

Department of Computer Engineering

Message from the Head of Department:

I am pleased to present the annual report for the year 2018-19 to students, parents, alumni and my dear colleagues. During last year, the department has conducted various activities aimed towards overall development of students and build the capacities of my young colleagues.

The department has revised curricula for the B. Tech. (Computer Engineering) program keeping view of the latest trends in the industry and the guidelines issued by AICTE. Students from the department are preferring industry internships and learning through NPTEL courses to upgrade their skill sets beyond the university courses. Also students from the department are slowly adopting the culture of Competitive Programming. We hope that these academic reforms will have positive impact on the employability of graduates in coming years.

We all at the department are proud of the achievements of alumni and we acknowledge their contribution in the development of the department. Alumni are regularly visiting their alma-mater and mentoring and sponsoring the cost of education of their junior colleagues.

One of the main contributions of the department toward fellow teaching community was that it has conducted more than ten faculty development programs which was attended by over 400 faculty colleagues from various colleges affiliated to the university.

In coming years, our goal is to accredit all the programs offered

I am confident that with the active support of alumni, my fellow colleagues, and through increased engagement of students in various academic activities, the department will establish itself as one of the leading institutes in the state of Maharashtra.

Arvind W. Kiwelekar
Professor and Head

1. About the Department:

The Department of Computer Engineering was established in the year 1995. Now it offers three programs in Computer Engineering.

1. Bachelor of Technology in Computer Engineering (B. Tech.) started in 1995.
2. Master of Technology in Computer Engineering (M. Tech.) started in 1999.
3. Doctor of Philosophy started (PhD) in 2009.

2. Vision and Mission Statements for Department :

- **Vision:** *Building Content Software Engineers for Knowledge Society.*
- **Mission:** *To provide employable ICT engineers to Indian and global Software Industry.*

3. Advisory Board and BoS:

Sr. No.	Name
Advisory Board	
1	Prof. Rushikesh K. Joshi , IIT Bombay, Academic Advisor
2	Prof. Ameya Karkare , IIT Kanpur, Academic Advisor
3	Dr Sandip Deshmukh , Industry Relationship Advisor
4	Mr Shrdhat Bhat , Industry Relationship Advisor
5	Mr Ashok Chuderwar , Industry Relationship Advisor
6	Mr Santosh M. Bhilegaonkar , Industry Relationship Advisor
Board of Studies in Computer Engineering	
1	Dr Arvind W. Kiwelekar , Chairman
2	Dr. L. D. Netak , Member
3	Dr. Vipul Bag , Member
4	Dr. Vaibhav Narwade , Member
5	Dr. Archana Rajurkar , Member
6	Dr. S. P. Abhang , Member
7	Mrs. M. D. Laddha , Secretary

4. Program Educational Objectives (PEOs) & Programme Outcomes (POs)

A graduate in the discipline of Computer Engineering is expected to have three kinds of knowledge. First, the graduate should have conceptual knowledge of the core topics of Computer Science. Second, s/he should have knowledge of mathematical formalism underlying various programming concepts. Third, graduates in the discipline of Computer Engineering should have

the knowledge of the state of the technologies and tools so that he/she can apply the principles of Computer Science to solve real-life problems from diverse application domains.

The programme of B.Tech. in Computer Engineering at Dr Babasaheb Ambedkar Technological University (DBTAU) essentially aims to meet these broad expectations. At the same time, the program intends to comply with the courses curriculum guidelines recommended by AICTE/MHRD/UGC/DTE.

The following specific educational objectives aim to achieve these global and regional expectations.

4.1 Programme Educational Objectives (PEOs)

[PEO1]	To provide knowledge of mathematical principles underlying various programming concepts.
[PEO2]	To develop an ability to understand complex issues in the analysis, design, implementation and operation of information systems.
[PEO3]	To provide knowledge of mechanisms for building large-scale computer-based systems.
[PEO4]	To develop an ability to provide computer-based solutions to the problems from other disciplines of science and engineering.
[PEO5]	To impart the skills necessary for adapting to rapid changes taking place in the field of information and communication technologies.

4.2 Programme Outcomes (POs)

PO1	The graduates will possess the knowledge of various discrete mathematical structures, Logic and numerical techniques.
PO2	The graduates will have an ability to apply the mathematical formalism of Finite Automata and Probability in modelling and analysis of systems
PO3	The graduates will have knowledge of core programming paradigms such as database orientation, object orientation, and agent orientation and concepts essential to implement a software-based system.
PO4	The graduates will have an ability to analyze problems, specify algorithmic solutions to them and to evaluate alternative solutions.
PO5	The graduate will have a broad understanding of the impact of computer-based solutions in an economic, environmental and social context and will demonstrate the use of analytical tools in gathering requirements and distilling relevant information to provide computer-based solutions.
PO6	The graduates will demonstrate the ability to build human-centric interfaces to computers.
PO7	The graduates will possess the knowledge of advanced and emerging topics in the fields of operating systems, databases and computer networks.
PO8	The graduates will possess the skills necessary to communicate design engineering ideas. The Skills set include verbal, written and listening skills.
PO9	The graduates will understand ethical issues in providing computer-based solutions also they will have an ability and attitude to address the ethical issues.
PO10	The graduates will understand the role of system software such as operating systems, database management systems, compilers, middle-ware and internet protocols in realizing distributed information environment.

5. Overview of Academic Programs:

Academic programme	Duration	Intake
Ph.D.	-	10 (on roll)
M.Tech. (Computer Engineering)	2 Years	18
B.Tech. (Computer Engineering)	4 Years	60

5.1 Statistical Information of Students:

Year	Open			SC			ST			OBC			VJNT			SBC			Total		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
B.Tech. (Computer Engineering)																					
I	1	6	2	7	3	1	1	0	1	1	6	21	4	2	6	1	0	1	45	17	62

	7		3			0				5											
II	1 8	11	2 9	8	5	1 3	1	0	1	2 0	9	29	5	2	7	0	1	1	55	28	83
III	1 5	7	2 2	4	3	7	2	0	2	1 5	1 3	28	2	3	5	2	0	2	40	26	66
IV	1 7	8	2 5	7	6	1 3	0	2		2 1	9	30	4	3	7	1	0	1	53	29	82
Total I	6 7	32	9 9	2 6	17	4 3	4	2	6	7 1	3 7	10 8	1 5	1 0	2 5	4	1	5	193	100	293
M.Tech. (Computer Engineering)																					
I	-	1	-	1	-	1	-	-	-	1	-	1	-	-	-	-	-	-	3	3	
II	-	1	-	1	-	1	-	-	-	1	-	1	-	-	-	-	1	1	1	3	4
Ph.D.																					
PhD	5	1	6	-	-	-	1	-		1	2	1	3	-	-	-	-	-	7	3	10

5.3 Campus Placements:

Sr. No.	Name of Company	Name of Students Placed	Package
1	Persistent	Omkar Shinge	4.41 LPA
2		Dhiraj Andhere	
3		Shubham Bhalekar	
4		Gaurav Chaudhari	
5		Dnyaneshwar Gawand	
6	Sciative Solution	Abhishek Rudrawar	6.5 LPA
7	Tata Consultancy Services	Pratik Patil	3.36 LPA
8		Rushikesh Telange	
9		Mrunali Pitambre	
10		Altaf Ahmed	
11		Swati Patil	
12		Vinaya Dalvi	
13	L & T Infotech	Sneha Patil	3.2 LPA
14		Snehal Adhyapak	
15	Wipro	Rohan Narkhede	3.5 LPA
16		Heramb Deobhankar	
17		Tejas Rana	
18	EasyReach Solutions	Rohan Narkhede	4.2 LPA
19		Snehal Adhyapak	
20		Saloni Shinde	

6. Faculty and Staff:

Sr. No.	Name of Faculty	Designation	Qualification	Area of Expertise
1	Arvind W. Kiwlekar	Professor & Head	PhD	Software Architecture, Ontology
2	Laxman D. Netak	Associate Professor	PhD	Internet of Things, Learning Analytics
3	Manjushree Laddha	Assistant Professor	PhD (Pursuing)	Learning Analytics
4	Sanjay U. Waikar	System Analyst	M. Tech.	System Administration
5	H. A. Akarte Deputed at MNIT Allahabad	Assistant Professor	PhD (Pursuing)	Wireless Sensor Networks
6	I. R. A. Jhetam	Assistant Professor	M. Tech.	Software Architecture
7	Prachi Deshpande	Assistant Professor	PhD	Computer Security
8	Kavita Aher	Assistant Professor	M. Tech.	Distributed Systems, HCI
8	Heena Gangrekar	Assistant Professor	M. Tech.	Digital Electronics
9	Rasika Kalyane	Assistant Professor	M. Tech.	Discrete Mathematics
10	Mohan Patil	Assistant Professor	M. Tech.	Web Design
11	Pankaj Phadtare	Assistant Professor	M. Tech.	Computer Organization
12	Tejal Meshram	Assistant Professor	M. Tech.	Computer Programming
13	Shubhangi More	Lab Technician	Diploma in Petrochemical	---
14	Sharada Malgunkar	Attendant	SSC	---

6.1 Faculty-Course allocation :

Sr. No.	Name of Faculty	Course Allocated
ODD SEMESTER		
1	Dr. Arvind W. Kiwlekar	Smartphone Application Development, Smartphone Application Development Laboratory, Development Engineering
2	Dr. Laxman D. Netak	Data Structures, Data Structures Laboratory,
3	Mrs. Manjushree Laddha	Computer Programming in C, Computer Programming Laboratory, Introduction to Data Analytics
4	Prof. S. U. Waikar	Third Year Seminar Coordinator Final Year Project (Phase-I) Coordinator
5	Mrs. I. R. A. Jhetam	Design & Analysis of Algorithms, Software Architecture, Software Architecture Laboratory
6	Dr. Prachi Deshpande	Database Management Systems, Database Management Systems Laboratory,
7	Kavita Aher	Internetworking Protocol, Internetworking Protocol Laboratory, HTML Laboratory,
8	Heena Gangrekar	Digital Electronics & Microprocessor, Digital Electronics & Microprocessor Laboratory, Advanced Database Techniques, Advanced Database Techniques Laboratory,
8	Rasika Kalyane	Theory of Computations, Discrete Mathematics
9	Mohan Patil	Advanced Programming Technologies, Computer Programming in C, Computer Programming Laboratory
10	Pankaj Phadtare	Design & Analysis of Algorithms Laboratory, Computer Organisation & Architecture, Object Oriented Analysis & Design
11	Tejal Meshram	Computer Programming in C, Computer Programming Laboratory
12	Sanil Gandhi	Python Programming, Python Programming Laboratory

Sr. No.	Name of Faculty	Course Allocated
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EVEN SEMESTER

1	Dr. Arvind W. Kiwlekar	Artificial Intelligence
2	Dr. Laxman D. Netak	Computer Networks, Computer Networks Laboratory
3	Mrs. Manjushree Laddha	Software Testing, Software Testing Laboratory
4	Prof. S. U. Waikar	Final Year Project (Phase-II) Coordinator
5	Mrs. I. R. A. Jhetam	Design & Analysis of Algorithms, Design & Analysis of Algorithms Laboratory
6	Dr. Prachi Deshpande	Information Security, Information Security Laboratory, Operating System Design
7	Kavita Aher	Computer Programming in C, Computer Programming Laboratory, Human Computer Interaction, Distributed System, Distributed System Laboratory
8	Heena Gangrekar	Computer Programming in C, Computer Programming Laboratory, System Administration, Database Implementation Techniques
9	Rasika Kalyane	Computer Programming in C, Computer Programming Laboratory, Numerical Methods, Compiler Construction, Compiler Construction Laboratory
10	Mohan Patil	Product Design Engineering, Object Oriented Programming in JAVA, Computer Programming in C, Computer Programming Laboratory, Object Oriented Programming Laboratory
11	Pankaj Phadtare	Operating Systems, Operating Systems Laboratory
12	Sanil Gandhi	Probability & Statistics, Introduction to Data Science with R, Introduction to Data Science with R Laboratory

6.2 Additional Responsibilities to the Faculty:

Sr. No.	Name of Faculty	Additional Responsibility
1	Dr. A. W. Kiwelekar	Coordinator, Faculty Development Center Chairman, BoS Computer Engineering Coordinator, UG Program Committee
2	Dr. L. D. Netak	Coordinator Networking Facility Member, BoS Coordinator, PhD Admission
3	Mrs. M. D. Laddha	Chairman, Anti Harassment Women Committee Coordinator, M. Tech. Programs
4	Mr. S. U. Waikar	Co-Coordinator, Faculty Development Center Extension Activities coordinator (Internship, industry project)
5	Mrs. I. R. A. Jhetam	Coordinator B. Tech Program, Asst. - Rector Hostel

6. 3 Faculty Research and publications:

1. A book chapter has been accepted for publication authored by Kiwelekar A. W., Geetanjali Mahamunkar, and Laxman Netak titled “Deep Learning Techniques for Geospatial Data Analysis” in the proposed book on “MACHINE LEARNING PARADIGMS Advances in Theory and Applications of Deep Learning” Publisher: Springer. To be published in Dec. 2020.
2. A book chapter has been accepted for publication authored by Kiwelekar A. W., Sanil Gandhi, on “Use-cases of Blockchain Technology for Humanitarian Engineering” in a book Information and Communication Technologies for Humanitarian Services edited by Muhammad Nazrul Islam Publisher: IET Publication: March 2020.
3. A book chapter authored by, Kiwelekar A. W., Manjushree Laddha, Laxman Netak, Sanil Gandhi, An Architectural Perspective for Learning Analytics, in a Book Advances in Learning Analytics Publisher: Springer, To be published in Dec. 2019.

6. 4 Citation index of faculty member and impact factor are as follows :

Sr. No.	Name of the Faculty	H-index	Impact factor
1	Dr. A. W. Kiwelekar	5	
2	Dr. L. D. Netak	3	

6.5 Workshops/FDP attended by Faculty members:

Sr. No.	Name of Faculty / Research Scholar	Title	Organized by
1	Mrs. M. D. Laddha	A course on Business Analytics	IIM Bangalore
2	Sanil Gandhi	A course on Business Analytics	
3	Mrs. Gitanjali Mahamunkar	A course on Business Analytics	
4	Kavita Aher	Geospatial Data Analysis	VJTI Mumbai
5	Mohan Patil	Geospatial Data Analysis	
6	Heena Gangrekar	Geospatial Data Analysis	
7	Rasika Kalyane	Geospatial Data Analysis	

6.6 Faculty Achievements:

1. Dr. Arvind W. Kiwelekar, Associate Professor, has been promoted as a Professor in Computer Engineering under the Career Advancement Scheme (CAS).
2. Mrs. M D Laddha, Assistant Professor (Senior Grade) has been promoted as Assistant Professor (Selection Grade) under the Career Advancement Scheme (CAS).

7. Laboratory Infrastructure:

7.1 Major Instruments in Laboratory:

Sr. No.	Name of Instrument	Qty.	Total cost
1	Desktop PCs	60	30,00,000/-
2	Printers	10	2,00,000/-
3	Networking Infrastructures	1	10,00,000/-

7.2 Laboratory Expenditure:

Sr. No.	Name of the laboratories	Total cost Laboratories
1	Air Conditioners	1,75,000/-
2	Meeting Table	90,000/-
3	Seminar Room Chairs	1,00,000/-
4	Lab Chairs	85,000/-

8. Industry Interaction and Sponsored Projects:

The Department of Computer Engineering has regular interactions with industries particularly ATA Freight System, GSLab, Persistent Systems, and Sarvah System through the network alumni.

8.1 Sponsored Projects

- **AICTE Prerana Project:** The Department of Computer Engineering has received a grant of Rs. 10.0 lakhs under the AICTE's Prerana scheme to train SC/ST students on Competitive Programming.
- **MHRD PMMMNMTT:** The Department of Computer Engineering has received a grant of Rs. 746 lakhs jointly with Veermata Jijabai Technical Institute (VJTI) from MHRD to establish Faculty Development Center under the Pandit Madan Mohan Malaviya National Mission on Teachers and Training (PMMMNMTT).
- **Industry Sponsored Projects:** The Department of Computer Engineering has signed MoA with ATA Freight Systems, Logistics Service Provider headquartered in the USA.

Under the agreement, ATA Freight has constituted three PhD and two M.Tech. fellowships during the year 2018-21.

