

National Institute of Technology Karnataka, Surathkal

Mangalore - 575 025, India



Annual and Audit Report

2022 - 23

VISION

To facilitate transformation of students into good human beings, responsible citizens and competent professionals, focusing on the assimilation, generation and dissemination of knowledge.

MISSION

- Impart quality education to meet the needs of profession and society, and achieve excellence in teaching-learning and research.
- Attract and develop talented and committed human resources, and provide an environment conducive to innovation, creativity, team-spirit and entrepreneurial leadership.
- Facilitate effective interactions among faculty and students, and foster networking with alumni, industries, institutions and other stake-holders.
- Practice and promote high standards of professional ethics, transparency and accountability.

MAIN ENTRANCE GATE



NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA SURATHKAL
MANGALORE - 575 025 INDIA



ANNUAL REPORT
2022-2023

Website : www.nitk.ac.in

E-mail : director@nitk.ac.in

Tel : 0824-2474000 (24 lines)

Fax : 0824-2474033

NITK SURATHKAL – AT A GLANCE

GOVERNANCE

NITK is governed by the Board of Governors, which consists of representatives of the Government of India, Government of Karnataka, Industry, Alumni, and other Nominees. The Chairman of the Board is nominated by the Government of India. The Director is the administrative head of the Institute. NITK an “Institute of National Importance”, is governed by NIT Act 2007 and statutes laid down by Government of India. Reconstituted Board of Governors is in place since September 2011.

TEAM NITK

14 Departments
267 highly qualified and dedicated faculty
109 committed supporting staff
6836 talented and motivated students

LIST OF DEPARTMENTS

- Water Resources and Ocean Engineering
- Chemical Engineering
- Chemistry
- Civil Engineering
- Computer Science & Engineering
- Electronics & Communication Engineering
- Electrical & Electronics Engineering
- Information Technology
- Mathematical & Computational Sciences
- Mechanical Engineering
- Metallurgical & Materials Engineering
- Mining Engineering
- Physics

SCHOOLS

- School of Humanities, Social Sciences and Management

Academic Programs

B.Tech. – 11 disciplines
M.Tech. – 26 Specializations
M.Tech. (Research) – All Specializations
MBA
MCA
M.Sc. (Chemistry) and M.Sc. (Physics)
Ph. D. – offered in all departments

All the Departments of the Institute are recognized QIP centers for admission of teachers of both Engineering colleges and Polytechnics for their post-graduate & doctoral studies.

PUBLICATIONS (2022-23)

International Journals – 630
National Journals – 11
International Conference – 275
National Conference – 19

INTERDISCIPLINARY CENTERS OF EXCELLENCE

Disaster Risk Reduction Innovation Material Research Sustainable Technologies System Design (Virtual Instrumentation) Wireless Sensor Networks.

ASSOCIATED CENTRES

Centre for Continuing Education, R&D center for - clay, Roofing Tiles & Ceramic Products, Industry Institute Partnership Cell; NITK Science and Technology Entrepreneurs Park (NITK-STEP).

CAMPUS

295 acres of lush green beach-side campus located at Srinivasnagar, Surathkal Mangalore. Departments & facilities on Eastern and Western sides of NH-66 with connectivity through a 2-lane vehicular underpass. Well connected by rail and road to the rest of country. Flights available to major Indian cities and International destinations.

FACILITIES & SUPPORTS

150 + Classrooms, 140+ laboratories
12 hostel blocks for boys, 5 hostel blocks for girls. Mega Hostel for boys with 1512 single-seater rooms. New Ladies Hostel with 347 single –seater room. Internet connectivity (1Gpbs, 155 Mbps, 6000 nodes) Central computer Center, Central Library, E-Library, On-line access to journals 1200-capacity Auditorium, 1800-capacity Open-air theatre, Co- Operatives stores, Post office, Banks, ATMs, Health Care Centre with many visiting specialist doctors, Yoga Centre, 3 Campus schools (Kannada & English Medium), Guest House, Food Court and Canteens, International standard Swimming – Pool, Sports Grounds for cricket, hockey, football floodlit Courts for Basketball, Volley ball and Tennis, NCC– 2nd Karnataka Engineering Company, Surathkal Innovation Challenge (SIC), Student Internship Programme (SIP).

Total Financial Outlay	Rs. 27021.68 Lakhs
Internal Revenue Generated	Rs. 6886.88 Lakhs
Consultancy & Testing Earnings	Rs. 513.00 Lakhs
Corpus Fund	Rs. 27445.20 Lakhs

DOCTORAL OUTPUT

2018 – 124 candidates
2019 – 116 candidates
2020 – 121 candidates
2021 – 120 Candidates
2022 – 126 Candidates
candidates Doctoral students on rolls – 1120

EXTRA AND CO-CURRICULAR ACTIVITIES

More than 30 clubs, societies and professional body chapters are active conducting regular activities through elected leaders and representatives. "INCIDENT" and "ENGINEER" are popular cultural and technical annual festivals. NITK has won the overall championship of Inter NIT Sports consecutively for the last 3 years.

