some of the laboratories are developed by the support of various industries like Forbes Marshall, Emerson, Cummins India Ltd, Rose-Mount Systems, Honeywell, Videocon, IBM, CISCO etc.

- Collaborations with EATON provides a platform to women engineering students from vernacular, semi-vernacular and rural background to acquire appropriate soft and social skills that are critical to achieve individual and professional success.

- With the help of CIL, MOU is signed with internationally renowned university for masters' program fellowship at Purdue, USA.

- Ansys India is supporting to our SAE BAJA team for design and analysis and also supporting financially

- Scorpious Trackers Pvt. Ltd has offered a consultancy work

- Danfoss India has established a "Centre of Excellence in Hydraulics" at Cummins Collge of Engineering for Women and also contributing in the syllabus development

Recent MoUs include MAN Trucks and Buses -for BAJA sponsorship,Allianz - ForMeritorious Scholarship and SAP Labs- For Industry Academia Relationship.

17.4 Memorandum of Understanding (MoU) with University & Industry

College has very good association with many industries College has signed MoUs with some of them. List of validMoUs is given below.

S.N.	MoU Sign with University / Industry	Date of MoU
1	AIC Spain	07/05/2009
2	Priyadarshani College	January, 2011
3	Deakin	23/02/2012
4	Ericsson	04/06/2012
5	La Trobe	20/12/2012
6	John Deere	06/05/2013
7	Purdue	18/11/2013
8	Eaton (Old MoU Date 13/12/2013)	15/12/2021
9	Truecopy (i) Electronic Transcript Delivery System (ii) Online Student verification System	01/06/2021 to 31/05/2024 (3 Yrs.)
10	Zensar	22/05/2014
11	Wiksate	13/08/2014
12	KPIT	02/09/2014
13	IGATE	07/11/2014
14	CMU Australia	01/01/2015
15	Persistent	01/07/2015
16	HSBC	04/11/2016

17	Mercedes-Benz	28/02/2017
18	Ansys	23/08/2017
19	Department of Science & Technology (DST-Nidhi Prayas)	21/09/2017
20	NEN	01/04/2016
21	TRIZ Association of Asia	02/08/2018
22	BOEING	31/10/2018
23	Tridiagonal Solutions Pvt. Ltd.	20/05/2019 to 19/05/2024(5Yrs.)
24	Emerson	27/02/2019
25	Devise Electronics Pvt. Ltd.	15/03/2019
26	ifm engineering pvt. ltd.	18/06/2019
27	Centre for Police Research, Pune	23/05/2019
30	Savitribai Phule Pune University & College of Engineering Pune , & Cummins College of Engineering & The Automotive Research Association of India	29/11/2019
31	Swayam Sahayata Sewa Sahakari Sanshta Maryadit, Pune & CCEW	21/01/2020
32	Virtual Labs Nodal Center (WLNC): CoE, Pune.	27/11/2020
34	Intence Engineering	31/08/2021
36	Scorpius Trackers Pvt. Ltd.	15/03/2022
37	UNI-TECH Automation Pvt. Ltd.	26/02/2022
38	Man Truck & Bus (I) Pvt. Ltd.	09/06/2022 to 08/06/2025 (3Yrs.)
40	Khushboo Charitable Trust	MoU Executed on 18/01/2022 02/04/2021 to 01/04/2024 (4 Yrs.)
43	Danfoss Technologies Pvt. Ltd.	19/08/2022
44	Chakraakaar Lifestyle Solutions Pvt. Ltd. (VaayuMitra)	22/09/2022
45	Moropant Pingale Godhan Foundation	14/10/2022
46	Confederation of Indian Industry (CII)	01/01/2023 31/12/2025 (3 Years)
47	Belrise Industries Ltd.	02/02/2023
48	The Indus Entrepreneurs Association, Pune Chapter (TiE Pune)	23/02/2023
51	Magna Seating (Magna Automotive India Pvt. Ltd.)	10/05/2023
52	Veritas Software Technologies (I) Pvt.Ltd.	10/05/2023
53	Wright State University	10/11/2023 to 30/06/2027

20 Best Practices adopted –

1) Full paid Ph.D. study leave for Faculty members.
2) Provision of sabbatical leave.
3) Incentives for quality journal publications.
4) Incentives for research funding.
5) Institution of Chair Professor by Cummins India Ltd.
6) Full financial support for filling patent.
7) Fully funded Master's Programme for selected students at Purdue.
8) Financial assistance to the needy students.
9) 'Employability enhancement program' to all third year students.
10) Communication Skills development & Soft Skills development training for second & third year students.
11) Mentor mentee scheme.
12) Sponsorship to the students towards membership fees for professional society chapters.
13) Active students' clubs for co-curricular & extra-curricular activities.
14) Digital evaluation system.
15) Bloom's taxonomy based evaluation system.
16) Periodic question paper and academic Audits.