9. Student Activities and Achievement:

9.1 List of B.Tech. Projects:

Sr. No.	Name of The Student	Topic
1	Anish Pandita	AI sight for blind
	Shaikh Abdul Azim	
	Shinge Omkar Bharat	
2	Devbhankar Heramb Vijay	Mortgage Risk Analysis
	Pawar Vivek Vishwas	
3	Joshi Juilee Vishwajit	Smart Irrigation System
	Kaslikar Sonam Suresh	
	Patil Sneha Vilas	
5	Penshanwar Gajanan Dhananjay	Automatic Window Opening System in a car to prevent suffocation
	Sonawane Roshan Bhika	
	Khillari Vishal Gajanan	
6	Ghanghave Rahul Pandit	IOT based Text to Speech
	Dawand Dnyaneshwar Gajanan	
	Todamangle Bajrang Raosaheb	
7	Patil Pratik Kailas	Journey from unsupervised to supervised ML
	Patle Kuldeep Ramesh	
	Rama Tejas Samloo	
8	Kadam Pooja Sunil	Expenditure Predictor
	Kurkure Akshay Suresh	
	Telange Rushikesh Suryakant	
9	Chaudhari Gaurav Milind	Data driven approach to select ML Algorithms
	Adhyapak Snehal Chandrakant	
10	Rudrawar Abhishek Achyut	Bus tracking system with crowdsourcing data
	Vhare Suraj Dattatray	
11	Bhonkar Sujit Baliram	Face Recognition Based Attendance System
	Kajbaje A. Tanmay	
13	Thool Vrushabh Raju	Suburbanized e-voting System
	Yeole Sahil Suresh	
	Pitambare Mrunali Ramkrishna	
14	Pranali Gavaskar	Disease detection in plants using

	Andhere Dhiraj Pramod	leaves
	Bhalekar Shubham Mahesh	
15	Narkhede Rohan Dilip	DBATU 3D simulator
	Patil Swati Jotiba	
	Ragit Sakshi Purushottam	
16	Dalavi Vinaya Vishwanath	Duplicate Question Detection using NLP
	Ghanawat Pooja Laxman	
	Rao Shraavya Ravindra	
17	Ingle Chetan Pralhad	Farm Assistant Service
	Narkhede Pranav Yadav	
	Sarode Amit Arjun	
18	Dalvi Dhanashree Mhasku	Fees Management System
	Shinde Saloni Rajesh	
	Sutar Vaishnavi Vishwas	
19	Lad Sayli Santosh	Signature Recognition System
	Mohite Rupali Rohidas	
	Pugaonkar Pragati Santosh	
20	Saurabh Suman	Apartment Management System
	Mayur K. Sheshani	
	Mayur Deshmukh	
21	Surya Ananta Vithalrao	ECOPS
	Yogesh Gutte	
	Tayde Akash Jagdish	
22	Bonde Pranav Sudhir	Detection and Translation
	Dongre Prajakta	
23	Mohsin Shahabuddin Tamboli	Eyewish: App for Blind
	Swapna Putthewad	
	Desai Aditya Shashikant	
24	Bhagyashree Patil	Sociohealth: Android App
	Vishal Ibutwar	
25	Waghulde Vishal Govinda	Object Labeling using ML Kit and tensorflow
	Altaf Ahemad	
26	Maruti Hake	Chatbot
	Nitin Kumar Kurmi	

	Saurabh Bamb	
27	Limaye Rohit Rahul	Automatic License number Plate registration
	Kasade Shubhangi Uttamrao	
	Potphode Aaishwarya Ganesh	
28	Baisthakur Abhishek Onkarsingh	Secure Smart Office System
	Harad Ankita Ashok	
	Ubhare Rajas Sanjay	
29	Nande Sachin Bhairvnath	Text Detection
	Padyal Abhijit Vilas	
	Patil Uday Vijay	
30	Dhurve Durgesh Rajesh	Accident Prediction
	Gaurav Kumar	
31	Ingawale Vishakha Bhagwan	Online Toll Payment System
	Bhutke Ashwini Jalindar	
	Dandge Arti Subhash	
32	Bhosle Yash Narendra	Hostel Management System
	Chaudhari Shraddha Prakash	
	Madavi Umang Diwakar	

9.2 Best B. Tech Project Award (AWK-Prize):

The project titled “**Mortgage Risk Analysis**” by Mr. Heramb Devbhankar and Mr. Vivek Patil has been awarded the **AWK Prize** for Best B.Tech. Project.

9.3 List of M.Tech. Projects:

Sr. No.	Name of Student	Title of the project
1	Akshata Ramesh Todankar	Image Captioning
2	Kharche Jyoti Sharad	Predicting Wheat-yield using Machine Learning Approach
3	Mandar Vijaysing Kamble	Stock Market Prediction
4	Siddhesh Ramchandra Jadhav	Mining Frequent Item Sets

9.4 PhD Topics:

Sr. No.	Name	Title of the project
1	Sanjay Thakare	Software Architecture Recovery to theory of Social Network Analysis
2	Rushali Dhumal	Sentiment Analysis Of Marathi Poems
3	Swanand Navandar	Cognitive Modeling of Software Language Learners
4	Amol Butada	Intelligent Agent Modeling of Economic Systems
5	Manjushri Laddha	Learning Analytics
6	Yogesh N. Pattil	Applications of Blockchain Technology for Education
7	Rachit Garg	Natural Language Processing for Logistics Documents
8	Prasad Mahajan	PRedictive Analytics for Logistics Industry
9	Sanil Gandhi	Blockchain Technology for Humanitarian Engineering
10	Gitanjali Mahamunkar	Deep Learning Techniques for Geo-Spatial Data Analysis

9.5 Industrial Visits by Students:

A group of 41 students from Third Year Computer Engineering has visited Indian Space Research Organization (ISRO) Bangalore during the month of February 2019.

9.6 Students undergone Industrial Internship:

Sr. No.	Name of Student	Company Name
1	Manvi Singh	IIT Delhi - Rendezvous
2	Kiran Abhinav	E-Cell, IIT Bombay
3	Kiran Abhinav	Lecturenotes.in
4	Shivam Patil	The DU Post
5	Sohel Mulani	Aam Aadmi Party
6	Shivam Tarone	Aam Aadmi Party
7	Mayur Narkhede	Book Hub Fantasy
8	Shivam Patil	Games LLP
9	Sreehari Pillai	CSIR-CDRI
10	Shivam Tarone	Builder India
11	Mayur Narkhede	CSIR-CDRI
12	Samiksha Sankar	IIM Bangalore, Business Summit
13	Samiksha Sankar	ExperienceEngineering
14	Swaraj Shelavale	ST FRANCIS EXPROVE
15	Omkar Raut	Huntsends
16	Swaraj Shelavale	Eximius 2019, IIM Bangalore
17	Omkar Raut	Dr. Babasaheb Ambedkar Technological University, Lonere
18	Omkar Raut	International Organisation of Software Developer
19	Isha Shende	Aparoksha, IIIT Allahabad
20	Swaraj Shelavale	TechFEST - SLIET
21	Omkar Raut	Aparoksha, IIIT Allahabad
22	Harshal Chaudhari	Aparoksha, IIIT Allahabad
23	Sagar Sarkale	Manastu Space Technologies

9.7 Industry Projects by the students:

Roll No.	Name	Title of the project	Name of the company	Stipend Paid by Company (Rs.)
20150640	Kuldeep Patle	Working on company platform	Jai Kisan Pvt. Ltd., Navi Mumbai.	10,000/- per month
20150642	Vivek Pawar	Face Recognition for office attendance	Triumph Info Solutions Pvt. Ltd., Mumbai.	5000/- per month
20150649 & 20150640	Tejas Rama & Kuldeep Patle	Data Analysis of Healthcare Management	Argence Labs Pvt, Ltd., Chennai.	Volunteer Work
20150648	Abhishek Rudrawar	Android Application Development	Sciative Solutions Pvt. Ltd., Navi Mumbai.	15,000/- per month

9.8 Major Students' Achievements:

The Following students qualified GATE/GRE/CAT

Sr. No.	Name of the Student	Examination Name
1	Ankit Naik	CAT (IIM Kashipur)
2	Rajas Ubhare	GRE-1
3	Saurabh Kumar	GRE-2
4	Rupali Firke	GRE-3
5	Kunal Ugle	GRE-4
6	Saurabh Khobragade	GRE-5
7	Chetan Borkar	GRE-6
8	Prajakta Sumbe	GRE-7
9	Gaurav Chaudhari	GATE-1
10	Abhishek Rudrawar	GATE-2
11	Vinaya Dalvi	GATE-3
12	Heramb Devbhankar	GATE-4
13	Chetan Ingle	GATE-5
14	Sanil Gandhi	GATE-6

10. Departmental Academic Activities**10.1 Conferences/Workshops/Trainings/Academic Awareness activities conducted:**

Sr. No.	FDP Title	Duration	Place	Coordinating Faculty
1	Product Design Engineering	28th Sept. to 2nd Oct. 2018	DBATU, Lonere	Prof. M. S. Sadaih Prof. S. U. Waikar
2	Product Design Engineering	12th Oct. to 16th Oct. 2018	CSMS-CoE, Aurangabad	Prof. L. D. Netak Prof. S. P. Abhang
3	Product Design Engineering	23rd Oct. to 27th Oct. 2018	NK Orchid CoE Solapur	Prof. S. U. Waikar
4	Product Design Engineering	23rd Nov. to 27th Nov. 2018	JD College of Engineering, Nagpur	Prof. S. U. Waikar
5	Product Design Engineering	7th Dec. to 11th Dec. 2018	Sant Gadgebaba CoE, Bhusawal	Prof. S. U. Waikar
6	Product Design Engineering	20th Dec. to 24th Dec. 2018	AMGOI, Kolhapur	Prof. S. M. Pore Prof. Sanil Gandhi
7	Pedagogical and Assessment Techniques for Product Design Engineering	25 th Feb to 6 th March 2019	DBATU, Lonere	Prof. S. U. Waikar Prof M S. Sadaih
8	FDP on Data Science	17th July to 21nd July 2018	CSMS College Aurangabd	Dr. L. D. Netak
9	FDP on R Programming Language	7th Jan. to 11th Jan. 2019	MGM CoE, Nanded	Prof. Sanil Gandhi
10	FDP on Software Architecture	24th Nov. to 28th Nov. 2018	DBATU, Lonere	Prof. I. R. A. Jhetam Prof. S. V. Bharad
11	Bootcamp for Competitive Programming	25th June to 24th June 2019	DBATU, Lonere	Prof. S. U. Waikar
12	Curriculum Development Workshop for Computer Engineering Teachers	1st May 2019	DBATU, Lonere	Prof. M. D. Laddha
13	FDP on Tunnelling and Underground Excavations	27th May to 31th May 2019	DBATU, Lonere	Prof. S. U. Waikar Prof. S. M. Pore

10.2. Expert Talks:

Sr. No.	Title	Speaker	Date	No of Participants
1	Automotive Controls & Telemetry	Mr. Matt Bieker, Hyster-Yale, USA	20/10/2018	51

10.3 Student Learning Assessment:

The students from the Second and Final year B. Tech. in Computer Engineering have taken a Student learning Assessment test conducted by Stanford University under the TEQIP-III project.

10.4 . Departmental Students Association:

Sr.	Name	Designation	Responsibility
1	Heramb Devbhankar	President	Leading students' association and organizing student welfare activities.
2	Pooja Kadam	Vice-President	Event management.
3	Pratik Patil	Treasurer	Proposing budget for events, handling accounts, maintaining finances.

10.5. Technical Events by Students' Association:

- Workshop on Ethical Hacking presented by Rakesh Puri.
- A small talk on machine learning by Tejas Rama and Kuldeep Patle.
- How to Analyze Data lecture presented by Sagar Sarkale.
- Mock Recruitment Drive in which participants technical knowledge and communication was tested thoroughly by experts.

11 Alumni Contribution:

11.1 Distinguished alumni of the Department:

1. Ashish Tendulkar
2. Pravin Pawar
3. Ameya Sakhalkar
4. Vaibhav Narwade
5. Pinki Roy
6. Sanjay Jadhav
7. Minal Ambikar-Borkar

11.2 Constitution of AWK Prize:

The following group of alumni led by Mr. Abhijeet Katte has constituted a prize for Best B. Tech. project award titled as "AWK Prize" to honor Prof. A. W. Kiwelekar.

1. Abhijeet Katte
2. Chaitanya Jadhav
3. Priyanka Ghanvat
4. Swati Waghmare
5. Vipul Patil
6. Dinesh Khatate
7. Shewta Badhe

11.3 Constitution of ATA Fellowship

Mr. Akshay Ghodke and Mr. Swapnil Bhate alumni of the department and employees of M/s ATA Freight, have constituted a fellowship to bear the cost of education of 2 M. Tech. and three PhD students.

11.4 Mentoring by Alumni

The following alumni of the department has visited the campus to mentor and guide current batches.

Sr. No.	Name of Alumni	Title	Date	No of Participants
1	Dr. Ashish Tedulkar	A talk on Tensor Flow	28/0719	40
2	Mr. Abhijeet Katte	A talk on Machine Learning	29/07/19	40
3	Mr. Omkar Shinge	A talk on Github	29/0719	40
4	Mr. Samir Oak	Project Report Writing and Presentation	May 2019	60
5	Dr. Pravin Pawar	Trends in Agile Software Engineering	23rd July 2017	55

12. Departmental strengths, Weaknesses, Opportunities and Challenges:

1. Strengths:

- Well furnished and Equipped laboratories with Desktops having latest configurations.
- Highly qualified and experienced faculty and cooperative staff.
- Well designed and up-to-date academic curriculum.
- Increasingly active alumni contributing to the progress of the department.

2. Weaknesses:

- Research activities and publications need to be increased.
- Access to the internet in terms of bandwidth and availability need improvement.
- State of lab infrastructure and class-room ambiance need improvement by providing Air conditions and furniture.
- The culture of start-ups, innovations, incubation and entrepreneurship is lacking in the department.

3. Opportunities:

- The department has wider opportunities to play the role of academic leadership to the colleges affiliated to DBATU.
- The department has to tap opportunities available for research and consultancy in the government and private sector.

4. Challenges

- Attracting talented students from state of Maharashtra for B. Tech. programs in the department.
- Declining trend among students for seeking postgraduate education in the DBATU.
- Motivating part-time PhD students for high-quality publications and to complete PhD within stipulated time.
- Inculcating the habit of innovations and entrepreneurial activities among the under-graduate students.

Department of Electrical Engineering

Message from the Head of Department: I am proud to be the founder member elite family of this University. In past few years the department has registered diversified students across the country with different learning rate and taste. With the highly qualified faculty, dedicated staff, state of art laboratory equipment, library facility and placement services the department is heading towards becoming center of excellence in forthcoming period. At this juncture I sincerely acknowledge the commendable work rendered by EESA. I take this opportunity to convey my whole hearted blessings to all my dear students and wish a bright and prosperous future to one and all.

1 . Vision and Mission Statements for Department :

Vision : To be a leading center for transformation of new trends in Electrical Energy and Technology through education, innovation of international acceptance to national industries and local society at affordable cost.

Mission : To cater the needs of Electrical Engineering Graduates to excel in the challenges of modern society through sound knowledge of fundamentals and applications,
To work intensely with industry leading to the development of cutting edge and commercially-viable technologies.

2. About the Department: The department of electrical engineering is one of the pioneer engineering department of the University. The department had passed a journey of 24 years. I am proud to be the founder member of this department and happy to note that based on excellent performance of students and staff, the department has got accreditation from NBA for successively two terms from 2003 to 2006 and 2006 to 2009. The beginning of a P.G. course in power system with an intake of 18 students is an extra feather to the department to initiate research activity. The registration of research scholars in emerging areas of power system and power electronics adds strength to research activity of the department. The department believes in skill training thus has maintained well equipped laboratories in the emerging areas with standard high end equipment. Many of our aluminous have attained prestigious positions in organizations of repute in India and abroad.

3 . Program Educational Objectives (PEOs) & Programme Outcomes (Pos)

Programme Educational Objectives (PEOs):

1. To prepare graduates meet the challenges of modern society through viable engineering solutions.
2. To prepare graduates to develop economically viable cutting edge technology for local industry. Need.
3. To prepare graduates to inspire next generation graduates as successful engineer/ entrepreneur, scientist and researcher.

Programme Outcomes (Pos):

1. Ability to apply knowledge of science, mathematics, and electrical engineering principles for solving problems.
2. Ability to identify, formulate and solve electrical power system problems
3. Ability to understand and use different software tools in the domain of Electrical Machine, Power electronics, power system and control system simulations.
4. Ability to design and conduct experiments and analyze and interpret data.
5. Ability to coherently work in a multidisciplinary team.