SCHOLARSHIPS & MEDALS

Several well known and prestigious scholarship (27) awards and medals (66) are on offer for students at all levels. This is in addition to all regular scholarships of Govt. of India and Other State Governments.

Career Development Centre (Formerly Training And Placement)

NITK is ranked among the top institutions for student placements. During 2022-23. UG placements 91.08%, M.Tech. 74.70%, MCA 94.44, MBA 72.09 and M.Sc. 34.92 students got placement through the campus selection. The department also facilitates internships for students within India and overseas.

MOUS with Universities, Institutes for the year 2022-23.

1. 11-04-2022, CSIR-Institute of Minerals & Materials Technology Bhubaneswar, 5 years, To Promote Collaborative research and exchange of knowledge and technical knowhow between the two institutions in areas of mutual interest.
2. 19-04-2022, Department of Psychiatry Yenepoya Medical College , Deralakatte Mangalore, 5 years, To encourage co-operation between administration on providing necessary service and expertise from either end to address the stress-related medical issues and psychological problems among NITK Students.
3. 29-04-2022, UD Trucks India Private Limited, Bengaluru, 3 years, To Promote students, Faculty Employees of UD Trucks Interaction.
4. 10-05-2022, Fourth Frontier Technologies Private Limited, Bangalore, 5 years, To collaborate on learning new technologies with the FFTPL program, develop project prototypes, and organise student internships.
5. 11-05-2022, NITTE (Deemed to be University), Deralakatte, Mangalore , 5 years, To encourage direct contact & co-operation between their faculty and administrative staff, departments & research institutions, within fields that are mutually acceptable.
6. 26-05-2022, SEG Automotive India Pvt. Ltd, Bengaluru , 3 years, To Co-operate with each other to explore the possibility of research collaboration in Electric Vehicle Technology.
7. 13-06-2022, Industry Network Technology Council (INTC), 3 years, To Promote education and collaboration on current and evolving Internet Standards in a Vendor-Neutral Environment.
8. 23-06-2022, Robosoft Technologies Private Limited, Udupi, 3 years, To collaborate in India to develop curriculums or any other mutually agreed activities.
9. 11-07-2022, Srinivas University, Mukka, Mangaluru, 3 years, To encourage collaboration and synergy between their staff and students in areas like R&D, Organising conferences etc.
10. 16-07-2022, Karnataka State Minerals Corporation limited Bengaluru, 5 years, Research, Training and Internship to BE/B. Tech students by KSMCL during their Training.
11. 25-07-2022, QUNU Labs Private Limited , Bangalore, 3 years, To promote interaction between QNU labs in Cybersecurity, Quantum safe internet technologies, Network Security, Cryptography, and allied areas.
12. 05-08-2022, TATA Consultancy Service Mumbai, 2 years. To research collaborations and also for the development of projects and patents in the area of Quantum Computing as well as the exchange of students to the TCS to work on their problem statements.
13. 05-08-2022, TATA Communication Limited, Mumbai, 3 years, To collaborate on Learn with TCL program, develop project prototypes and TCL designed curriculum elective (2/3 credits) offered under the name TCL course. Accordingly, both Parties shall work together on developing and shaping the curriculum guided by TCL technological focus.
14. 09-09-2022, Niveus Solutions Pvt. Ltd, Udupi, 3 years, To advance multidisciplinary research, development, and education in emerging technologies and applications, such as cloud infrastructure, Data Analytics, AI, ML and a few others.
15. 16-12-2022, EM Electronix Pvt. Ltd, Bengaluru, 5 years, To Promote Collaboration in the area of EV Control Unit and Charges.
16. 06-02-2023, Bharat Electronics Ltd (BEL) Bengaluru, 5 years, Solving Academic research Pressing problems faced by Defence, Strategic, and Civilian Sectors.

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1. THE INSTITUTE

1.1 HISTORICAL BACKGROUND

National Institute of Technology Karnataka (NITK) Surathkal, formerly known as Karnataka Regional Engineering College (KREC) Surathkal, was established in the year 1960 at Srinivasnagar, Mangalore, Karnataka State. Sri U. Srinivasa Mallya, a visionary and a philanthropist was instrumental in the establishment of this Institute and hence the campus is named after him as "Srinivasnagar". KREC made a small yet significant beginning with 3 Departments offering BE programs in Civil, Mechanical and Electrical Engineering. Since then KREC grew from strength to strength and set unprecedented records in the field of technical education in the country. Initially the College was affiliated to the University of Mysore but in 1980 the affiliation was transferred to the Mangalore University. With every passing batch of students who went on to conquer unexplored domains in the service of humanity, the stature of KREC grew and the world recognized and applauded. So much so, 'Surathkal' is synonymous with high quality engineering education. In 2002, the Government of India decided to grant full autonomy and accordingly the College was elevated to the status of Deemed University and renamed as the National Institute of Technology Karnataka. Subsequently, the National Institute of Technology Act, 2007 was enacted by the Parliament of India to declare India's National Institutes of Technology as Institutes of National Importance. The Act received the assent of the President of India on 5th June, 2007 and became effective from August 15, 2007. The Institute is governed by the rules and statutes of the NIT Act.

The Institute has established itself as a premier center engaged in imparting quality technological education and providing support to research and development activities. The Institute has a long tradition of research for several decades in both traditional and modern areas of engineering and sciences in all departments. The Institute has been actively involved in applied research while

identifying and resolving problems faced by the society in several areas. NITK attracts students from all over the country and abroad. NITK graduates are sought after by top industries/companies and the Institute has been rated as one of the best Institutions in the country with regard to student placements. Many of its alumni occupy coveted positions both in India and abroad and are sources of pride and inspiration to the Institute. NITK is consistently rated among the top engineering and technological institutes in India. Today, the Institute offers nine B.Tech programmes, 31 Post Graduate programmes and Doctoral programmes in all its fourteen Departments and is making significant advances in R&D and outreach activities too.

1.2 LOCATION

The Institute is located at Srinivasnagar, Surathkal in the Dakshina Kannada District of Karnataka State, 21 km. North of Mangalore city on either side of NH.66 which cuts across the campus. The campus is well connected by rail, road, air and sea with the rest of the country. The airport is situated at Bajpe, 20 km from Surathkal. The nearest Railway station is Surathkal (3 km.) which is on the Mangalore-Mumbai Konkan Railway route and the nearest sea port is New Mangalore which is 8 km. south of Institute premise.

1.3 CAMPUS

The campus covers an area of 295 acres in picturesque surroundings with Western Ghats in the East and the West Arabian Sea in the West. The campus is well laid out with roads, electrical installation, water supply, underground drainage etc. The campus being on the seashore, is blessed with clean air lush green and a healthy climate. The National Highway NH 66 separates the campus into Western Side and Eastern Side campus. The Western Side of the campus houses the Departments of Electrical and Electronics Engg., Electronics & Communication Engg., Computer Science and Engg. and Information Technology, Guest House, STEP, Yoga centre and pristine beach.

2 GOVERNANCE & ADMINISTRATION

2.1 ADMINISTRATION

NITK is governed by the Board of Governors which consists of representatives of the Government of India, Government of Karnataka, Alumni, Industry and other nominees. The Chairman of the Board is nominated by the Government of India. The Director is the administrative Head of the Institute. The functioning of NITK is governed by NITSER Act 2007 and rules laid down by Government of India.

COUNCIL, BOG AND OTHER COMMITTEES

COUNCIL OF NITs

- 1 Hon'ble Minister, Ministry of Education (erstwhile MHRD), Government of India
- 2 Education Secretary, Ministry of Education (erstwhile MHRD), Government of India
- 3 The Chairperson of National Institute of Technology Karnataka, Surathkal
- 4 Director of National Institute of Technology Karnataka, Surathkal
- 5 Chairman, UGC
- 6 Chairman, All India Council for Technical Education
- 7 Director, General, Council for Scientific and Industrial Research
- 8 Secretary, Department of Bio-Technology, Government of India
- 9 Secretary, Department of Atomic Energy, Government of India
- 10 Secretary, Department of Information Technology, GOI
- 11 Secretary, Department of Space, Government of India
- 12 Not less than three but not more than five persons to be nominated Member by the Visitor, atleast one of whom shall be a women, having special knowledge or practical experience in respect of education, industry, science or technology
- 13 Three members of Parliament, of whom two shall be chosen by the Member House of the people and

one by the Council of States

- 14 Two Secretaries to the State Government, from amongst the ministries Member or departments of that Government dealing with technical education Two Secretaries to the State Government, from amongst the ministries Member or departments of that Government dealing with technical education
- 15 Financial Adviser, Ministry Government of India
- 16 Joint Secretary -Technical (Technical)/Additional Secretary (Technical), Department of Higher Education, Ministry of HRD, GOI

BOARD OF GOVERNORS

Chairperson In-charge

Udaykumar R.Yaragatti, From 17.02.2022 to 24.08.2022
Ph.D., Director (In-charge) NITK, Surathkal.