6. Demonstrate sensitivity towards professional and ethical responsibility.
7. Ability to communicate effectively in writing as well as through public speaking.
8. Demonstrate ability to appreciate and engage in lifelong learning.
9. Demonstrated knowledge of contemporary issues.
10. An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.
11. The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context

4 . Overview of Academic Programs :

Academic programme	Duration	Intake
B. Tech In Electrical Engineering	Four Years	60

5.1 Students Statistical Information

Year	Open			SC			St			OBC			VJNT			SBC			Total		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
First																					
Second																					
Third																					
Final																					

5.2 Result Analysis : (Final Year)

- No. of students on roll:
- First Class with dist.:
- First Class:
- Second class:
- Failed:

5.3 Campus Placements :

5 . Faculty and Staff :

Sr. No.	Name of Faculty	Designation	Qualification	Area of Expertise
1	Dr. P. K. Katti	Professor	M.E. Ph.D	Energy Systems
2	Dr. K. Vadirajacharya	Professor & Head	M.E. Ph.D	Power Electronics
3	Mr. M.F. A. R. Satarkar	Associate Professor	M.E.	Power Systems
4	*Mr. Anish salvi	Asst professor	M.Tech	Power Systems
5	*MrSwaraj Kadam	Asst professor	M.E	Power Systems
6	*Mr. Ajinkya Bhaeare	Asst professor	M.Tech	Power System
7	Mr. Rohan Shinde	Asst professor	M.Tech	Power System
8	*Mrs. Harshada	Asst	M.Tech.	Power System

	Kalyankar	professor		
9	*Mr. Nandkumar Patil	Asst professor	M.Tech	Power System
10	*Miss. Pratiksha Kurundwade	Asst professor	M.Tech	Power system
11	Mr. Hemant Washikar	Electrician	ITI NCTVT	
12	Mrs. P.S. Padaval	Lab Asst	Dip (Instru)	
13	Mr. C.A. Juikar	Lab Asst	ITI Nctvt	
14	*Mr. Pranaya Salvi	Lab Asst	ITI	
* On contract basis				

6 . Additional Responsibilities to the Faculty:

S.No	Name of Faculty	Additional Responsibility
1	Prof. P.K. Katti	I/c Dean Faculty of Technology Coordinator- Research Committee of Dept Coordinator- Girls grievance Cell of the dept
2	Prof. K. Vadirajacharya	Head of Dept Coordinator, Dept Purchase Committee Coordinator, Industry Institute Interaction of dept
3	Prof. M. F. A. R. Satarkar	Member- Women Grievance Cell Coordinator- Academic Monitoring Committee of Dept Coordinator- Students Counselling Cell of Dept

7. Advisory Board and BoS :

Advisory Board Members	Board of Study Members
1. Dr. K. Vadirajacharya Chairman 2. Dr. D. J. Doke 3. Dr. M. K. Khedkar 4. Dr. S. E. Talole 5. Sri. Venkatesh Kulkarni 6. Sri. Vivek Garg 7. Sri. Shivprasad Khened 8. Sri. Ajit Deshpande	1. Prof. K.Vadirajacharya Chairman 2. Prof. D.B. Talange 3. Prof. B.N. Chowadary 4. Prof. P.K Katti 5. Prof. S.D. Agashe 6. Prof. D.N. Sonawane

7 . Faculty Research and Publications :

International Journal - 4
International Conference- 10,
National Conference NC- 4

1. Vaibhav Marne, K. Vadirajacharya" Performance Verification of DC–DC Boost Converter" Proceedings of ICCASP 2018, Sept 2018 Computing, Communication and Signal Processing DBATU Lonere, pp 661-667
2. S. G. Kamble, K. Vadirajacharya, U. V. Patil "Comparison of Multiple Attribute Decision-Making Methods—TOPSIS and PROMETHEE for Distribution Systems" Proceedings of ICCASP 2018, Sept 2018 Computing, Communication and Signal Processing DBATU Lonere, Pp 669-680
3. Anish Vijay Patil, K. Vadirajacharya, "Interconnection of Grid and Renewable Energy Sources Using Voltage Source Inverter" Proceedings of ICCASP 2018, Sept 2018 Computing, Communication and Signal Processing DBATU Lonere, Pages 681-68719.
4. K. Vadirajacharya, " Demand side management: an alternative for sustainable energy", Proceedings of All India Seminar on Renewable energy for Sustainable development , 27-28 July 2018, Institution of Engineers India Ghaziabad Local center Ghaziabad.
5. Mr.Ritesh Shegokar, Mr.Nitin Shetake, Mr.Anand Sutar, Mr.Gajanan Tondare, Mr.Prashant Yadav, and Dr. K. Vadirajacharya "Energy Conservation Through Energy Audit At Utility Sector: A Case Study ", Proceedings of All India Seminar on Energy Management and Audit, 26-27October 2018, Institution of Engineers India Gujrat Local center

11 . Laboratory

11.1 Major Instruments in Laboratory :

Sr. No.	Name of Major Equipment/Facility	Cost (>Rs. 1,00,000/-)
1	DELORENZO Open Machine Lab	18.0 Lakh (TEQIP-III)
2	Machine Lab equipment	4.86 Lakh(UGC fund)
3	Trident tech labs dept (5users) PSim software Suit	13.0 lakh (TEQIP –II)
4	Wind turbine emulator	9.0Lakh (TEQIP-II)
5	Solar emulator	4.5Lakh(TEQIP-II)
6	PV trainer and PV grid tied training system	4.5Lakh(TEQIP-II)
7	PV system	1.85Lakh(TEQIP-II)
8	Power Electronics Modules	6.4Lakh
9	FPGA kit (5)	3.75 Lakh
10	D Space Unit Crane software	6.5 Lakh (TEQIP-II)
11	Power quality analyzer FLUKE	2.1 Lakh
12	Digital LCR meter (5)	1.75 lakh
13	Sphere gap apparatus	1.35 Lakh
14	AC test kit	2.0 Lakh
15	DC test kit	2.7 Lakh
16	Transmission line simulator	3.5 Lakh
17	Power system analyzer	2.5 Lakh
18	Smart class room	1.5 Lakh
19	HT Power electronics Lab	2.75 Lakh

12 . Industry Institute Interaction:

Department has good industry institute interaction through the network alumni.

12.1 MoU Signed by the department (if any) :

Roll No.	Name	Title of the project	Name of the company	Stipend Paid by Company (Rs.)
	Miss. Manjeri Kalsekar	Energy conservation at MNGL Pune	MNGL Pune	8000
	Miss. Prachi Kotwal	EMC	Sameer Mumbai	Nil
	Mrs Kareema Shekh & group	Design and Simulation of 12 pulse converter for industrial application	BARC	Nil
	Mr Aniket Jamadhe & group	Automatic SCADA Controlled Smart AB switch	MSEB	Nil
	Mrs. Shubhangi Virar & group	Performance improvement of UPS	Galaxy Electronics Mumbai	Nil

13 . Industrial Visits :

1. Industrial visit to MNGL Pune by Prof. K. Vadirajacharya and Miss Manajari Kalsekar



2. Industrial Visit to DiTAP on 20 March 2018 for III year B.Tech Electrical Engg students coordinated by coordinated by Mrs Harshada Kalyankar.

14. Conferences /Workshops / Trainings / Academic Awareness activities conducted



Energy Audit workshop

15 . Workshops / Conferences attended by Faculty members , Research Scholars and PG Students :

Sr. No.	Title	Date	Remarks
1.	'Renewable Energy for Sustainable Development' organized by Institution of Engineers India on at ABES College of Engineering Ghaziabad.	27-28 July 2018	Prof. K. Vadirajacharya attended As resource person
2.	International Conference on High Voltage organized by CPRI Hydrabad at Hyderabad	7-8 February 2019.	Prof. K. Vadirajacharya Presented paper
3.	One week FDP on Current Trends in Technology and Entrepreneurship, at GP Malvan	18-22 March 2019	Prof. K. Vadirajacharya attended as resource person
4.	External Audit at AG Patil CoE Solapur	2Feb2019	Prof.P..K.Katti & prof.K.vadirajacharya

16 .Other activities Conducted by Department :

1 . Alumni Meet :

An alumni meet was called on 13 January 2019 at the office of Electrical Engineering. Around ten alumni were present for the meet. Miss Padaval P. S. welcomed the guest and alumni. Prof . K. Vadirajacharya Head of department presented the department progress and appealed alumnus for their active support in terms of expert lecture, industrial training and placement and joint projects. Prof Satarkar felicitated all the alumni. Prof P.K. Katti addressed the audience.



17 . Academic Achievements:

Five students of the department are awarded with a POSCO fellowship of \$500



18 . Departmental Students Association : EESA

EESA is a dynamic and all round forum through which students of electrical engineering can foster their talent leading to their overall development. EESA actively organizes expert lectures and personality development programs by inviting eminent personalities from the industries and institutes of repute. It also conducts regular aptitude and technical tests to keep the students prepared for various competitive examinations. It has developed its own library, which includes technical, reference, competitive books, etc. The association arranges field visits for the students to various prominent industries to reinforce the theoretical knowledge.

EESA is one of the most active student associations, which not only concentrates on technical activities but also helps to improve the students' participation in co-curricular as well as extracurricular activities. Thus, it helps the students in developing

19 .Departmental strengths , Weaknesses , Opportunities and Challenges :

Strengths:	Weakness:
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<ol style="list-style-type: none"> 1. Dedicated staff / faculty 2. In campus accommodation 3. Liberalized policy for quality up gradation. 4. Government organization 5. Well equipped labs for UG, PG as well Research Scholars. 	<ol style="list-style-type: none"> 1. Very poor faculty & staff strength 2. Lack of adequate space for laboratory 3. Very poor commutation and communication facilities. 4. Non availability of most common amenities like medical, school , recreation and township facilities
Opportunities: <ol style="list-style-type: none"> 1. Larger opportunities for getting exposure in different administrative activities. 2. Leading/ Premier Technical institute of state. 	Threats: <ol style="list-style-type: none"> 1. Poor retention of faculty and staff 2. Poor quality of education leading poor intake

Department of Electronics and Telecommunication Engineering

Message from the Head of Department:

This gives me incalculable happiness present Annual Report of Department of Electronics and Telecommunication Engineering for academic year 2018-19.

To meet the growing demand of Electronics Engineers in the Government and private sectors, Department of Electronics and Telecommunication Engineering is taking best efforts by producing highly trained and capable engineers, who can take up the challenges of the real world.

The two key objectives of the department are to maintain high academic standards and to give due weightage to practical work. The department has a fine blend of renowned as well as young and dynamic personalities as faculty, who are involved in imparting quality education. The faculty strives not only to foster but also to encourage a teaching methodology which includes both practical and theoretical approaches as well. This orientation has led to successful projects and training. The Department is wide open to innovative ideas, methodologies to establish itself as the most sought excellent learning center in this part of the state.

The lab facilities are being upgraded from time to time and provide adequate opportunities for the students to learn and innovate. The Department is conducting special classes for preparation of GATE examinations. The Department also organizes interactive lectures every week by inviting Alumni and Technocrats from industries to guide students and to make them aware about needs of outside world, this helps students in their overall development. Department also regularly organizes training programmes, workshops, exhibition, Idea competition, conference and soft skills development programmes, which helps them to understand the theoretical aspects and also do the value additions in them. Department is regularly receiving sizable amount of grants from AICTE, UGC, TEQIP, RUSA and other Government agencies for various research projects.

Departmental students association has been established by the students for the extracurricular activities. This association conducts various technical and cultural events regularly. “Engineers are the creators of the new world”, going with these lines the Department has a fully equipped Project lab to encourage the students to show their creativity. Educational tours and industrial

visits are regularly organized to enhance the practical knowledge of the students with the recent technologies used in the industry.

Dr. S. L. Nalbalwar
Head, EXTC Department

1 . Vision and Mission Statements for Department:

Vision :

The vision of the department is to achieve excellence in teaching, learning, research and transfer of technology for development of society.

Mission :

The Electronics and Telecommunication Engineering Department constantly aims at providing quality education and works towards the fulfillment of the goal and objectives in pace with the modern scientific and technological development.

2. About the Department:

The department of Electronics and Telecommunication Engineering was established in the year 1995 initially with B. Tech. programme with intake of 60 students. In 2001, M. Tech. programme in Electronics & Telecommunication Engineering with an intake of 18 students was introduced. From academic year 2008-2009, intake of B. Tech. has been increased to 120 students. The department has started Ph.D. programme from the academic year 2003, presently 19 research scholars are working in the research area of Signal Processing, Computer Network and Microwave Communication. Department is also offering fellowship to M. Tech. and Ph.D. students under TEQIP project.

The curriculum designed is a perfect blend of Electronics, Communication and Computing Technologies. The focus of the department is to produce graduates & post graduates with strong fundamentals in Electronics and Communication domain.

The department has received handful amount of funding from AICTE, UGC, TEQIP and State Government for various research projects. The department has state of the art laboratories to cater for curricular requirements as well as projects and research.

The faculty members are having strong background of research in the current issues of the discipline. The budding graduates from this discipline have very good job opportunities in VLSI Technologies, Embedded Systems, Signal Processing, Radio Frequency (RF) Communication, Mobile communication and in Software Engineering. Many of our students placed in industries like Infosys, TCS, Cognizant, Persistent, Siemens, Huawei, Reliance Communication, Prayas Software Ltd, JSW ISPAT, RCF, Videocon, ONGC, BHEL, BEL, GE, L & T, Sasken, MBT, Texas, Accenture, Mahagenco, Motorola, CapGemini, Flextronix, NVIDIA, Patney Computers, Reliance Jio, Hexaware, Tataelxsi, BSE, City bank, etc. and got admitted for higher education (M. Tech. / Ph. D. programme) in institute of high repute such as IIMs, IITs and NITs.

Good number of students of this department compete in the competitive examinations like GATE, CAT, TOFEL, and GRE. Many students go abroad to perceive higher studies. As an essential part of the academic schedule, the students have to undergo industrial training at the end of second and third year, during summer in industries of repute around us. To get an industrial exposure the department also arranges Industrial Visits to reputed industries in electronics, communication and computing area. There is an overwhelming participation of

students in conferences, seminars, workshops, paper publications, annual sports. The department regularly organizes workshops, training, seminars, expert lectures and conference in the emerging areas of electronics and communication engineering.

3 . Program Educational Objectives (PEOs) & Programme Outcomes (Pos)

Programme Educational Objectives (PEOs):

1. To prepare students to excel in technical fields in order to pursue postgraduate programs or to succeed in industry/technical profession, R&D institutions through global and new emerging areas in Electronics and Telecommunication engineering.
2. To provide students with a solid foundation in mathematical, scientific and engineering fundamentals required to solve engineering problems.
3. To train students with good scientific and engineering breadth in core subjects so as to comprehend and simulate to cater changing needs of society, analyze, design, and create novel products and solutions for the real life problems.
4. To develop in students, professional and ethical attitude, effective communication skills, leadership, teamwork skills, multidisciplinary approach, and an ability to relate engineering issues to broader socioeconomic context.
5. To provide students with conducive academic environment, awareness of excellence and the life-long learning needed for successful professional career.

Programme Outcomes (POs):

1. The graduates will possess the knowledge of differential equations, vector calculus, complex variable, matrix theory, probability theory, physics, chemistry and electrical & electronics engineering.
2. The graduate will demonstrate an ability to identify, formulate and solve Electronics & Telecommunication engineering problems.
3. The graduates will have an ability to design electronic circuits and systems, analyze and interpret data.
4. The graduates will have an ability to design digital and analog systems and components.
5. The graduates will possess the knowledge of advanced and emerging topics in the fields of Electronics, Signal Processing and Communication.
6. The graduates will demonstrate the skills to use modern engineering tools, software and equipment's to analyze and solve real-life problems.
7. The graduate will have broad understanding of the impact of Electronics and Telecommunication field in economic, environmental and social context and also will be aware of the contemporary issue.
8. The graduates will possess communication skills necessary to communicate engineering ideas. The skills set include verbal, written and listening skills.
9. The graduates will demonstrate the ability to work and collaborate in heterogeneous teams.
10. The graduates will demonstrate the awareness of professional and ethical responsibilities.
11. The graduates will develop self-confidence and ability for lifelong learning

4. Overview of Academic Programs:

Academic Programme	Duration	Intake
UG(B. Tech.)	Four Years	120
PG(M. Tech.)	Two Years	18
Ph. D.		35+12 Research Scholars registered

5.1 Students Statistical Information

a) B. Tech. in E&TC Engineering

Year (2018-19)	Open			SC			ST			OBC			VJNT			SBC			J&K			Total		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
First	20	8	28	13	69	1	0	1	18	75	2	11	12	0	22	0	0	0	63	24	87			
Second	37	13	50	18	97	4	1	5	29	210	5	10	66	3	25	0	0	0	101	52	153			
Third	25	22	47	10	66	1	0	1	21	167	3	67	13	5	27	0	0	0	68	53	121			
Fourth	31	22	47	15	94	7	5	12	30	222	5	52	17	3	14	0	1	1	98	65	163			

b) M. Tech. in E&TC Engineering

Year(2018-2019)	Open			SC			ST			OBC			VJNT			SBC			J&K			Total		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
First	0	2	2	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	3	3
Second	0	2	2	1	3	4	0	0	0	2	2	4	1	1	2	0	0	0	0	0	0	5	7	12

c) Ph.D. in E&TC Engineering (After M. Tech./M.E.)

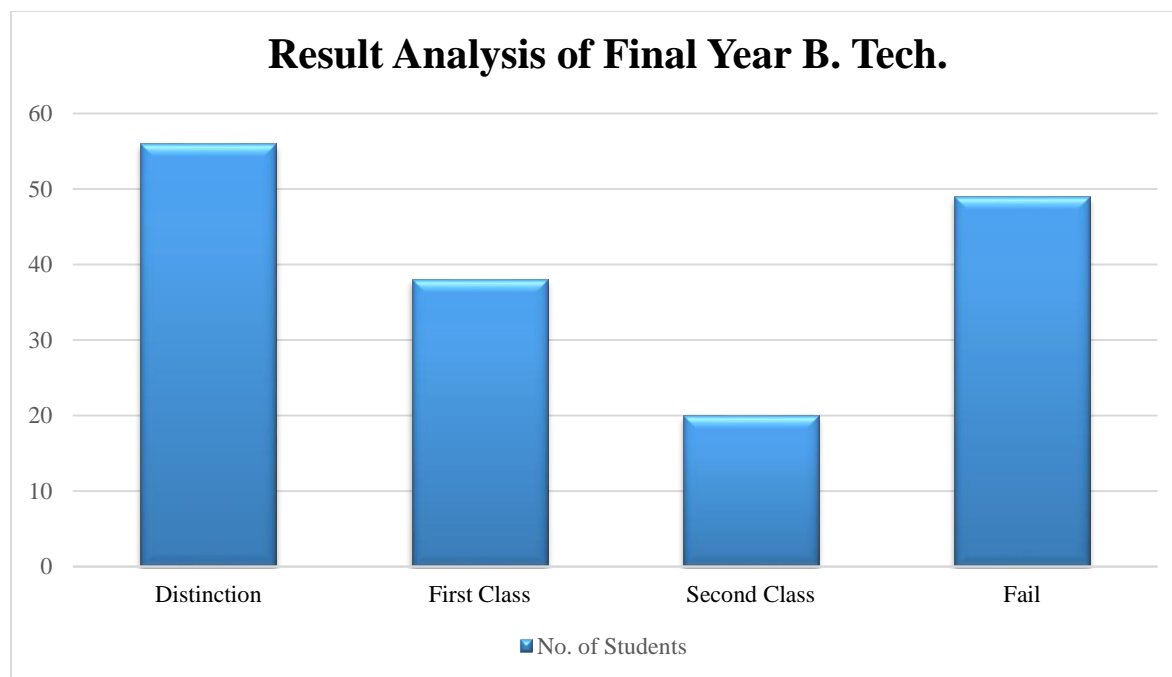
Sr. No	Year	Open			SC			OBC			SBC			Total		
		M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
1.	2018-2019	7	0	6	1	0	1	3	0	3	0	0	0	10	1	12
2.	2017-2018	08	01	07	-	01	01	01	-	01	0	0	0	09	02	11
3.	2016-2017	02	02	04	02	00	02	-	-	-	1	0	1	06	02	08
4.	2015-2016	02	02	04	02	00	02	-	-	-	1	0	1	06	02	08
5.	2014-2015	02	01	03	02	-	02	01	-	01	-	-	-	05	01	06
6.	2013-2014	01	01	02	-	-	-	-	-	-	-	-	-	01	01	02
7.	2012-2013	01	-	01	01	-	01	-	-	-	-	-	-	02	-	02

First year Ph. D. research Scholars Enrolled in AY 2018-20.

Sr. No.	Roll No.	Name	Type
1	RS20180301	Gaikwad Snehal Sunil	Full Time
2	RS20180302	Jangam Aniket Ashok	Full Time
3	RS20180303	Kamble Kunal Shankar	Full Time
4	RS20180304	Kulkarni Niranjana Satish	Part Time
5	RS20180305	Naik Amit Jayan	Part Time
6	RS20180306	Mehta Ameet Mukund	Part Time
7	RS20180307	T. Rakesh Basawarajappa	Part Time
8	RS20180308	Dhotre Sudhirkumar Suryakant	Part Time
9	RS20180309	Biradar Shashank Devidasrao	Part Time
10	RS20180310	P Chander	Industry Sponsored Assistanceship
11	RS20180311	Shinde Swapnesh Sudesh	Industry Sponsored Assistanceship
12	RS20180312	Mashayank Usama Atherpasha	Full Time

5.2 Result Analysis :

Year	No. of students on Roll	First Class with distinction	First Class	Second Class	Failed
First Year					
Second Year					
Third year					
Final Year	163	56	38	20	49



5.3 Campus Placements:

Sr.No	Name Of Students	Name of Company
1	Gargi Kumthekar	TATA Consultancy
2	Shubham Pethe	ISTC, Pune
3	Datta Pisal	ISTC, Pune

6 Faculty and Staff :
Faculty

Sr. No.	Name of Faculty	Designation	Qualification	Area of Expertise
1	Dr. S. B. Deosarkar	Professor	M.E., Ph. D	Microwave Engineering
2	Dr. S.L. Nalbalwar	Professor & Head	M.E., Ph. D (IIT D)	Signal Matched Filter Bank
3	Mr. S. V. Khobragade	Assistant Professor	M.E. Ph. D. (Ongoing)	Microstrip Antenna
4	Dr. A. B. Nandgaonkar	Assistant Professor	M.E Ph. D	Microstrip Antenna
5	Dr. N. S. Jadhav	Assistant Professor	M. Tech Ph. D.	VLSI Design
6	Dr. B. R. Iyer	Assistant Professor	M. Tech Ph. D.	RF and Microwave
7	Mr. Ramesh V. Bandgar	Assistant Professor	M.Tech.	Signal Processing
8	Ms. Sampada Thorat	Assistant Professor	M.E.	VLSI, embedded system
9	Ms. Megha Kamble	Assistant Professor	M.Tech	Signal Processing
10	Ms. Swati Pawar	Assistant Professor	M.E.	Signal Processing
11	Mrs. Jyoti Kalgi	Assistant Professor	M.E	Digital Electronics
12	Mr. Roshan Bonde	Assistant Professor	M.E.	Image Processing
13	Mrs. Pallavi Ingale	Assistant Professor	M.Tech. Ph. D. (ongoing)	Signal Processing
14	Ms. Tejashree Phalke	Assistant Professor	M.E.	Wireless Communication
15	Ms. Pratima Nirmal	Assistant Professor	M.E. Ph. D. (ongoing)	Microstrip Antenna
16	Mr. Ravindra Rathod	Assistant Professor	M.E.	Embedded System
17	Mr. Ganesh Kale	Assistant	M.E.	Microstrip Antenna

		Professor		
18	Mr. Sandeep Bavkar	Assistant Professor	M.E. Ph. D. (ongoing)	Signal Processing
19	Mr. Mahesh Kendre	Assistant Professor	M.Tech.	Antenna
20	Ms. Vibha Walekar	Assistant Professor	M.Tech.	Wireless communications
21	Mr. Tejas Mahagaonkar	Assistant Professor	M.E.	Optical Communications
22	Mrs. Mohini Sheth	Assistant Professor	M.Tech.	Signal Processing
23	Mr. Kiran Kurangkar	Assistant Professor	M.Tech.	Signal Processing
24	Mr. Vijay Jamdar	Assistant Professor	M.Tech.	Microstrip Antenna

Staff:

Sr. No.	Name	Designation / Role
1	Mr. S. T. Jadhav	Lab Technician
2	Mr. S. P. Patil	Lab Technician
3	Mr. A. A. Kadu	Lab Assistant
4	Mr.S.D. Batawale	Lab Assistant
5	Ms.V.M. Ubhare	Lab Assistant
6	Mr.S. Nawale	Lab Assistant

6. Additional Responsibilities to the Faculty:

Dr. S. L. Nalbalwar Head, Department of Electronics & Tele-Communication Engineering. Board Chairman, ICT Chairman, BoS and RC DBATU Member of Academic Council Member of Governing body for Orchid College of Engineering, Solapur TEQIP-III Performance Auditor and Mentor appointed by MHRD TEQIP-III Co-ordinator CEO, Innovation, Incubation & Enterprise Member of BoS, BAMU Aurangabad University Co-ordinator AISHE, NBA, RUSA, AICTE, AQAR	Dr. S. B. Deosarkar Registrar, DBATU Institute Coordinator, TEQIP-III Member of BoS DBATU Member of Academic Council MIT University Pune Member of BoS & Research Committee DBATU Recognized Ph.D. Guide of Pune and Aurangabad University Professor Industrial Relation Member Secretary Research Board Member of Board of Dean
Dr. A.B. Nandgaonkar Member of BoS DBATU	Mr. S. V. Khobragade Appointed as District Licensing Officer of

Member of Research Committee DBATU Nodal Officer TEQIP-III, SPIU, Mumbai	MHT CET 2018 for Raigad district for and successfully conducted the same Member, Executive Council Member, Women Grievance Cell for DBATU Member, Tribal Development Cell DBATU
Dr. N S Jadhav, Associate Controller of Examination Associate Dean, Academic Cultural Co-ordinator, DBATU TechnoHub Co-ordinator, DBATU	Dr. B. R. Iyer TEESA Co-ordinator Associate Dean Student Welfare Member of Research Committee DBATU Member of Executive Committee i2e Center

7. Advisory Board and BoS :

7.1 Advisory Board

To provide time to time guidance and monitor the activities for the development of the department, Advisory Board for E & TC department is formed. Following accomplished members from reputed industry and academicians from institute of repute are appointed by the Hon. Vice-Chancellor on this Board. The Advisory Council/Board is entrusted with responsibility of conducting academic audit of department, suggesting dynamic curriculum and providing input for research activities.

Members on Advisory Board:

Sr. No.	Name	Designation
1	Lt. Cdr (Retd) Ravindra Kale	Sr. Program Manager, Tata Communication Ltd., Mumbai.
2	Dr. Munir Sayyad	General Manager and Head of Reliance JIO Quality Assurance Lab, Mumbai
3	Suresh Lok	Senior Vice-President Consulting Innovation and Evaluation for New Age Services at International Innovation, Incubation and Training Center, Navi Mumbai
4	Santosh B. Gadewar	DGM – SAP IT Business Solutions, Larsen & Toubro Limited, EAIC, Powai, Mumbai– 400 072
5	Dr. V.M. Gadre	Professor, Electrical Engineering, IIT Bombay
6	Dr. R.R. Manthalkar	Professor, Department of E & TC, SGGSI & T Nanded, MS
7	Dr. S.G. Bhirud	Professor, E & TC VJTI Mumbai

7.2 Board of Studies E & TC Engineering:

Each Department of University has its own Board of Studies (BoS). The main function of the BoS is to frame the curriculum and the contents of individual courses and to identify the electives to be offered. The BoS includes experts from industries, academia and research

organizations. While framing the curriculum, the BoS takes into account the feedback from various stakeholders, needs of the industry, profession and society, needs of the research organizations, thrust areas of the country, etc.

During this academic year we have conducted two BoS meetings to discuss and finalize Course Structure and Course contents for various B. Tech and M. Tech programmes. Minutes of latest BoS meeting is attached in annexure C.

Members on the Board of Studies:

Sr. No.	Name	Designation
1	Dr. S L. Nalbalwar	Head, Department of Electronics and Telecommunication Engineering
2	Dr. D. S. Bormane	Principal, JSPM's, RSCoE, Pune
3	Dr. R. N. Awale	Professor of Electronics Engineering, VJTI, Mumbai
4	Dr. S. B. Deosarkar	Professor of EXTC, Dr. Babasaheb Ambedkar Technological University, Lonere – Raigad
5	Dr. A. B. Nandgaonkar	Associate Professor of EXTC, Dr. Babasaheb Ambedkar Technological University, Lonere – Raigad
6	Dr. Munir Sayyad	General Manager, Reliance Jio, Mumbai.
7	Dr. R.M. Autee	DIEMS, Aurangabad
8	Dr. P.J. Deore	RC Patel Institute of Technology, Shirpur
9	Dr. A.D. Sayyad	Marathwada Institute of Technology, Aurangabad
10	Dr. S.D. Nawale	N B Nawale Sinhgad College of Engineering, Solapur
11	Dr. Sachin Singh	AKTU Lucknow
12	Dr. Vinay Kumar	HPTU, Hamirpur

7.3 RC Meeting:

The Research Committee represents the research interests and activities of Department. It aims to foster, design, and execute high quality multidisciplinary research in Department. Plan of action includes initiation, facilitation, integration, and support of research projects conducted by members, sections or research groups of Department. The Research Committee provides a mechanism for these research groups to interact within Department, with external collaborating individuals and groups. The Research Committee is the responsible body for managing this interaction. During the academic year we have conducted four RC meetings to see the current status of research in the department. Minutes of latest RC meeting is attached in annexure D

7. Faculty Research and publications:

International Conference:

1. Yuvraj V. Parkale and Dr. Sanjay L. Nalbalwar (2019), "Sensing matrices in compressed sensing", Paper presented in International Conference on Computing in Engineering and Technology (ICCET), Aurangabad(MS), India, January 10 & 11, 2019.
2. Amol. B. Kotade, A. B. Nandgaonkar, S. L. Nalbalwar, "Performance Analysis of SLM Technique for PAPR Reduction in OFDM using QPSK Modulation", published in (ICCASP)-2018, Advances in Intelligent Systems and Computing (AISC) series, Springer Publications. ISBN (print): 978-981-13-1512-1, Online ISBN: 978-981-13-1513-8, DOI: https://doi.org/10.1007/978-981-13-1513-8_45, pages 431-440.
3. Jaswantsing Rajput, Dr. Anil Nandgaonkar, Dr. Sanjay Nalbalwar, Dr. Abhay Wagh, "Design study and Feasibility of Hyperthermia Technique", ICCET-2019 DIEM&S, Aurangabad, Jan-2019.
4. Ingale, Pallavi P., and Sanjay L. Nalbalwar. "Detection of Speaker Identities from Cochannel Speech Signal." WESAS Transactions on Signal Processing 14.1 (2018): 43-59.
5. Sandeep Bavkar, Brijesh Iyer, and Shankar Deosarkar, "Detection of Alcoholism: An EEG Hybrid Features and Ensemble Subspace K-NN based Approach", (Eds): G. Fahrnberger et al., ICDCIT 2019, Lecture Notes in Computer Science 11319, pp. 161-168, Jan 2019, Springer, (Scopus Indexed) DOI: 10.1007/978-3-030-05366-6_13.
6. Kiran V. Kurangkar, A. B. Nandgaonkar, S. L. Nalbalwar, "ECG Analysis and Abnormality Detection", Second International Conference on Intelligent Computing and Control Systems (ICICCS), June, 2018.
7. Akshay B. Satpe, S. V. Khobragade, S. L. Nalbalwar, "Wheelchair Control Using Hand Movement & Voice with Obstacle Avoidance", Second International Conference on Intelligent Computing and Control Systems (ICICCS), June, 2018.
8. Nasrin B. Pansari, S.B. Deosarkar, A.B. Nandgaonkar, "Smart Compost System", Second International Conference on Intelligent Computing and Control Systems (ICICCS), June, 2018.
9. Subodh B. Harkanche, A.B. Nandgaonkar, S.V. Khobragade, "Tenuous Hexagonal Microstrip Fractal Antenna for UWB Applications", Second International Conference on Intelligent Computing and Control Systems (ICICCS), June, 2018.

International Journal Publications:

1. Ms. Aipta Anil Pawar, Dr. Sanjay L. Nalbalwar, Dr. Shankar B. Deosarkar, Dr. Sachin Singh, "Surveillance Drone", International Research Journal of Engineering and Technology, Vol. 6, Issue 7, pp. 1466-1469, July 2019.
2. Ms. Rutuja Anil Shinde, Dr. S. L. Nalbalwar, Dr. Sachin Singh, "Smart Shoes: Working Towards A Better Future", International Journal of Engineering and Technology (IJERT), Vol. 8, Issue 7, July 2019.
3. Shraddha J. Salve, J. K. Prajapati, S. S. Kakatkar, S. L. Nalbalwar, "Triangular Waveguide fed slot antenna", International Journal of Advanced Research in Computer and Communication Engineering, Volume-8, Issue 5, May 2019, DOI:10.17148/IJARCCE,2019.8552.
4. Pratiksha P. Dolas, Dr. S. L. Nalbalwar, Dr. S. B. Deosarkar, Sachin Singh, "Patient Healthcare System using IOT", International Research Journal of Engineering and Technology, Vol. 6, Issue 7, July 2019.

5. R. V. Ahire, S.L. Nalbalwar, N. S. Jadhaw, Sachin Singh, "Tomato Nutrients Deficiency Detection System on the basis of Visual Symptoms using Digital Image Processing", International Journal of Computer Science and Engineering, Volume-7, Issue-6, pp. 683-689, June 2019.
6. Mr. Shashank Kharade, Prof. Sanjay V. Khobragade, Dr. Ashish Bagwari, "An Aperture Coupled Microstrip Patch Antenna for Application at 7.5 GHz", International Journal of Engineering and Technology (IJERT), Vol. 8, Issue 7, July 2019.
7. Mrunmai Goregaonkar, "A Classification of EEG Signals of Eye-Open and Eye-Closed Using ANN Classifier", International Journal of Computer Science and Engineering (IJCSE), Vol. 7, June 2019, E-ISSN: 2347-2693, paper id- ijce07499.
8. Roshan K. Borse, Kartik Shrivastav, S. L. Nalbalwar, Roshan Makkar, "A Review on Development of High Resolution Imaging System at 635nm & 840nm", International Journal of Advanced Research in Computer and Communication Engineering, DOI: 10.17148/IJARCCE,2019.8627, Vol.-8, Issue 6, June 2019.
9. Roshan K. Borse, Kartik Shrivastav, S. L. Nalbalwar, Roshan Makkar, "Development of High Resolution Imaging System at 635nm & 840nm", International Journal of Advanced Research in Computer and Communication Engineering, DOI: 10.17148/IJARCCE,2019.8541, Vol.-8, Issue 5, May 2019.
10. Siddhi. S. Shinde, Dr. S. L. Nalbalwar, Dr. S. B. Deosarkar, "A Review on Liquid Solar Array System", International Research Journal of Engineering and Technology, Vol. 7, Issue 6, June 2019.
11. Siddhi. S. Shinde, "Implementation of Efficient Liquid Solar Array System", IJCSE, Vol. 7, Issue 6, June 2019, pp. 901-904.
12. Sameep S. Sawardekar, Dr. S. L. Nalbalwar, Dr. S. B. Deosarkar, Dr. Sachin Singh, "Real Time River Bridge Monitoring and Alert System using GSM", International Journal of Computer Science and Engineering, Volume-7, Issue-6, June 2019.
13. Renuka Kale, Dr. S.L. Nalbalwar, Dr. Sachin Singh, "Leakage detection in underground gas pipeline", International Journal of Computer Science and Engineering, Volume-7, Issue-6, E-ISSN:2347-2693, June 2019.
14. Sandeep Bavkar, Brijesh Iyer, and Shankar Deosarkar, "Rapid Screening of Alcoholism: An EEG Based Optimal Channel Selection Approach," in *IEEE Access*, vol.7, pp. 99670-99682, 2019. (SCI Indexed), DOI: 10.1109/ACCESS.2019.2927267
15. Ingale Pallavi P., and Sanjay L. Nalbalwar. "Singing voice separation using mono-channel mask." International Journal of Speech Technology 21.2 (2018): 309-318.

11. Laboratory

11.1 Major Instruments in Laboratory :

Department has state of the art research equipment and software in the area of Signal & Image Processing, Embedded Systems, Biomedical Electronics and Antenna & Microwave Engineering. This equipment includes DSP starter kits, development boards, daughter cards to capture / process the images & video signals in real time mode, Spectrum analyzer, DSOs, RF signal Generator, Dual Channel arbitrary wave form function Generator, Microwave Communication Trainer, Synthesized Receiver, Fiber optics setup and various biomedical instruments, etc. The software related to above research areas include Cadence, IE3D, EMI Test, EM CAD, MATLAB, Proteus VSM, Quantic SI and Micro-wind.