Chairperson In-charge

Prasad Krishna, Ph.D., From 25.08.2022 to till date
Director (Additional Charge), NITK, SURATHKAL

Members:

Director Ex-Officio

Udaykumar R. Yaragatti, From 17.02.2022 to 24.08.2022
Ph.D., Director (In-charge) NITK, Surathkal.

Prasad Krishna, Ph.D. From 25.08.2022 to till date
Director (Additional Charge), NITK, SURATHKAL

Nominee of the Central Government

Ms. Saumya Gupta, IAS From 07.12.2021 to till date
(TR:2004) Joint Secretary (NITs),Dept. Of Higher Education

Ministry of Education (Shiksha Mantralaya) Govt. of India, Room No.203, C – Wing Shastri Bhavan, NEW DELHI – 110 115.

Ms. Darshana M. Dabral Upto 11.09.2022
Joint Secretary and Financial Advisor Integrated Finance Bureau Ministry of Education

(Shiksha Mantralaya)
Govt. of India, 120-C,
Shastri Bhawan
NEW DELHI – 110 001.
Ms. Leena Johri, IAS From 12.09.2022
(UP:94) to 05.01.2023
Additional Secretary and
Financial Advisor
Integrated Finance
Bureau, Ministry of
Education, (Shiksha
Mantralaya) Govt. of
India, Shastri Bhawan,
New Delhi - 110 001
Sh. Sanjog Kapoor From 06.01.2023
Joint Secretary & to till date
Financial Advisor
Integrated Finance
Bureau,
Ministry of Education,
(Shiksha Mantralaya)
Govt. of India,
120-C, Shastri Bhawan,
New Delhi - 110 001.

Nominee of the State Government

Dr. Y. A. Narayanaswamy From 29.01.2022
Hon'ble Member to 28.01.2025
Karnataka Legislative Notification No:
Council, No.461, 7th ED/252/TEC/2021
Cross, 4th Main, H.I.G. dated 29.01.2022
Dollar's Colony, RMV 2nd received from the
State, Bengaluru – Deputy Secretary to
560094. Government,
Higher Education
Department,
Bengaluru.

Shri Aprameya
Radhakrishna
CEO & Co-founder of
Koo No.101, Van Gogh's
Garden Kasturba Cross
Road Bengaluru –
560001.

Nominee of the NIT Council Vacant
Vacant

Nominee of the Institute Senate

Subhash C Yaragal From 10.11.2020
Ph.D., Department of to 09.11.2022
Civil Engineering,
NITK, SURATHKAL.
U. Shripathi Acharya, From 10.11.2022
Ph.D. Professor to 09.11.2024
Department of
Electronics &
Communication
Engineering,,
NITK,SURATHKAL.

Dr. Vasudeva Madav From 17.10.2021
Assistant Professor to 16.10.2023
Department of
Mechanical
Engineering
NITK, SURATHKAL.

Director, IIT-Bombay
Prof. Subhasis Upto 26.05.2022
Chaudhuri, Director
Indian Institute of
Technology Bombay
IIT Powai, Mumbai –
400 076.

Prof. K. V. Krishna From 27.05.2022
Rao, Deputy Director to three years
(FEA) & Professor,
Dept. of Civil
Engineering
Indian Institute of
Technology Bombay
P.O. IIT Powai,
Mumbai – 400 076.

[Nominee of the Director, IIT-Bombay].

Secretary

Shri K. Ravindranath Till date
Registrar, N.I.T.K.,
SURATHKAL.

FINANCE COMMITTEE

Name & Address Term

Chairperson In-charge

Udaykumar R. From 17.02.2022
Yaragatti,Ph.D. Director to 24.08.2022
(In-charge), NITK,
Surathkal.

Prasad Krishna, Ph.D. From 25.08.2022
Director (Additional to till date
Charge), NITK,
SURATHKAL

Members:-

Director Ex-Officio

Udaykumar R. From 17.02.2022
Yaragatti,Ph.D. Director to 24.08.2022
(In-charge), NITK,
Surathkal.

Prasad Krishna, Ph.D. From 25.08.2022
Director (Additional to till date
Charge), NITK,
SURATHKAL

Nominee of the Central Government

Ms. Saumya Gupta, IAS From 07.12.2021
(TR:2004), Joint Secretary to
(NITs), Dept. of Higher till date
Education Ministry of
Education (Shiksha

Mantralaya), Govt. of India, Room No.203, C – Wing, Shastri Bhavan, NEW DELHI – 110 115.
 Ms. Darshana M. Dabral Upto 11.09.2022
 Joint Secretary and Financial Advisor
 Integrated Finance Bureau
 Ministry of Education (Shiksha Mantralaya), Govt. of India, 120-C, Shastri Bhawan, NEW DELHI – 110 001.
 Ms. Leena Johri, IAS From 12.09.2022 to 05.01.2023
 Secretary and Financial Advisor Integrated Finance Bureau, Ministry of Education, (Shiksha Mantralaya) Govt. of India, Shastri Bhawan, New Delhi - 110 001
 Sh. Sanjog Kapoor From 06.01.2023 to till date
 Joint Secretary & Financial Advisor
 Integrated Finance Bureau, Ministry of Education, (Shiksha Mantralaya), Govt. of India, 120-C, Shastri Bhawan, New Delhi - 110 001.