Sr.	Name of Instrument	Qty	Total
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No.			Cost (Rs.)
1	Cadence EDA Tools	01	15,82,500
2	Compact Optical test Platform (OTDR) with SM 1310/1550 nm Make JDSU MTS - 6000	01	3,99,000
3	LAN Trainer with LAN Simulation Software Hardware Scientech -5002A	01	2,47,500
4	MCS -03 microwave communication training system	01	2,08,620
5	UHF Antenna trainer & modeling system 50-860MHz	01	1,99,175
6	HP Compaq Tablet PC, TC 1100,1.1GHz/512/60GB/26.4Cm, TFT/ CDR/RWW	01	1,20,034
7	Software: - IE3D for windows NT/95 power pack (MM 060)	01	3,60,000
8	Software:- FIDELITY for windows 95 TN (fD060)	01	3,30,000
9	Software:- MD SPICE for windows NT (SP 060)	01	1,65,000
10	EMI-Test Software	01	6,58,000
11	EM CAD Software	01	1,24,000
12	Proteus VSM software	01	4,51,000
13	Quantic SI (1 user license)	01	7,49,000
14	MICROWIND Package Includes DS CH3 (10 User)	01	5,50,000
15	Proteus PCB software (01 user)	01 user	1,56,000
16	R & S Make RF Signal Generator, 3 GHz. Model No:- SM – 300	01	4,21,500
17	R & S Make Dual Channel Arbitrary wave form function Generator, Model No:- AM – 300	01	4,28,125
18	Synthesized Receiver with RF Source	01	1,44,000
19	DSP development board with provision for daughter cards, DSP kits, various daughter cards, related software	01	10,00,000
20	AMITECH make 2.4 GHz Satellite Communication Lab with Spectrum Analyzer, Model: STC 24	01	2, 07,000
21	AMITECH make, Microwave Antenna Training system	01	2, 07,000
22	YOKOGOVA digital scope 500 MHz band width, 4 Channel, sample rate -5G Samples/sec	01	6, 86, 662
23	FPGA Lab Trainer, Custom Board Implementation of FPGA Design, Universal Development platform for FPGA	01	1396500
24	HFSS software	01	5,77,500
25	Embedded System	01	9,40,495
26	Simtel CD and Pen drive 5 user License	21 items	5,00,000

11.2 Laboratory Expenditure(Recurring) :

S.N.	Equipement/ Component	Total cost (Rs.)
1	PS850F2 EDP (10 nm) Prism	10,000

2	Antivirus Quick heal Total Security-CD	3,100
3	RUSSA Report Printing	9,725
4	0.6 nm Drill Bit Milling Bits(90 Degrees) Milling Bits (60 Degrees) 1.0 mm Router Bit	9,605
5	Toner Refiling and Repair	1,040
6	Antivirus Quick heal- CD	1800
7	Toner refiling & AICTE buand	1,800
8	Copier machine repairing	2,600
9	Website Hosting Expenditure of Innovation and Incubation Center	4,989
10	Printer Repairing, Toner refiling and Raigad District Map	1,471
11	Project Component Purchase	2,200

12 .Projects :

UG Projects :

Sr. No.	Project Topic
1	Design of Meander line Antenna for oiprating frequency of2.5 GHz
2	Gas leakage detection and alert system using E-notice board and location tracking
3	LTE Broadcast
4	Ultrasonic blind walking stick
5	Head movement and voice control based head belt for physically challenged.
6	Voice controlled library management system
7	Four channel petrochemical fire detection and preintimation system
8	Arythmias detection system from ECG signal using MATLAB
9	Motion detection using IOT and Embedded system concept
10	IOT based smart irrigation system and crop monitoring, pest (predator) detection plus animal protection system
11	Unmanned aerial vehicle (UAV)
12	Voice controlled vehicle for industrial use
13	Automated vehicle detection and alert system
14	IoT based water quality monitoring system
15	Smart way of handwritten script
16	Epileptic Seizure Classification Using Stastical Features of EEG Signal
17	Biometric Attendance System for Classroom
18	Design of cicular-ring microstrip antenna of 2.5 GHz frequency
19	Ultra-wideband Microstrip patch antenna
20	IOT based crop monitoring system for agriculture application
21	Performance evaluation of microstrip antenna using different feeding techniques for Bluetooth application
22	Wireless LED notice board with IOT
23	Speaking system for mute people using hand gesture
24	An intelligent patient monitoring system
25	Accident detection depending on the vehicle position and vehicle theft tracking, reporting

	system
26	IOT based automated toll collection system
27	Hexagonal Novel Antenna for UWB applications
28	Galaxy Morphology Classification Using Machine Learning
29	Smart attendance sallery calculator
30	Online Service management system for automobile
31	D-shaped microstrip patch antenna
32	IOT based Raspberry Pi Home security system with email alert
33	Sonar based fish detection
34	IOT based underground cable fault detector
35	IOT based distribution transformer monitoring system
36	voice control robotic system using arduino for medical purposes
37	Design and implementation of microstrip patch antenna for bluetooth application
38	Plant disease detection by using MATLAB
39	Detection of defects in industrial pipes
40	Flood monitoring and detection using IOT
41	IoT based home appliances controlling system
42	IOT based bridge monitoring and maintenance system to enhance the life of bridges and flyovers
43	Pothole detection system for speed control vehicle
44	Plus slot rectangular microstrip patch antenna
45	Voice Controlled Wireless Electronic Rolling Display
46	Sports Predictor
47	Heath monitoring system based on IOT for Active and Assisted living.
48	Meteorino
49	Design and analysis of E shaped microstrip patch antenna for wireless application
50	Pentagonal microstrip fractal antenna for UWB application
51	I slot rectangular microstrip patch antenna
52	Automatic licence plate recognition system using matlab
53	Smart Solution to reduce damage of food grains in warehouse

PG Projects:

Sr. No.	Project name
1	Surveillance Drone
2	Smart Shoes: Walking towards a Better Future
3	Triangular Waveguide fed Shaped Antenna
4	Patient Healthcare System
5	Tomato Nutrient Deficiency Detection using Digital Image Processing
6	An Aperture Coupled Microstrip Patch Antenna for Applications at &.5 GHz
7	A Classification of EEG Signal of Eye Open and Eye Closed using ANN Classifier
8	Development of High-Resolution Imaging System at 635nm and 840nm
9	Implementation of Liquid Solar Array using GSM and Launchpad
10	Leakage Detection and Monitoring System oh Underground Gas Pipeline using IoT

Community Projects:

For community projects, all the third year and final year students have participated in Smart India Hackathon 2019, in which they submitted their projects ideas with respect to particular problem statement type of their own choosing as follows:

Sr. No.	Problem Statement Type	Description
1	Complex	An automatic alert to Safety Officers or Ambulances for accident victims in vehicles could be given by developing a software and a prototype hardware sensor. The sensor device may be integrated or embedded to the vehicle's collision detection system (for example: like deployment of Airbag, collapsing the steering) so that when accident occurs, sensor and associate software will send a panic signal using the GPS technology to all the GPS enabled ambulances nearby with exact location of accident. The alert may also be sent to police control room. The combination of hardware and software may be suitable for deployment in all type of vehicles. This will help to provide immediate medical assistance to the victim and can save the life. A prototype hardware sensor may be developed which has to be embedded in the vehicle to sense accident / collision. A software may be developed to integrate with the vehicle's GPS software system, which will automatically have activated by sensing the collision and will send alert messages either to police control room or to all GPS enabled Ambulances nearby to attend the accident site with exact location of the accident. This will save valuable time to save the life of victim.
2	Bike crash detection	To avoid crash of the bikes
3	Low cost & smart cooling system for tractor cabin	intent is to a design a smart cabin & cooling system for the tractor that would employ a very thoughtful design of a. cabin ensuring all round visibility b. Alternatively, new innovative concepts of cooling without a cabin can also be thought of, cooled seat c. Smart cooling system d. a smart cooling algorithm e. low cost design f. carbon footprint should be at least 50% less and should be compatible for future electric tractors
4	Industry personnel	A lot of high rise and older building will be in dilapidated conditions or would develop cracks or leakage over a period of time. Design and develop a drone based video surveillance solution that could be used to inspect the high rise buildings or buildings in hazardous conditions Once the video feed is captured, analyze the video feed to identify the state of the building focusing on finding cracks, water leaks, structural damages etc
5	Simple	We are going to make project on smart vehicle based on Arduino

		. Really we are overcoming on the real time problem faced by common people.
6	To have Self Charged Fans - Cost effective , Energy saving and very useful for end user // FAN	Fans are used across regions (Urban / Rural) and considering rural mkt penetration is still relatively low where power problems are still there , we can think of Fan which can store energy and which can be useful either in (a) no power condition or (b) can be used to use stored energy for some other application requiring energy. This will be cost effective / energy saver for end user point of view.
7	Live AQI (Air quality Index) Map like Google traffic map for the use of various stakeholders (Car Drivers,OEMs, individuals etc.)	Automobile Dash Mounted Device for Live AQI mapping.
8	Robust/Affordable fetal heart monitoring	Background: Approximately 6 lakh still births happen in India. Around 50% of them are during labor. Some still births can be prevented by monitoring fetal heart rate. Having this information can help the obstetric team take the appropriate steps during labor. Problem Statement: Develop a solution to accurately measure the frequency of an object of approx. size of 1 cm, placed at a distance (ranging 10 cm to 100cm), oscillating at 1 “ 5 Hz.It should be affordable (<20\$) and compact
9	Central ministry	A portable lightweight wheelchair may be developed for Physically handicapped persons.
10	Smart eco-friendly garbage management.	Trash management is a one of the hard problems. The existing model is very ineffective due to its poor placement, collection scheduling, dump yard allocation and management, ever increasing transport cost and resulting health issues. The solution shall present a solar powered smart garbage bin (like an Edge in IoT) which houses necessary biotech based mini/macro waste decomposer and necessary mechanical and electronics to manage, monitor and secure the Smart bins & detect usage violation etc.
11	Desalination of Sea Water to make Potable Water	Water is a precious resource in the Islands. Hence, potable water from Saline water through low cost technology is the need.
12	Industry Personnel	Ocean is an integral part of us. How can we keep our beaches and ocean clean? How can we effectively handle the waste management at large scale, especially at the ocean level - which is harming aquatic animals. Ask is a hardware solution that would help in pick up the collected waste transport back to the land for recycling and responsible processing. Also the machine should be equipped with reflector to make them show up on

		radar, thus mitigate the possibility of collision.
13	Cost effective Carpet drying System	Carpet drying problem in rainy season as machine is not there for drying. Cost effective machine is required. Affordable machine is required.
14	Central Ministry (Customizable Tea Leaves plucking system)	If customized mechanized system is introduced in plucking of leaves & maintenance of canopy table at the desired level, cost of labour may be saved to a good extent
15	Agriculture and rural development	Low cost & smart cooling system for tractor cabin
16	Low Cost Automatic Dishwasher Machine	Low cost Automatic Dishwasher Machine. Using a Dishwasher instead of hand-washing dishes not only saves your personal time and energy, it also cuts down on your water usage. Dishwashers can save you from a life of drudgery. These can help save your precious time. So, the time you waste washing away dishes can be spent in something more important work
17	Design of tools and exhaust system to assist workers in stone industries	During cutting and carving of marble/articles in stone industries dust pollution is very high. We wish to develop special tooling, exhaust systems, etc. so that the level of the dust in the working area may be reduced and health issues of the workers are addressed.
18	Industry Personnel	tails Description 10 - 15 kg ghee making machine for women in rural areas. It is usually seen that ghee making machines are of larger quantities and rural women do not have the capability to buy large machines. So we would like to empower them by giving access to small machines to churn ghee and support the economic conditions of their families.
19	Central Ministry	Water is a precious resource in the Islands. Hence, potable water from Saline water through low cost technology is the need.
20	Automatic pothole detection while driving	Every year we lose more than 1 lakh lives on Indian roads due to accidents and the proportion of these accidents due to pot holes on the road is quite significant. If these pot holes can be detected in real time while driving, it will benefit two wheeler riders by avoiding it especially when the pot holes are covered by water during monsoon.
21	Classification of quality of milk on the viscosity, colour, and density.	To design an inexpensive equipment to find out milk quality and segregate it accordingly.
22	Low cost smart dust bins for Office	Under the Swatch Bharat mission we should have all the government offices fitted with these low cost (less than Rs 2000) smart bins which have anti-theft mechanism and inform the labour with SMS when the bin is full.
23	Low cost smart dust	Under the Swatch Bharath mission we should have all the

	bins for Office	government offices fitted with these low cost (less than Rs 2000) smart bins which should have anti-theft mechanism and should inform the labor with SMS when the bin is full.
24	Ghee making machine	10 - 15 kg ghee making machine for women in rural areas. It is usually seen that ghee making machines are of larger quantities and rural women do not have the capability to buy large machines. So we would like to empower them by giving access to small machines to churn ghee and support the economic conditions of their families.
25	Cattle feed manufacturing from local agriculture produce	Problem : A cattle feed machine is required for grinding and churning of agricultural products.. Financial cost for a fully processing cattle feed machine or pellet making machine ranges up to 40000â ¹ , and above.. Thus, we propose a small economically balanced, low-cost , cheap and feasible as well as viable cattle feed machine which will range below 3000â ¹ -4000â ¹ .. Accordingly, big benefit will be of this manufacturing machine is that it is compact and is easy to use for the farmers.... Therefore, for this problem a economically and full working & stable machine to be produce is our motive..
26	Industry Personnel (Low cost residential flow meter)	There is a need for strap-on low cost flow meter that can be used to meter water consumption in individual units in existing Apartments and buildings . This problem explain the need and requirements to create such a low cost flow meter.
27	Industry personnel	During medical emergencies, common people always face problems in deciding which hospital they should visit for required treatment. The wander from one hospital to another in search of medical facility, medicines, blood supply, etc. Hospital Finder will solve this problem by allowing people to search for nearby hospitals on the basis of medical treatment, specialist doctors, medicine/blood availability, etc.
28	Central Ministry	Development of Website / APP for collection, transportation, disposal and segregation of waste products.
29	Central ministry	Unawareness about the availability of highway related raw material like stone aggregate, sand, fly-ash, cement,bitumen near the project site leads to under /over estimation of the project cost thereby resulting into rebidding or excess payment to the contractor .An application develop to keep records of the availability of highway raw material shall help in optimum cost assessment .The app shall register geo-location of the government permitted stone /sand quarries ,thermal plants for fly-ash ,cement plant and bitumen refineries to provide their least distance from the project site.
30	Simple	Mobile app to provide all generic public information of selected city of India. Information can be about City, Main Attraction, Hotels, Hospitals, Emergency Contact No., Schools and

		colleges, Police stations, Public Representatives, Govt Officials, Old Age Home, Local Train Information, Bus time table information, Nearest police station based on Geo Location.
31	Distribution of electric power for agriculture	Electric power distribution is the final stage in the delivery of electric power; it carries electricity from the transmission system to individual consumers. Distribution substations connect to the transmission system and lower the transmission voltage to medium voltage ranging between 2 kV and 35 kV with the use of transformers.[1] Primary distribution lines carry this medium voltage power to distribution transformers located near the customer's premises. Distribution transformers again lower the voltage to the utilization voltage used by lighting, industrial equipment or household appliances. Often several customers are supplied from one transformer through secondary distribution lines. Commercial and residential customers are connected to the secondary distribution lines through service drops. Customers demanding a much larger amount of power may be connected directly to the primary distribution level or the sub transmission level.
32	Distribution of electric power for agriculture	electrical distribution software is specifically used by distributors of electrical supplies. Electrical distribution software helps electrical distributors manage warehouse operations, accounting, purchasing and customer relationships. Managing these operations involves three separate kinds of supply chain management applications: warehouse management, order management and inventory management.
33	Distribution of electric power for agriculture	electrical distribution software is specifically used by distributors of electrical supplies. Electrical distribution software helps electrical distributors manage warehouse operations, accounting, purchasing and customer relationships. Managing these operations involves three separate kinds of supply chain management applications: warehouse management, order management and inventory management.
34	Distribution of electric power for agriculture	Electric power distribution is the final stage in the delivery of electric power; it carries electricity from the transmission system to individual consumers. Distribution substations connect to the transmission system and lower the transmission voltage to medium voltage ranging between 2 kV and 35 kV with the use of transformers. Primary distribution lines carry this medium voltage power to distribution transformers located near the customer's premises. Distribution transformers again lower the voltage to the utilization voltage used by lighting, industrial equipment or household appliances. Often several customers are supplied from one transformer through secondary distribution lines. Commercial and residential customers are connected to the secondary distribution lines through service drops. Customers

		demanding a much larger amount of power may be connected directly to the primary distribution level or the sub transmission level.
35	Distribution of electric power for agriculture	electrical distribution software is specifically used by distributors of electrical supplies. Electrical distribution software helps electrical distributors manage warehouse operations, accounting, purchasing and customer relationships. Managing these operations involves three separate kinds of supply chain management applications: warehouse management, order management and inventory management.
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37	Industrial Personnel	During medical emergencies, common people always face problems in deciding which hospital they should visit for required treatment. The wander from one hospital to another in search of medical facility, medicines, blood supply, etc. Hospital Finder will solve this problem by allowing people to search for nearby hospitals on the basis of medical treatment, specialist doctors, medicine/blood availability, etc.
38	Ensure driving distance in Adverse conditions	Many of the collisions on the highway are due to slow response of the driver and not many systems are place to warn the drivers about frontal collisions. In addition to that weather also affects the sensors and visions. To build up the effective sensors to ensure safety.
39	Healthcare	Diabetic retinopathy Detection From Retinal Images
40	My city information app	Mobile app to provide all generic public information of selected city of India. Information can be About City Main Attraction Hotels Hospitals Emergency Contact No Scholl and college Police stations Public Representatives Govt Officials Old Age Home Local Train Information Bus time table Information Nearest police station based on Geo Location [Sample City can be Faridabad]
41	Crowd sourcing of works for MPs	There is a need to develop a digital platform which provides the citizens to list the works that should be recommended by a particular MP or to endorse the listed works of others. The platform should also inform the respective MPs about the works that are listed for his recommendation along with the number of endorsement each work has received. However, it would be discretion of an MP to select the works, out of this crowd sourced works, for recommendation.
42	Industry personal	Mobile app to provide all generic public information of selected

		city of India. Information can be About City Main Attraction Hotels Hospitals Emergency Contact No Scholl and college Police stations Public Representatives Govt Officials Old Age Home Local Train Information Bus time table Information Nearest police station based on Geo Location [Sample City can be Faridabad]
43	Central Ministry	Electronic Interlocking with centralized operation of points and signals should be provided to eliminate human failure and to replace old mechanical systems. Centralized Traffic Control (CTC) System will help in real time monitoring and better management of trains. It provides for remote operation of signals from the centralized traffic control office
44	Smart and dynamic Timetable management system	It is app based timetable system which provides complete information about school or required institute routine.
45	Agriculture and Rural Development	Agri Business and Entrepreneurship Awareness System For Rural Youth
46	Agriculture and rural development	providing government facility to farmer and rural area
47	Industry Personnel	There are different services which are linked to Birth and Death of an individual. If these services are integrated together it will help individuals. Maternity Nursing home register child birth to Municipal Office Then Parent / guardian can one time enter the name of their child and get a print of Birth Certificate after few days. No need to visit MO. In case of Death registration at MO then build a system which will notify all tear down services to update death status of the individual.
48	Citizen feedback on maintenance of road	During travelling on roads, the commuters come across potholes/accidents/landslides/ other hazards that may lead to accidents. Citizen feedback is a important feature that will enable Govt. authorities to take timely action on road not maintained. An application may hence be developed to capture GIS based images of potholes/accidents/landslides/ other hazards by the citizens. The road user will register on the application and upload the captured image of the highway. The Govt. authority will be provided with an option to upload images informing of the action taken in response to the feedback provided. The exercise shall bring a feeling of owning 1of highways among the citizens.
49	My City Information Application	Mobile app to provide all generic public information of selected city of India. Information can be About City Main Attraction Hotels Hospitals Emergency Contact No Scholl and college Police stations Public Representatives Govt Officials Old Age Home Local Train Information Bus time table Information Nearest police station based on Geo Location [Sample City can be Faridabad]