FC Member - Nominee of the State Government

Shri Aprameya From 29.01.2022 to 28.01.2025
 Radhakrishna
 CEO & Co-founder of Koo Notification No: No.101, Van Gogh's ED/252/ Garden Kasturba Cross TEC/2021 dated Road, Bengaluru - 29.01.2022
 560001. received from the Deputy Secretary to Government, Higher Education Department, Bengaluru.

Nominee of the Institute Senate

Subhash C Yaragal, From 10.11.2020 to 09.11.2022
 Ph.D., Department of Civil Engg., NITK, SURATHKAL.
 U. Shripathi Acharya From 10.11.2022 to 09.11.2024
 Ph.D., Department of Electronics & Communication Engg. NITK, SURATHKAL.

Member Secretary

Shri K. Ravindranath Till date
 Registrar
 N.I.T.K., SURATHKAL

BUILDING AND WORKS COMMITTEE

Name & Address	Term
The Director – ex-officio Chairman	
Udaykumar R. Yaragatti, Ph.D. Director (In-charge) NITK, Surathkal.	From 17.02.2022 to 24.08.2022
Chairman In-charge	
Prasad Krishna, Ph.D. Director (Additional Charge) NITK, SURATHKAL	From 25.08.2022 to till date
Members (Ex-officio):	
Director or Deputy Secretary or his nominee dealing with the NITs in the Ministry And Director or Deputy Secretary or his nominee dealing with the Finance of NITs in the Ministry - as ex-officio members of the Central Government.	
Shri M L Soni, Director – NITs, Ministry of Education, Govt. of India, Dept. of Higher Education, Shastri Bhavan, New Delhi – 110001.	Upto 29.08.2022
Ms. Veena Dunga Deputy Secretary (NITs), Dept. of Higher Education Ministry of Education, Govt. of India, C-Wing Shastri Bhavan, New Delhi. 30.08.2022 to till date
Shri Anil Kumar, Director – Finance, Ministry of Education, Govt. of India, Dept. of Higher Education, No. 213-C, Shastri Bhavan, New Delhi – 110001	Till date
Dean, Planning and Development or similar position – Member.	
Prof. Babu Narayan K S, Dean (P&D), NITK, Surathkal.	
Members:	
One member nominated by the Board of Governors.	
Lakshman Nandagiri Ph.D., Dept. of Water Resources & Ocean Engineering, NITK, Surathkal	Nominated vide Ref. No.67.3.3/67th meeting dated 12-08-2022- from 12.08.2022 to three years
One expert each from Civil and Electrical Engineering wing of Central or State Government or any autonomous body of repute – Member.	
Shri Suneet K Dadheech Superintending Engineer cum Project Manager, CPWD, NITKS Project Circle Office, NITK campus, Mangaluru – 575025	Nominated vide Ref. No.67.3.3/67th meeting dated 12-08-2022-

Shri Manjappa
Superintending
MESCOM
O&M Circle, Attavar
Mangalore – 575001.
Sri Ravikanth Kamath
Superintending Engineer (E),
Karnataka Power
Transmission Corporation
Limited, Works and
Maintenance Circle,
Maroli, Kulashekar,
Mangaluru – 575005

from
12.08.2022
to three years
Upto
19.07.2019

Nominated
vide Ref.
No.67.3.3/
67th meeting
dated 12-08-
2022-
from
12.08.2022
to three years

Registrar- ex-officio Member Secretary.
Shri K. Ravindranath
Registrar
N.I.T.K., SURATHKAL

Till date

OTHER COMMITTEES
SENATE

Name	Position
Udaykumar R Yaragatti, Ph.D. Director (In-charge), NITK, Surathkal.	Chairman from 17.02.2022 to 24.08.2022
Prasad Krishna, Ph.D. Director (Additional Charge), NITK, Surathkal.	Chairman from 25.08.2022 to till date
K.V. Jayakumar, Ph.D.	External Member (upto30.09.2022)
Rajesh M Hegde, Ph.D.	External Member (from 3.10.2022)
N. C. Shivaprakash, Ph.D.	External Member (upto30.09.2022)
Debashish Acharya, Ph.D.	External Member (from03.10.2022)
(Ms.) Anjula Gurtoo, Ph.D.	External Member (upto30.09.2022)
Neelima M. Gupte, Ph.D.	External Member (from 3.10.2022)
(Ms.) Vidya Shetty K, Ph.D.	Member
G. C. Mohan Kumar, Ph.D.	Member