50	Driver Alertness detection	A lot of deaths happening are because of road accidents. So to prevent these accidents, a driver alertness detection system must be made.
51	Development of website/App to creating awareness amongst women to improve maternal healthcare	The death of women during delivery of child in rural area in the country is still a case to be addressed. The lack of awareness in rural areas, the unavailability of doctors and health counsellors in the PHCs, lack of education on women / mother heal, lack of hygiene and sanitation are the prime cause of such death which needs to be addressed.
52	Industry Personnel	This platform would be generating time table for a college/school/institution based on the input of trainers skills, trainers load hour, session duration, no. of days of training. This platform would generate the time table in the start of academic session based on the provided input. Dynamic nature of this platform would be in adjusting the vacant classes in case of trainers absence due to any reason. This platform should automatically allocate the free classes to appropriate trainer of same.
53	Industry Personnel	Indian farmers rely on each other for guidance on the type of seeds to use, diagnosis of pests and diseases as well as their remedies. Timely assessment of problems on the field can improve yields and therefore incomes for the smallest of farmers. The solution envisages using the ewido of the crowds- the creation of a crowd-sourced database which is created for the farmers by the farmers. In the ideal situation farmers will be able to login to see information that other farmers have inputted.
54	Students Innovation(Android App)	A mobile app for helping doctors plan their appointments, out patient & in patient care, handover of patients in case of leaves for seamless continuity of care
55	Industry Personnel	Every day we come across several sources of pollution, polluting the very basics of our lives- Rivers, Land, Air and Noise. We know nothing about who/where to report it and how. We suggest an Innovative way to identify the sources of pollution in your area, get it prioritized through people votes, escalate it to the concerned authorities, keep a track of the progress and get notified of the actions taken. It will provide an End-2-End tool to battle pollution democratically partnering with Govt.
56	Development of Website/app for improving skills and development of workers	Interactive Audio-Visual training material for soft/ other skills and development of customized self-power projector which could be used in far flung, rural areas. The MSME and KVIC industries have incomparable technical skills, where as they face a problem and various other activities such as quality, planning, marketing, business development, use of computers, customer handling etc. There are many soft skills that need to be trained and for the same interactive training material and hard technology to present the same will strengthen the rural MSMEs.

57	Industry Personnel	During medical emergencies, common people always face problems in deciding which hospital they should visit for required treatment. The wander from one hospital to another in search of medical facility, medicines, blood supply, etc. Hospital Finder will solve this problem by allowing people to search for nearby hospitals on the basis of medical treatment, specialist doctors, medicine/blood availability, etc.
58	Industry Personnel	Mobile app to provide all generic public information of selected city of India. Information can be About City Main Attraction Hotels Hospitals Emergency Contact No School and college Police stations Public Representatives Govt Officials Old Age Home Local Train Information Bus time table Information Nearest police station based on Geo Location
59	Industry Personnel	In today's world there are a lot of entrepreneurs who are not able to connect to other entrepreneurs or sponsors of their will. We tend to build an online portal (Application/Software) for them to register themselves and then interact with entrepreneurs or people who have resources which can fulfill their need. This forum will also match entrepreneurs and people depending on their interests and their "asks" and "haves" automatically as given in the problem statement.
60	Clubbing College Projects	An app which has the similar capabilities of github and google drive could be a possible solution for this thing. Github never gives more than 25 mb (student level) for a repository.. To avoid this we can build a app which gives large space of google drive and link it with github repository at the easiest level
61	Software - Web App development	Last mile route planning from delivery centers
62	Industry personnel	Mobile app to provide all generic public information of selected city of India.Information can be About City Main Attraction Hotels Hospitals Emergency Contact No Scholl and college Police stations Public Representatives Govt Officials Old Age Home Local Train Information Bus time table Information Nearest police station based on Geo Location [Sample City can be Faridabad]
63	Student innovation	Students Innovation is an open category in which teams can propose a digital or product development solution to address a real time issue faced by India under the mentioned technology bucket. Please note: The solution has to address an issue which according to you is of significance and can impact our country positively. Teams cannot use the existing problem statements available on the portal, under various technology buckets, to submit a solution. In case this is done, the solution/ team will be disqualified.
64	My City Information Mobile App	Mobile app to provide all generic public information of selected city of India.Information can be About City Main Attraction

		Hotels Hospitals Emergency Contact No Scholl and college Police stations Public Representatives Govt Officials Old Age Home Local Train Information Bus time table Information Nearest police station based on Geo Location [Sample City can be Faridabad]
65	software -web app development	storing the school/university/board certificates is a recurring process.for the organization verifying the authenticity of the certificates is tedious and cumbersome.the proposed solution will help the institutions to store the certificates in the decentralized way using the block chain system and give access to any organization or any institution with consent of the individual using multi-sign.
66	Security & surveillance	Looking to build an alarm system
67	Industry Personnel	Many farmers do not keep account of their expenses. They do not keep a note of expenditure on seed, fertilizer, pesticides, labour, machinery charges, electricity bills etc. If maintained properly, this information can help farmers take many decisions like cutting out unnecessary expenses. If accompanied by various finance options, the smart farm diary can be a very useful tool for farmers.

14 . Industry Institute Interaction :

Department has good industry institute interaction through the network alumni.

As a part of B. Tech. curriculum, it is mandatory for Third year and Final year students to do Industrial Training/ Internship for two weeks to four weeks during summer /winter vacation.

Department regularly invite industry experts to give talk for betterment of students of EXTC department

14.1 MoU Signed by the department (if any):

Sr. No.	Description of MoU	Date of MoU
1	National Institute of Electronics and Information Technology, Aurangabad The NIELIT has agreed to provide training programmes ranging from 6 weeks to 6 months duration to students of DBATU and its affiliated colleges. This MoU will provide us an opportunity to meet industrial requirement and also provides exposure to acquire the required state-of-the-art skills. It also helps in placing our students in industries. The NIELIT is also agreed to extend discount of 10% against the rates mentioned on the website of ministry of skill development NSQF guidelines.	15/06/18
2	Biotronics Equipment Pvt. Ltd, Thane BEPL has agreed to sponsor two Ph.D students under research fellowship scheme. Certainly, this MoU will help to start joint research activity between industry and University in the area of Healthcare Technology. Department agreed to the terms and	11/06/18

	conditions mentioned in the MoU and recommended for signing of the said MoU.	
3	Maritime Research Centre, Indian Maritime Foundation, Pune This MoU would help the students and faculty to update the knowledge in their respective field of interest. The main objective is to promote academic and technical knowledge, projects and educational exchange between these two organizations through collaborative research, exchange of academic and technical staff, visit of student and research fellows.	01/12/17
4	Millionminds Ecosystem, Mumbai Primary objective of this is to help students with a chance to penetrate into the Startup ecosystem from the beginning of their careers. Million minds under the patronage of Startup India (A Govt. of India Initiative), launched The Startup League wherein students can send in their ideas, and meet the business incubators, Startup founders and possible investors to fuel their Startup dream.	13/03/18
5	ITIE Knowledge Solution, Bangalore This MoU helps to strengthen the scientific exchange & cooperation to be of mutual value. This would help the students and faculty to update the knowledge in their respective field of interest. The main objective is to promote academic and technical knowledge, projects and educational exchange between these two organizations through collaborative research, exchange of academic and technical staff, visit of student and research fellows.	15/11/17
6	TATA Technologies Ltd, Pune TATA Technologies' experts and specialists have created e-learning module which will be licensed for use to DBATU. Also, this is aimed to offer certification program which can be considered as academic electives, to better equip young engineers and to increase their awareness and industry connect and to promote entrepreneurship.	25/05/17

14.2 Industry Projects by the students :

Roll No.	Name	Title of the project	Name of the company	Stipend Paid by Company (Rs.)
20150363 20150364 20150360	Kumthekar Gargi Sharad Kunte Jayshri Vijaykumar Kondagurla Akanksha Bholeshwar	Implementation of VOIP over MPLS network	RTTC BSNL, Pune	-
20150303 20150306 20150333	Bagade Yashwant Prashant Bhagwat Pritesh Suryakant Girgave Dhananjay Dhondiba	Design and enabling secure communication through VPN between public and private networks	RTTC BSNL, Pune	-

201503102 201503114 20150318	Sharma Arti Omprakash Talwatkar Shvetali Ganesh Chavan Krishna Bapurao	Automated and secure configuration in IPv6 enterprise tunneling network	RTTC BSNL, Pune	-
201603172 201603181 201603182 201603152	<u>Naphade Kajal Devidas</u> <u>Shinde Ashwini Lahuraj</u> <u>Shinde Ashwini Lahuraj</u> <u>Shinde Ashwini Lahuraj</u>	IOT based solar power agribot for farm monitoring and irrigation system	JSM Infotech, Pune	-
20150310 20150335 201503123 20150316 20150329	Bhogade Vaibhav Mohan Gore Rushikesh Narayan Waghmare Roshan Maroti Chauhan Deepakkumar Faujdar Gawarguru Shyamli Shyam	Cloud based air and sound pollution monitoring system using Raspberry Pi controlled	JSM Infotech, Pune	-
20150386 20150366 20140350 20140365	Pawar Pralhad Sakharan Lokare Santosh Vijay Koli Sonali Dharmaraj Meshram Punambai Virendranath	Water Level Controller (submersible)	Electro Dreams Tech, India, Sangli	-
20150307 201603159 201603161 201603151 201603155	Bhalerao Pragati Bhagwan Gaikwad Utkarsha Krishnat <u>Godse Vaishnavi Dipak</u> <u>Arsude Ragini Vilas</u> Bhangale Puja Sanjay	Digital cyclic timer autoswitch	Electro Dreams Tech, India, Sangli	-
20150349 20150347 201603168 20150348	Karagir Shradha Tukaram Kadu Riddhi Pundlik <u>Kondalwade Shrinath Nabhaji</u> Kamble Mukund Bhimrao	Enhancing network security by implementing preventive mechanism using GNS3	RTTC BSNL, Pune	-
20150305 20150339 20150314	Bansod Pritam Yuvaraj Holkar Suraj Navnath Chandajkar Ravi Sanjay	Implementing border gateway protocol in MPLS layer 3 VPNs	RTTC BSNL, Pune	-
201603156 201603167 201503103	Bhoee Amruta Mahadev Kasture Shweta Sunilrao Shedge Suraj Sanjay	Mobile Auto Switch (GSM)	Electro Dreams Tech, India, Sangli	-
20150376 201603171 201603180 201503107	Nar Siddhi Vilas <u>Matsagar Komal Ashok</u> <u>Rathod Sneha Suresh</u> Suralkar Pooja Ganesh	Door interlocking system (Industrial based project)	Nile Automatio n and Control System, Pune	-

20150356 20150342 20150361	Khillare Swapnil Annasaheb Jamnekar Suyog Anil Korpe Roshan Kashinath	Automated and secure configuration in IPv6 enterprise network with PBR	RTTC BSNL, Pune	-
20150312 20150313 20150343 20150355	Bhusari Ashish Janardhan Borse Someshwar Ravindra Jatale Anil Ambadas Khedkar Shivkant Namdev	Implementation of traffic engineering in MPLS networks using resource reservation protocol	RTTC BSNL, Pune	-
20150304 20150308 201603158	Bambarde Mehul Kamlesh Bhandekar Abhilash Shailesh <u>Bundeale Rupesh Ashok</u>	RPM distribution of TrippleO	Reliance Jio, Navi Mumbai	-
20140356 20130302 20150322	Kusmade Avinash Baburao Ayare Sanyam Santosh Dhare Yogesh Baban	GSM based programmable switching control for industrial automation in repetitive nature of work	Laxmi Organic, Mahad	-
201603163 201603165	Kadam Karan Ajay Kalalkar Yogesh Tryambakrao	Smart lighting for smart cities	Hindustan Semiconductor Ltd., Nagpur	-

15 . Industrial Visits :

During Academic year 2018-19, department had organized one industrial visit for B. Tech. Students.

Sr. No.	Name of Industry	Date	Participants
1	Industrial Visit to Institute of Satellite Telecom Pvt.Ltd, Pune	5 th October, 2018	Final Year B. Tech. Students

16. Conferences/Workshops / Trainings / Academic Awareness activities conducted

Sr. No.	Name of the Course	Duration	Name of the Coordinators/ Speakers	Participants
1	Induction Programme for first year B.Tech	1-08-2018 to 21-08-2018	Dr. S. L. Nalbalwar, Ms. Swati Pawar, Ms. Tejashree Phalke	All First year B. Tech Students
2	Guest lecture on Preparation and strategies for UPSC and MPSC administrative services	10-08-2018	Dr S.B. Deosarkar, Dr. M.P.Bhagat	B. Tech Students
3	Expert talk on UCEL / MillionMinds: Debate on Swachh Bharat Abhiyaan	24 Sept, 2018	Dr. S. L. Nalbalwar	B. Tech students

4	Workshop on GATE Awareness	16-01-2019		B. Tech Students
5	International Conference (ICCET 2019)	9-01-2019 to 11-01-2019	Dr. B. R. Iyer Dr. A. B. Nandgaonkar	Participants from all over the nation
6	Two days Business Idea competition on Incubation and Start up	01-03-2018 to 02-03-2018	Dr. S. L. Nalbalwar	Students (Outside)
7	Workshop on IoT		Mr. Ravindra Rathod	B. Tech. Students
8	Expert talk on Remedial Coaching	6-05-2019	Mr. S. V. Khobragade	B. Tech Students
9	Expert talk on Personality and skill development	7-05-2019	Mr. S. V. Khobragade	B. Tech Students

ICCET 2019:

4th International Conference on Computing in Engineering & Technology (**ICCET 2019**) was organized by Department of Electronics and Telecommunication Engineering of Dr. B. A.T. U., Lonere and D. I. E. M. S., Aurangabad during 9th – 11th January, 2019 2019 at Deogiri Institute of Engineering and Management Studies, Aurangabad (MS), India.

The ICCET-2019 aimed at bringing together the academicians, scientists, engineers and research students in areas of engineering and technology, and it provided an international forum for the dissemination of original research, new ideas and practical developments experience. The conference was focused on the frontier topics in the field of Engineering and emerging/next generation technologies.

ICCET-2019 was carved from our flagship series ICCASP and was organized to address various issues to promote the creation of intelligent solution in future. The theme of this conference was to motivate the researchers to adopt the outcome for implementation. The conference provided an exceptional platform to the researchers to meet, discuss the practical solutions, scientific results and methods in solving intriguing problems with people who are actively involved in these emerging fields.

Keynote speakers:

- I. **Prof. Ajith Abraham**, MIR Labs, USA
Topic: Big Data Analysis Perspective
- II. **Mr. Aninda Bose**, Senior Editor, Springer Nature
Topic: Nuances and Tools of Scientific Publishing
- III. **Dr. Virendrakumar C. Bhavsar**, University of New Brunswick, Fredericton, NB, E3B 5A3, Canada
Topic: Perspectives on a Big Data Application: What Database Engineers and IT Students Need to Know?
- IV. **Dr. M. P. Abegaonkar**, CARE, IIT Delhi.
Topic: Dual frequency active antenna design
- V. **Dr. Sudhakar Agarkar**, Ex-Prof. Tata Institute of Fundamental Research
Topic: Paradigm Shift in Higher Education

Papers were invited in following tracks:

1. Digital Image processing and Digital Signal Processing
2. Cloud Computing and Internet of Things
3. RF and Embedded System
4. Information System and Evolutionary Computing
5. Computing in Mechanical
6. Computing in Civil Engineering
7. Techonology in Education

Total 75 research papers were presented in this conference.

16. Expert Talks / Lectures by Alumni:

Sr. No.	Topic	Date	Name of Speaker/ Coordinator	Participants
1.	From Zero to Hero	05 Aug, 2018	Prof. Prashant Deshmukh	First Year B. Tech students
2.	Career opportunities in Defense	05 Aug, 2018	Dr. Vivek Vadke, ExTech Process Engineering Ltd.	B. Tech students
3.	Recent Trends in Telecommunication Technology	18 Aug, 2018	Dr. Munir Sayyad, General Manager, Reliance Jio, Mumbai	B. Tech students
4.	Talk on future of IT Industry	3 May, 2019	Mr. Achyut Godbole, Scialist, Writer, Ex Management Executive(CEO of Patni Computer Systems)	Final Year B. Tech Students

18 . Workshops attended by Faculty members, Research Scholars and PG Students :

Sr.No.	Title	Date	Name of participants
1	Two days conclave on Innovation and Incubation forging partnership for development of innovation and start up, SPPU, Pune	March 8-9, 2019	Dr. S. L. Nalbalwar
2	Workshop on under water domain awareness Mumbai University	March 16, 2019	Dr. S. L. Nalbalwar
3	Workshop on under water domain awareness Summers School 2019	June 11, 2019 to July 20, 2019	Mr. Shashank Kharade

19. Other activities Conducted by Department:

1. **Induction program:** All India Council of Technical Education (AICTE) has asked all the institutes to greet every new student with an “Induction Programme” before they can embark on any study of science and engineering. Induction Programme for first year B. Tech students was organized by Department of Electronics and Telecommunication Engineering. The programme was conducted from 1st to 21st Aug, 2018. A strong focus was

there on building confidence and boosting creativity through disciplines Physical activity, taking up some Creative arts, Literary activity encouraged in Indian languages, fostering greater human interaction and class bonding with small group discussions with faculty. Each day's program encompassed a mixture of different types of activities: talks, panel discussions, presentations; hands-on activities and group work. Most sessions were interactive – students were encouraged to express their views and participate actively.

2. **GATE coaching:** Remotely situated institutes like ours must conduct practices beneficial to students during final year of graduation. Department conducts, throughout the year, the GATE coaching classes for all the students till their examination and these classes are included in their weekly time table as if they are the part their academic schedule. Every year almost all students of the final year B. Tech are appearing for the examination.
3. **Industrial Training and Industry Sponsored projects:** Each student undergoes an industrial training during summer vacation at the end of 2nd year B. Tech. for 2-weeks and 3rd year B. Tech. for 4 weeks. This training gives exposure to the students to latest industrial practices and modern technologies, develops interest of core subjects among students; which would in turn help them to identify research-oriented projects.
4. **Technical Project related to Community Services:** Student undertake projects related to community services. Through such projects, they get exposure to real life problems of the community. This gives them an opportunity to seek solutions to such problems. By taking social responsibility in account, have included a task called COMMUNITY PROJECT in our curriculum, which has some Credits. For community projects this year we are allowing students to undertake the challenges posted on innovate.mygov.in portal for Smart India Hackathon'19.
Smart India Hackathon'18 is a portal for posting submissions for different challenges posted by government agencies and departments. The structure of problem is clearly mentioned on the website, so that one can have a brief look at challenge. To provide the solution of challenge you have to participate in the Hackathon. Format for the same is also available on the respective website.
5. **Cynosure 2019:** Cynosure'19 is the technical festival arranged by Dr. Babasaheb Ambedkar Technological University. Being the only State Technological University, Dr. BATU envision the visitors the taste of this year's theme "STARTUP FOR A BETTER TOMORROW". All the departments have put in their respective events to bring in all the emerging Engineers from all over India to experience the taste of our fest. EXTC department arranged four events in the technical fest as: Motustron, Battleship
6. **Farewell:** Departmental farewell was organized by TEESA on 3rd May, 2019 for final year B. Tech Students. Graduating students shared their experience about University/ department/ faculty. Students also discussed the problems faced by them during their graduation so that the appropriate solution may be found for the betterment of their juniors

21. Alumni Meet :

No Alumni meeting was held during AY 2018-19.

22. Academic Achievements:

22.1 Faculty Achievements:

Citation index of faculty members and impact factor are as follows:

S.N	Name of the Faculty	Citations	h- index	i10- index
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1	Dr. S. B. Deosarkar	180	7	2
2	Dr. S.L. Nalbalwar	545	13	16
3	Mr. S. V. Khobragade	80	6	1
4	Dr. A. B. Nandgaonkar	74	5	2
5	Dr. B. R. Iyer	137	9	7

22.2 Distinguished alumni of the Department:

1. Munir Sayyad, General Manager, Reliance Jio, Mumbai
2. Pritesh Pawaskar, staff engineer (Flash Chip Power Management), Flash Component Division, LSI Corporation
3. Mahadu Kurkute, Sr. Project Manager in Infosys
4. Rajnish Telang, Sr. Staff Engineer, Orca Radio Systems
5. Mayur Desai, Principal Engineer, Broadcom
6. Anil Bajpai, Practice Head, Infosys
7. Preeti Chande, Business Analyst, Capgemini
8. Ranjit Khot, Project Manager, KPIT
9. Ranjit Somnathan, Vice President, Credit Suisse
10. Vijay Shepunde, Manager, Capgemini
11. Sourabh Bandopadhyay, Manager, Industry Solution Group, CiscoSystems
12. Mandar Patil, Staff Verification Engineer, Infinera
13. Shashank Nafde, Associated Project Manager, HCL Technologies
14. Anand Zambre, Assistant Consultant, TCS

22.3 Major Students' Achievements:

- A. Paper publications: Students as well as research scholars publish their research papers regularly in national/ international conferences and journals.

B. List of students qualified in GATE 2019 Examination:

Sr. No.	Name	Marks (Out of 100)
1	Gaurav V. Shinde	32.00
2	Swapnil S. Patil	24.67

C. List of students qualified in GRE:

Sr. No.	Name	Marks (Out of 340)
1	Shreyas Mane (Alumni)	321

D. Co-curricular Activities:

University Sports:

Sport/ Game	Name of Students	Prize
Box Cricket	Omkar Ghosalkar	Gold
	Akshay Vaidya	
	Nayan More	

		Aniket Sutar	
		Pruthviraj Walse	
		Mahesh Kawale	
		Akshay More	
		Shri Kondalwade	
		Adhinath Govilkar	
Athletics	100 m	Omkar Ghosalkar	Gold
		Vaibhav Ambore	Silver
	200 m	Omkar Ghosalkar	Gold
		Vaibhav Ambore	Silver
	800 m	Shailesh Mhaske	Silver
	1600 m	Dipesh Shepunde	Silver
	100*4 Relay	Omkar Ghosalkar	Gold
		Vaibhav Ambore	
		Ashutosh Chikane	
		Dipesh Shepunde	
Chess		Shankar Salunke	Silver
Table Tennis		Akshay Vaidya	Gold
		Amit Narote	
		Swayam Dhondge	
Football		Roshan Waghmare	Gold
		Nidaan Gaddpawar	
		Akshay Vaidya	
		Shubham Kendre	
		Pruthviraj Walse	
		Madhav Lalit	
		Akshay More	
		Swayam Dhondge	
		Prajwal Nandeshwar	
		Parth Akre	
		Ashish Junghare	
		Shantanu Kurapti	
		Rahul Misal	
		Swaroop Nchankar	
		Manshu Raut	
		Prasad Chaudhari	
Futsal		Akshay Vaidya	Gold
		Roshan Waghmare	
		Nidaan Gaddpawar	

	Pruthviraj Walse	
	Prajwal Nandeshwar	
	Madhav Lalit	
	Akshay More	
	Swayam Dhondge	

Abhiyanta Vasant 2019:

Event	Name of Students	Prize
Solo Act	Sneha Pandhare	Gold
Clay Modelling	Sneha Pandhare	Gold
Mime	Rupa Potdar	Gold
	Sneha Pandhare	
	Nandini Shirke	
	Chetana Rera	
	Ashitosh Chikane	
	Monika Yadav	
One Act	Rupa Potdar	Gold
	Sneha Pandhare	
	Nandini Shirke	
	Ashitosh Chikane	
	Shriniket Anerao	
	Shardul Kulkarni	
	Nitin Naragude	
	Monika Yadav	
Skit	Sneha Pandhare	Silver
	Rupa Potdar	
	Advaita Rane	
	Ashitosh Chikane	
	Nandini Shirke	
	Chetana Rera	
	Shriniket Anerao	
	Shardul Kulkarni	
Singing	Rupa Potdar	Silver
	Nandini Shirke	
	Ashitosh Chikane	
	Sneha Pandhare	
	Advaita Rane	
Duet	Akshay Vaidya	Silver

23. Departmental Students Association:

Department have a student association named ‘**Telecommunication and Electronics Engineering Students’ Association (TEESA)**’.

The TEESA committee for the academic year 2018-2019 was as follows:

Sr. No.	Name	Designation	Responsibilities
1.	Mr. Jayesh Chaudhari	President	Yearly student activity planning, control and execution of all the actives held. The bridge between student and faculty advisor and HOD.
2.	Mr. Shubham Mali	Vice President	To help president and other team members with the responsibilities and events carried out by TEESA
3.	Ms.Mridul Mose	Secretary	Maintenance of financial record of TEESA
4.	Ms.Advaita Rane Mr.Akash Yadav Mr.Dnyaneshwar Bhatte	Social activities coordinator	Coordination and planning of social activities for the student in consultation with the president.
5.	Mr.Radhakrushna Khade Mr.Rohan More Mr.Shailesh Fajge Mr.Sanket Thorat	Student Counselling Cell Coordinator	Identification of the students who needs counselling on various issues in the campus and off the campus. Coordinate faculty and student meetings to develop the communication skills and counselling appointments in regards
6.	Ms.Sneha Pandhare Mr.Shailesh Kumar Salve Ms.Gauri Phutane Mr.Ashitosh Chikane	Cultural Coordinator	Coordination and planning of cultural activities for the students in consultation with the president.
7.	Mr.Akshay Vaidya Mr.Nidaam Gaddpawar Mr.Vishnukant Gavhane Mr.Shrinayan Yadav	Sports Coordinator	Coordination and planning of sports events of students in consultation with the president.
8.	Mr.Saket Ghate Mr.Shantanu Kurapati Mr.Abhijeet Dhole	Technical Coordinator	Coordination and planning of technical events of students in consultation with the president.
9.	Ms.Snehal Jadhav Ms.Deepali Ubhare Mr.Mayuresh Kharade Mr.Mayur Vanne Mr.Mustakim Kureshi Ms.Aishwarya Mahadik	News Room Head	Update and recent events, current news and progress in science and technology to the students via notice board. Preparation of quarterly news bulletin for the students.

10.	Mr.Harshad Sutar Mr.Atul Gavhane Mr.Akshay Yende Ms.Sneha Kadam Ms.Rukmini Salwe Mr.Vaibhav Chobe Mr.Rushikesh Jagtap Ms.Mrinmayee More Ms.Ruchira Saware Mr.Vaibhav Jadhavar Mr.Chaitanya Rajhans Ms.Pallavi Pevekar Ms.Charu Talwar	Class Representative	Coordinate with the TEESA activities via its committee members.
11.	Mr.Shubham Mehetre Mr.Gaurav Lokhande	Photography Club	

24 .Technical Events by Students' Association :

- I. TEESA Cup: This year for the first time, TEESA had organized an intradepartmental technical event/ tournament called 'TEESA Cup' during 9th – 11th April, 2019.
- II. Photography Exhibition: TEESA had organized a photography exhibition event during 8th- 10th April, 2019. Objective of this event was to motivate students of all years to explore the nature while developing their photography skills as well.

25. Departmental strengths, Weaknesses , Opportunities and Challenges :

Strengths:

- Highly dedicated and motivated faculty members
- The curriculum design is perfect blend of Electronics, Communication and Computing Technologies
- The department regularly gets handful amount of funding from AICTE, UGC and State Government by way of various research and other projects
- Guidance and support from Alumni
- Research publication by faculty members
- Well-equipped labs for UG, PG and Research Scholars

Weaknesses:

- Departmental maintenance: Most of the minor problems related to maintenance and installations are handled in department itself. These problems are solved by laboratory assistants and department students. For major problems such as repairing of PC motherboard, trainer kits, UPS controller, testing and measurement equipments, department does not have maintenance and repair facility. Some of the equipments are obsolete, hence need to be replaced by new ones.

- Lack of adequate Space for laboratory and classrooms: The department intake is of 120 students. Its is difficult to manage classes, examinations and practices in the space allotted to the department.
- Faculty shortage: Presently, faculty strength of department is six. However, department activities are carried out by appointing faculty on contract basis and also by appointing teaching assistants.

Opportunities:

- The graduates from this discipline have very good job opportunities in Embedded Systems, IoT, Signal Processing, RF Communication, VLSI technologies, Mobile Communication and in Software Engineering.
- Every year many of our students are getting placed in industries like Infosys, Accenture, Cognizant, TCS, Reliance, etc.

Challenges:

- Managing all departmental activities with the help of available faculty members.
- Recruitment of qualified faculty members having Ph. D. qualification.
- Attracting creamy students for UG, PG and Ph. D programmes.

Annexure C

Minutes of BoS Meeting

I. BoS Meeting held on 14th -15th January,2019

Meeting of BoS in Electronics & Telecommunication Engineering, Electronics Engineering and Biomedical Engineering was held on 14th -15th January, 2019 in EDUSAT room.

The following members were present for the meeting:

- 1 Dr. S.L. Nalbalwar, Dr. BATU, Lonere
- 2 Dr. S.B. Deosarkar, Dr. BATU, Lonere
- 3 Dr. R.M. Autee, Deogiri Institute of Engineering and Management Studies, Aurangabad
- 4 Dr. S.D. Nawale, N B Nawale Sinhgad College of Engineering, Solapur
- 5 Dr. A.D. Sayyad, Marathwada Institute of Technology, Aurangabad

Following members could not attend the meeting. Leave of absence was granted to them.

1. Dr. P.J. Deore, RC Patel Institute of Technology, Shirpur

2. Dr. A.B. Nandgaonkar, Dr. BATU Lonere
3. Dr. Munir Sayyed, Reliance Jio, Mumbai
4. Dr. Sachin Singh, AKTU Luckhnow
5. Dr. Vinay Kumar, HPTU, Hamirpur

The following points were discussed and finalized during the meeting of BoS held on 14-15 January, 2019.

1. Finalization of the curriculum of 1st and 2nd Year B.Tech programs (all four semesters).

The curriculum structure and detail syllabus for UG programs in Electronics and Telecommunication Engineering, Electronics Engineering and Biomedical Engineering have been finalized and recommended for considerations of Academic Council. The minor changes in credits and course contents in the course “Product Design Engineering” are incorporated as per directives Hon. Vice Chancellor (NO.FoET/2018/01).

2. Recommendation of final structure for the third year and final year UG programs as discussed in the Faculty of Engineering Meeting.

The course structure along-with detail syllabus for the third year and only *course structure* for final year of B.Tech programs in Electronics and Telecommunication Engineering, Electronics Engineering and Biomedical Engineering is recommended by BoS.

3. The BoS Recommended and resolved for nomination of expert on Faculty as per modified statutes (S3.10(d) PP 71).

As per the S3.10 (d), BoS in Electronics & Telecommunication Engineering, Electronics Engineering and Biomedical Engineering there is a provision to nominate one faculty amongst the institutions those are satisfying norms. The BoS has resolved and recommendation following faculty member on the *faculty board* as a nominee

1. 1.Dr. Jagdish Jadhav, RC Patel Institute of Technology, Shirpur

4. The BoS suggested minor corrections in Rules and Regulations and modified Statutes

BoS members discussed over this agenda point and conveyed few suggestions to Dean, Faculty of Engineering.

5. Any other point with permission of chair.

A. For M.Tech Course on IPR/ Project Management, weightage under TW and PR heads are removed and replaced by only *theory* (TH) head without changing the total marks.

B. BoS members delegated powers to the BoS Chairman for small corrections like Course Codes, addition Electives, corrections in examination scheme and credits, credit distributions, if necessary.

Meeting ended with thanks to chair.

II. BoS Meeting held on 30th May, 2019

Meeting of BoS in Electronics & Telecommunication Engineering, Electronics Engineering and Biomedical Engineering was held on 30th May, 2019 at 11 am in EDUSAT room.

The Agenda for the meeting was as follows:

1. To recommend the curriculum for Second Year Electronics and Communication Engineering Sandwich Programme
2. Finalization of course content of final year B.Tech programme in Electronics & Telecommunication Engineering and Electronics Engineering
3. Finalization of course structure and Curriculum for B.Tech programme Electronics & Communication Engineering
4. Discussion credit transfer facility for AKTU/HPTU/UTU Universities
5. Any other point with the permission of the chair.