K. S. Babu Narayan, Ph.D.	Member
S. M. Kulkarni, Ph.D.	Member
Vijay H. Desai, Ph.D.	Member (VRS from 31.01.2023)
Narendranath S, Ph.D.	Member
Shrikantha S. Rao, Ph.D.	Member
B M Dodamani, Ph.D.	Member
Lakshman Nandagiri, Ph.D.	Member
Subba Rao, Ph.D.	Member
Dwarakish G S, Ph.D.	Member
Kiran G. Shirlal, Ph.D.	Member
A. Mahesha, Ph.D. (Mrs.) Amba Shetty, Ph.D.	Member Member
K. Varija, Ph.D. (HoD – WROE)	Member (from 27.03.2023)
P E Jagadeesh Babu, Ph.D. (HoD)	Member
M.B. Saidutta, Ph.D.	Member
Dr. Raj Mohan B	Member
Gopal Mugeraya, Ph.D., (Reported back to the Institute on 30.01.2023 after completion of lien period as Director, NIT Goa)	Member
Uday Kumar Dalimba, Ph.D. (HoD)	Member
A. Chitharanjan Hegde, Ph.D.	Member
A. Nityananda Shetty, Ph.D.	Member
Badekai Ramachandra Bhat, Ph.D.	Member
Denthaje Krishna Bhat, Ph.D.	Member
Arun Mohan Isloor, Ph.D. (Mrs.) B R	Member Member
Jayalekshmi, Ph.D.	Member
M. C. Narasimhan, Ph.D.	Member
Katta Venkataramana, Ph.D.	Member
A.U. Ravi Shankar, Ph.D.	Member
K. Swaminathan, Ph.D.	Member (VRS from 31.03.2023)
Varghese George, Ph.D.	Member
S. Shrihari, Ph.D.	Member

Institutional Affairs)		S M Murigendrappa, Ph.D.	Member
H.O.D. of each	Members	Professor, Dept. of	
Department/his nominee		Mechanical Engg.	
BOG member	Member	Ravishankar K S, Associate	Member
representing the faculty		Professor, Metallurgical &	
Three Representatives	Member	Materials Engg.	
from the premier		Nagendrappa H, Asst.	Member
Academic Institutions	Member	Professor Grade- 1, Dept. of	
such as IIT, NIT, IISc.,		E&E Engg.	
IIM, others belonging to	Member	Mrs. Rashmi Uchil, Ph.D.	Member
Southern region		Asst. Professor Grade – 1,	
Assistant Registrar	Member	School of Humanities, Social	
(Academic)		Sciences and Management	
Registrar	Secretary	Dinesh Naik, Asst. Professor,	Member

QUARTERS ALLOTMENT COMMITTEE

Prof. Prasad Krishna, Ph.D.	President	Pathipati Srihari, Asst.	Member
(Director i/c)		Professor Grade – 1, Dept. Of	
Prof. G C Mohan Kumar,	Chairman	E&C Engg.	
Dean (Faculty Welfare)		Kedarnath Senapati, Asst.	Member
Prof. Gangadhar Mahesh,	Member	Professor Grade – 1, Dept.	
Ph.D., Faculty In-charge	Secretary	MACS Dept.	
(Estate & Works)		Shri. P N Subrahmanya,	Member
Prof. U Shripathi	Member	Asst. (SG-II)	
Acharya, Ph.D., Senior.		Establishment & General	
Internal BOG Member		Section	

Umesh Bhat,

Superintending Engineer
(on contract)

P Sam Johnson, Ph.D.,
Associate Dean (Faculty
Welfare) – 1

Dr. Ajay Kumar Yadav,
Ph.D., Dept. of Mechanical
Engg.

Dr. Nagendrappa H, Ph.D.
Liaison Officer – SC/ST Cell

Mrs. Vani M, Associate
Professor, Dept. of CSE

Mr. Gaurav Chowdhury,
Asst. Registrar (Admin)

President -NITK Employees
Association (R)

President–NITK Non
Teaching Employees

Association (R)

Shri. K Ravindranath, Registrar

Shri. Ram Mohan Y, Joint Registrar

Murulidhar N N, Ph.D.
Professor, Mathematical &
Computational Sciences

SECURITY COMMITTEE

Dean (Faculty Welfare)
Dean (P&D)
Dean (SW)
Registrar
Chairman, CCC
Prof. i/c Hostels
Resident Engineer
Joint Registrar
Faculty i/c Estate & Works
Faculty i/c Ele. Works
Faculty i/c Security
Security Officer

LIBRARY ADVISORY COMMITTEE

Prof. B. R. Shankar	Chairman, LAC
Dr. Subrahmanya K	Member (Water Resources & Ocean Engg)
Dr. B M Kunar	Member (Mining)
Dr. V. Murugan	Member (Math. & Comp.)
Dr. Shashi Bhushan Arya	Member (Met. & Mat. Engg.)
Dr. P. Shrihari	Member (Electronic & Comm.)
Dr. Suprabha	Member (School of Management)
K. R.	

Dr. Gangamma	Member (Chem. Engg.)
Dr. Debashree Chakraborty	Member (Chemistry)
Dr. Ajith K. M.	Member (Physics)
Dr. Biswajit Bhowmik	Member (Computer Science)
Dr. Kiran M	Member (Inf. Tech.)
Dr. Arumuga Perumal	Member (Mech. Engg.)
Dr. Girisha H. Navada	Member (Electrical & Electronics)
Dr. Anupama Surenjan	Member (Civil Engg.)
Mrs. Anusuya C.	Member (Central Library)
Dr. Mallikarjun Angadi	Secretary (Central)

SPORTS ADVISORY COMMITTEE

Director	President
Dean (S. W.)	Chairman
Dean (F.W.)	Member
Registrar	Member
Joint Registrar	Member
Associate Dean (SW) - I	Member
Associate Dean (SW) - II	Member
Resident Engineer In-charge	Member
Professor-in-charge of Hostel Affairs	Member
Prof. S M Murigendrappa, Dept. of Mechanical Engg.	Member
Prof. B Venkatesa Perumal, Dept. of E&E Engg.	Member
Dr. Vasudeva M, Dept. of Mechanical Engg.	Member
Dr. Nagendrappa H, Dept. of E&E Engg.	Member
Dr. S Pavan Kumar, School of Management	Member
Dr. Shyam Lal, Dept. of E&C Engg.	Member
Dr. Kiran M, Dept. of IT	Member
Dr. Shwetha H R, Dept. of WR&OE	Member
Shri. Shivaram A, Sr. Sc.Asst. P.D.	Member
Dr. Hem Prasad Nath, SAS Officer	Member
Librarian	Member
Students Council President	Member

Vice President	Member
Sports Secretary	Member
R C Convenor	Member
All Captains	Member
Dr. Manoj, SAS Officer	Member

INTERNAL COMPLAINTS COMMITTEE

Mrs. Amba Shetty, Ph.D., Professor, till 3.7.2022	Member, ICC-SH
Sheena, Ph.D. from 4.7.2022	
Annappa, Professor, Ph.D.	Member, ICC-SH
Mrs. Senthil Thilak A, Ph.D., Dept. of MACS	Member, ICC-SH
Ms. Khyati Verma, Ph.D. Dept. of Mechanical Engg.	Member, ICC-SH
Shri. Murugavelu, Supdt. (SG-II)	Member, ICC-SH
Ms. Wilma Irene Pinto, Superintendent	Member, ICC-SH
Mrs. Manjula V Prasad, Madhu Nivasa, Ambagilu, Udupi	External Member, ICC-SH

HEALTH CARE COMMITTEE

Dean (Faculty Welfare)	Chairman
Warden, Girls Hostel	Member
Professor in-charge (Hostel Affairs)	Member
Liaison Officer, SC/ST Cell	Member
G Ram mohan Reddy, Ph.D.	Member
Pavan Kumar, Ph.D.	Member
C P Devatha, Ph.D.	Member
Ms. Gayathri Rao K	Member
Joint Registrar	Member
Supdt. Accounts III	Member
President Student's Council	Member
Girls Representative	Member
Dr. M L Balabhaskara, Medical Officer	Member
Dr. (Mrs.) Shrimathi B, Medical Officer	Secretary

3. DEPARTMENTS AND SCHOOLS

Water Resources & Ocean Engineering	(WROE)
Chemical Engineering	(CH)
Chemistry	(CY)
Civil Engineering	(CV)
Computer Science & Engineering	(CO)
Electrical & Electronics Engineering	(E&E)
Electronics & Communication Engineering	(E&C)
Information Technology	(IT)
Mathematical & Computational Sciences	(MACS)
Mechanical Engineering	(ME)
Metallurgical & Materials Engineering	(MT)
Mining Engineering	(MN)
Physics	(PH)
SCHOOLS	(SOM)
School of Humanities, Social Sciences and Management	