The following members were present for the meeting:

1. Dr. S.L. Nalbalwar, Dr. BATU, Lonere, Chairman BoS
2. Dr. S.B. Deosarkar, Dr. BATU, Lonere, Member
3. Dr. Sachin Singh, AKTU Lucknow, Invited Member
4. Dr. Vinod Kapoor, HPTU, Hamirpur (Participated on Skype), Invited Member
5. Dr. Ashish Bagwari, UTU, Dehradun (Participated on Skype), Invited Member
6. Dr. R.M. Autee, DIEMS, Aurangabad, Member
7. Prof. Ravindra Gahane, NCER, Talegaon, Invited Member
8. Prof. Neeta P. Karhadkar NCER, Talegaon, Invited Member

Following members could not attend the meeting. Leave of absence was granted to them.

1. Dr. A.B. Nandgaonkar, Dr. BATU Lonere
2. Dr. Munir Sayyed, Reliance Jio, Mumbai
3. Dr. S.D. Nawale, N B Nawale Sinhgad College of Engineering, Solapur
4. Dr. P.J. Deore, RC Patel Institute of Technology, Shirpur
5. Dr. A.D. Sayyad, Marathwada Institute of Technology, Aurangabad

The following points were discussed and finalized in the meeting of BoS:

1. The course structure along-with detail syllabus for the second year Sandwich course in Electronics and Communication Engineering is approved & recommended by BoS. (Annexure-I)
2. Course content of final year B.Tech in Electronics & Telecommunication Engineering (E & TC) and Electronics Engineering is finalized by the BoS and recommended for approval of Academic Council. (Annexure-II)
3. As far as course structure and detail syllabus for UG programs in Electronics and Communication Engineering is concerned, it is discussed and decided to keep the same curriculum of second and third year of E & TC Engineering programme to Electronics and Communication Engineering programme.
4. BoS has discussed at a length on credit transfer facility among the Mentees and Mentor Universities. BoS recommended this facility, for the courses which are having same course contents and similarities in the course name which is available in each of these Universities.

BoS members delegated powers to the BoS Chairman for corrections like Course Codes, addition of Electives, corrections in examination scheme and credits, credit distributions, credit transfers if necessary.

Meeting is ended with thanks to the chair.

Minutes of RC Meeting

I. RC Meeting held on 7th July, 2018

Meeting of RC in Electronics and Telecommunication Engineering was held in EDUSAT room on 7th July, 2018 at 11.00 am

Agenda for the meeting was as follows:

- A. Pre-synopsis Presentation of two Research scholars:
 - (i) Pavan Paikrao (Research Topic: Developing Optimized Signal Processing Techniques for Improving the Perception of Hearing Impaired)
 - (ii) Pratima Nirmal (Research Topic: Minimizing Mutual Coupling in MIMO Antenna)
- B. Decision on research work carried out by Research Scholar Ms. Pallavi Ingale for submission of Pre-Synopsis (Research Topic: An Information Extraction Approach to Acoustic Signal Processing: Analysis, Segregation and Detection)
- C. To take review of research progress done by the of Research Scholars
- D. To take review of bi-annual progress reports submitted
- E. Any other point:

To discuss reports received from External Examiners for the Research scholars namely

- 1. Milind Bhagat
- 2. Rohit Gawade

Following Research Committee members were present for the meeting:

- 1. Dr. S. L. Nalbalwar
- 2. Dr. R.S. Holambe
- 3. Dr. R.N. Awale
- 4. Dr. A. B. Nandgaonkar

Following points were discussed and finalized in the meeting:

A] Pre-synopsis Presentations

(i) Mr. Pavan Paikrao has presented pre-synopsis on “Developing Optimized Signal Processing Techniques for Improving the perception of Hearing Impaired” before RC. He has satisfactorily answered the questions asked by the Committee. The RC recommended his case for submission of synopsis and thesis.

(ii) Mr. Pratima Nirmal has presented pre-synopsis on “Minimizing Mutual Coupling in MIMO Antenna” before RC. She has satisfactorily answered the questions asked by the Committee. The RC recommended her case for submission of synopsis and thesis.

B] Permission for Pre-Synopsis Presentation:

Ms. Pallavi Ingale has completed substantial work on her Ph.D. topic and published research papers in International Journal and conferences. The RC unanimously recommended her case for pre-synopsis presentation in the next meeting of RC.

C] To take review of research progress done by the of Research Scholars

Sr. No.	Name of the Candidate	Registration Number & Date	Broad area of research	Remarks
1	Bhide Girish Govind	RS20140301 20/8/2014	Analysis, Simulation and Design of MSA using suitable Computational EM Method	Progress is good. Candidate should communicate papers with reputed journals in his research area.
2	Khobragade Sanjay Vivekanand	RS20140302 21/8/2014	Some studies on Fractal Tree MSA for Multiband Application	Progress is good. Candidate should communicate papers with reputed journals in his research area.
3	Kotade Amol Bhaskar	RS20140303 19/8/2014	Analysis of PAPR reduction in OFDM based system and system performance improvement	Progress is good. Candidate should communicate papers with reputed journals in his research area.
4	Shinde Ashok Naganath	RS20140306 21/8/2014	Compressed Sensing for Bio-signals	Progress is good. Candidate should communicate papers with reputed journals in his research area.
5	Bavkar Sandeep Sarjerao	RS20150301 10/09/2015	Human Brain Distinctiveness Analysis based on EEG	Progress is good. Candidate should communicate papers with reputed journals in his research area.
6	Oak Pratik Vinayak	RS20150307 09/09/2015	Analysis and Detection of Cervix Cancer: An Image Processing Approach	Progress is good. Candidate should communicate papers with reputed journals in his research area.
7	Kadge Sushma Shankar	RS20150303 11/09/2015	Analysis and Classification of Retinal Images	Progress is good. Candidate should communicate papers with reputed journals in her research area.
8	Munde Mahesh Madanrao	RS20150306 09/09/2015	Impact Analysis of effects of RF on Human Health	Progress is good. Candidate should communicate papers with reputed journals in his research area.
9	Khadase Rahul Babarao	RS20150304 10/09/2015	Design of Implantable Antenna as a Sensor for Continuous Glucose Monitoring System	Progress is good. Candidate should communicate papers with reputed journals in his research area.

D] Approval of Biannual Reports:

Biannual progress reports of above research scholars in the department were placed before RC for monitoring the progress of the candidates. RC found their work satisfactory and all these progress reports were approved by committee.

Sr. No.	Name of the Candidate	Registration Number & Date	Broad area of research
1	Pallavi Ingale	RS 20130301 13/08/2013	An Information Extraction Approach to Acoustic Signal Processing: Analysis, Segregation and Detection
2	Bhide Girish Govind	RS20140301 20/8/2014	Analysis, Simulation and Design of MSA using suitable Computational EM Method
3	Khobragade Sanjay Vivekanand	RS20140302 21/8/2014	Some studies on Fractal Tree MSA for Multiband Application
4	Kotade Amol Bhaskar	RS20140303 19/8/2014	Analysis of PAPR reduction in OFDM based system and system performance improvement
5	Shinde Ashok Naganath	RS20140306 21/8/2014	Compressed Sensing for Bio-signals
6	Bavkar Sandeep Sarjerao	RS20150301 10/09/2015	Human Brain Distinctiveness Analysis based on EEG
7	Jagtap Sagar Satyawar	RS20150302 10/09/2015	Some Studies on Smart Antenna for future Wireless Communication
8	Oak Pratik Vinayak	RS20150307 09/09/2015	Analysis and Detection of Cervix Cancer: An Image Processing Approach
9	Kadge Sushma Shankar	RS20150303 11/09/2015	Analysis and Classification of Retinal Images
10	Munde Mahesh Madanrao	RS20150306 09/09/2015	Impact Analysis of effects of RF on Human Health
11	Khadase Rahul Babarao	RS20150304 10/09/2015	Design of Implantable Antenna as a Sensor for Continuous Glucose Monitoring System
12	Uday Prakash Mithapelli	RS20150305 11/09/2015	Analysis and Classification under water signals

E] To discuss report received from External Examiners

(i) External examiners have evaluated the thesis submitted by Mr. Milind Bhagat. Both the examiners have recommended the thesis for final defense.

RC recommended the thesis for the final defense examination.

(ii) External examiners have evaluated the thesis submitted by Mr. Rohit Gawade. Both the examiners have recommended the thesis for final defense. However, one of the examiners has asked some queries, which are not mandatory. Accordingly, candidate has replied those queries. RC approved the responses to queries submitted by him and recommended the thesis for final defense examination.

II. RC Meeting held on 8th May, 2019

Meeting of RC in Electronics and Telecommunication Engineering was held in EDUSAT room on 8th May, 2019.

Agenda for the meeting was as follows:

- A. Annual Progress Seminars
- B. To discuss replies received from Mr. Pavan Paikrao (Research Scholar) to the queries of external examiners
- C. To take review of Bi-annual progress reports submitted in July-Dec. 2018
- D. Decision on reports recommended and submitted by RPC
- E. Decision on research work carried out by Research Scholar Mr. S.V. Khobragade. for submission of Pre-Synopsis (Title : Some Studies on Fractal Tree Microstrip Antenna for Multiband Application)
- F. Other point: Recognition of Dr. N.S. Jadhav as Research Guide

Following Research Committee members were present for the meeting:

1. Dr. S. L. Nalbalwar
2. Dr. S.B. Deosarkar
3. Dr. R.N. Awale
4. Dr. A. B. Nandgaonkar
5. Dr. Brijesh Iyer
6. Dr. Faruk S. Kazi

The following members were absent with prior intimation to Chairman, RC.

1. Dr. Y.V. Joshi
2. Dr. R.S. Holambe

Following points were discussed and finalized in the meeting:

A] Annual Progress Seminar presentation and Evaluation

Following candidates presented their annual progress seminars before the RC. RC assessed and evaluated their presentations and remarks given by RC are as follows:

Sr. No.	Name of the Candidate	Registration Number & Date	Broad area of research	Remark
1	Khobragade Sanjay Vivekanand	RS20140302 21/8/2014	Some studies on Fractal Tree MSA for Multiband Application	Recommended for Pre-Synopsis.
2	Kadge Sushma	RS20150303	Analysis and Classification	1. Candidate needs to

	Shankar	11/09/2015	of Retinal Images	understand characteristic of the dataset. This will help in identifying proper classification technique and justify accuracy of the result. 2. Candidate may submit research work in good quality peer-reviewed journals.
3	Khadase Rahul Babarao	RS20150304 10/09/2015	Design of Implantable Antenna as a Sensor for Continuous Glucose Monitoring System	Candidate may work on good quality publication based on research work completed till now.

The Annual Progress Seminar of 2018-2019 (Jan.-2018) batch research scholars

The annual progress seminar of 2018-2019(Jan.-2018) batch research scholars was held in the department to evaluate the progress of the research scholars.

Following RC members and external observers were present for the evaluation:

1. Dr. S. L. Nalbalwar: Chairman, DRC
2. Dr. S. B. Deosarkar: Member, RC
3. Dr. Brijesh Iyer: Member, RC
4. Dr. A. W. Kiwalekar: External observer
5. Dr. S. M. Jadhav: External Observer

The following members were absent with prior intimation to Chairman, RC.

3. Dr. A. B. Nandgaonkar: Member, RC
4. Dr. P. K. Katti: External Observer

Each Scholar had presented his/her work done during the last academic year and same was evaluated by the individual SRC members. The details of the evaluation are as follows:

Sr.	En. No.	Name	Title/ Broad area of research	Remarks
1.	RS20170301	Mr. Bakale R.S.	A compact UWB MIMO antenna with high isolation and low correlation for wideband applications	Strong literature review is required to justify the problem.
2.	RS20170302	Mr. Bodke Bhagwan	RF energy harvesting antenna for implantable device	Strong literature review is required to justify the problem.
3.	RS20170303	Mrs. Dhengre Shraddha	Clustering issues in cognitive radio network for 5G applications	Strong literature review is required to justify the problem.
4.	RS20170304	Mr. Jagdale Shantanu	Performance enhancement of a FSO link	Strong literature review is required to justify the problem.

5.	RS20170305	Mr. Jain Deepak	Design and Analysis of Photonics Front ends for 5G applications	Strong literature review is required to justify the problem.
6.	RS20170306	Mrs. Kamthekar Swati	Past life regression and healing: An EEG based analysis	Strong literature review is required to justify the problem.
7.	RS20170307	Mr. Harsh Jondhale- Khare	Hybrid energy management of fuel coil electric vehicle to optimize fuel consumption and improving FC lifetime	1. Strong literature review is required to justify the problem. 2. The title need to be reworded in consultation with Supervisor
8.	RS20170308	Mr. Mukund Kulkarni	Load balancing techniques in Cloud Computing	Strong literature review is required to justify the problem.
9.	RS20170309	Mr. Suraj Patil	Some studies n Application Control using brain computer interface.	1. Strong literature review is required to justify the problem. 2. The title need to be reworded in consultation with Supervisor
10.	RS20170310	Mr. Puri Digambar	Detection of Alzheimer's diseases using EEG recording	Strong literature review is required to justify the problem.
11.	RS20170311	Mr. Rajput Jaswantsing	Some studies on diagnosis & curing of cancer deploying Hyperthermia technique	1. Strong literature review is required to justify the problem. 2. The title need to be

Following general suggestions were given to all the scholars regarding their progress:

1. A timeline of the research work activity need to be prepared and submitted the ensuing bi-annual progress report.
2. As per the existing rules of the Ph.D. program, the precise problem statement need to be defined within 18 months of the registration. Hence, all were informed to prepare it in consultation with the research supervisor on or before the ensuing bi-annual progress report.

The evaluation committee unanimously recommends to accept the annual progress reports of the 11 research scholars listed in the above table. Further, Chairman, DRC, is requested to put

forward this report for the perusal/approval of DRC. The RC gone through the report submitted by RPC and approved the same.

B] To discuss replies received from Mr. Pavan Paikrao (Research Scholar) to the queries of external examiners

External examiners have evaluated the thesis submitted by Mr. Pavan Paikrao. External examiners have raised some queries. Accordingly he has addressed the queries. RC approved the responses to queries submitted by him and recommended for final defense examination.

C] Approval of Biannual Reports:

Biannual progress reports of above research scholars in the department, stated in [A], were placed before RC for monitoring the progress of the candidates. RC found their work satisfactory and all these progress reports were approved by committee.

D] Decision on reports recommended and submitted by RPC

Biannual progress reports of the following research scholars in the department recommended and submitted by RPC were placed before RC for monitoring the progress of the candidates. RC found their work satisfactory and all these progress reports were approved by committee.

Sr. No.	Name of the Candidate	Registration Number & Date	Broad area of research	Remark
1	Niranjan Satish Kulkarni	RS20180304 04/08/2018	Big Data Analytics	Course work completed. Biannual reports submitted. Which were placed before RC through RPC were approved by RC.
2	Naik Amit Jayant	RS20180305 03/08/2018	Microwave Engineering	
3	Mehta Ameet Mukund	RS20180306 03/08/2018	Microwave Engineering	
4	P Chander	RS20180310 06/08/2018	Biomedical Signal Processing	
5	Gaikwad Snehal Sunil	RS20180301 03/08/2018	Signal Processing	
6	Jangam Aniket Ashok	RS20180302 10/08/2018	Microwave Engineering	
7	Sudhirkumar Suryakant Dhotre	RS20180308 03/08/2018	Optical Communication	
8	Biradar Shashank Devidasrao	RS20180309 04/08/2018	Biomedical Signal Processing	
9	Kamble Kunal Shankar	RS20180303 10/08/2018	Embedded System Design	
10	Shinde Swapnesh Sudesh	RS20180311 01/09/2018	Biomedical Signal Processing	
11	Rakesh T	RS20180307 04/08/2018	Image Processing	

12	Mashayak Usama Atherpasha	RS20180312 11/09/2018	Microwave Engineering
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E] Permission for Pre-Synopsis Presentation:

Mr. S.V. Khobragade has completed substantial work on his Ph.D. topic and published research papers in International Journals and conferences. The RC unanimously recommended his case for pre-synopsis presentation in the next meeting of RC.

F] Other Point: Recognition as Research Guide: Dr. N.S. Jadhav has submitted his request for recognition as a Research Guide. The committee has gone through details submitted by him and recommended his case for recognition as a Research Guide of the Department.

III. RC Meeting held on 25th June, 2019

Meeting of RC in Electronics and Telecommunication Engineering was held in EDUSAT room on 25th June, 2019.

Agenda for the meeting was as follows:

- A. Pre-synopsis presentation of Mr. S.V. Khobragade
- B. To discuss replies received from Mr. Yuvraj Parkale (Research Scholar) to the queries of external examiners
- C. Any other point with permission of the chair.

Following Research Committee members were present for the meeting:

1. Dr. S. L. Nalbalwar
2. Dr. S.B. Deosarkar
3. Dr. R.N. Awale
4. Dr. A. B. Nandgaonkar
5. Dr. Faruk S. Kazi
6. Dr. Ashish Baigwari. UTU, Dehradun (Participated through phone). Invited Member
7. Dr. Vinod Kapoor. HPTU, Hamirpur (Participated through phone), Invited Member

The following members were absent with prior intimation to Chairman. RC.

1. Dr. Y.V. Joshi
2. Dr. Brijesh Iyer
3. Dr. R.S. Holambe

Following points were discussed and finalized in the meeting:

A] To discuss replies received from Mr. Yuvraj Parkale (Research Scholar) to the queries of external examiners

External examiners have evaluated the thesis submitted by **Mr. Yuvraj Parkale** (RS2013 0302). External examiners have raised some queries. Accordingly he has addressed the queries of both examiners. RC approved the responses to queries submitted by him and recommended for final defense examination.

B] Mr. S.V. Khobragade (RS2014 0302) has presented pre-synopsis on his research topic **Some Mudies on Fractal Tree Microstrip Antenna for Multiband Application**. He has satisfactorily answered all queries asked by the committee. The RC recommended his case for submission of synopsis and thesis.