4. ACADEMIC PROGRAMMES

4.1 PROGRAMMES OFFERED

I. B.TECH. (Undergraduate Programme) – Eight semesters

- 1 Chemical Engineering
- 2 Civil Engineering
- 3 Computer Science & Engineering
- 4 Electrical and Electronics Engineering
- 5 Electronics & Communication Engineering
- 6 Mechanical Engineering
- 7 Metallurgical & Materials Engineering
- 8 Mining Engineering
- 9 Information Technology
- 10 Artificial Intelligence
- 11 Computational Data Science

II .M.Tech. (Post Graduate Programme) – Four Semesters

- 1 Structural Engg.
- 2 Geotechnical Engg.
- 3 Environmental Engg.
- 4 Transportation Engg.
- 5 Construction Technology and Management
- 6 Marine Structures
- 7 Water Resources Engineering and Management
- 8 Geoinformatics
- 9 Manufacturing Engg
- 10 Mechatronics Engg
- 11 Thermal Engg
- 12 Mechanical Design
- 13 Power & Energy Systems
- 14 VLSI Design
- 15 Communication Engineering and Networks
- 16 Signal processing and Machine Design
- 17 Environmental Science and Technology
- 18 Chemical Engineering
- 19 Industrial Biotechnology
- 20 Materials Engg
- 21 Process Metallurgy
- 22 Nanotechnology
- 23 Computer Science & Engg

24 Computer Science & Engg- Information Security

25 Computational and Data Science
26 Information Technology

III M.Tech. by Research : In all the above M.Tech Programme and in the Department of Mining - M.Tech Research Programme in Rock Excavation Technology and Management

IV. M.C.A. (Master of Computer Applications) - Six semesters

V. M.B.A. (Master of Business Administration) - Four semesters

VI. M.Sc. in Chemistry – (Four semesters)

VII. M.Sc. in Physics – (Four semesters)

VIII. Ph. D. Programme:-

Ph.D. Programmes are offered in 14 Departments in various streams and interdisciplinary specializations.

4.2 ACADEMIC CALENDAR

Academic Programmes	Admission Year	Admission Commen	Admission closed on
B.Tech.	2022-23	4.12.2022	9.12.2022
M.Tech.	2022-23	11.08.2022	14.08.2022
M.Tech. by Research/ Spon.	2022-23	29.06.2022	6.07.2022
MCA	2022-23	16.08.2022	16.08.2022
M.B.A.	2022-23	9.5.2022	17.05.2022
M.Sc. (Physics & Chemistry)	2022-23	16.08.2022	16.08.2022
Ph.D	2022-23	29.06.2022	6.07.2022

5. ADMISSION POLICIES

5.1 ADMISSION PROCEDURE

B. Tech.:-

The Government of India, Department of Ministry of Education (erstwhile MHRD) issued a uniform admission procedure for all the NITs in the country. Candidates seeking admission to NIT are required to appear for the JEE (Main) conducted by NTA. Seats are filled up as per the merit list prepared on the basis of JEE (Main) Examination and qualifying examination scores. According to All India rank prepared on the basis of the performance in JEE (Main), seats will be allotted in the centralized on-line campus counseling through Central Seat Allocation Board (CSAB). The seat allocation done on the basis of 50% Home State Quota (HS) and 50% Other State Quota (OS). These seats are filled on All India ranking Merit Basis (JEE Main). Seats are reserved for candidates belonging to Scheduled Caste, Scheduled Tribes, Persons with Disabilities (PWD,) Other Backward Classes and Economically Weaker Section (EWS) as per the guidelines issued by the Ministry of Education (erstwhile MHRD). Female supernumerary seats are also created by CSAB to accommodate 20% seats for female candidates. In addition to this, 15% over and above the intake is available under the Direct Admission of Students Abroad (DASA) Scheme, and a few seats are reserved for the candidates nominated by the Ministry of External Affairs and ICCR

M.Tech -GATE/Scholarship seats:-

On the basis of GATE Score, admissions for scholarship category (GATE) were made in the centralized on-line common Admission Process through Centralized Counseling for M.Tech. (CCMT) coordinated by MNIT Jaipur.

M.Tech.(Sponsored Seats/Research):-

Selection of candidates for admission were made on the basis of GATE score or in some of the programmes,

selection was based on GATE score and on academic performance in qualifying examination and written aptitude test or/ and interview etc as decided by the DPGC of the concerned Department offering that programme.

M.C.A.:-

Selection of candidates for admissions was done through a common entrance test NIMCET. Admissions were made through a centralized counseling. (NIMCET)

M.B.A:-

Selection was based on CAT/MAT /GATE score and performance in the qualifying examination and written aptitude test or/ and interview etc as decided by the DPGC of the School of Management.

M.Sc (Chemistry & Physics):-

Selection of candidates for admissions was made on the basis of JAM Score. Admissions were made through a centralized counseling. (CCMN)

Ph.D. Programme:-

Selection of candidates for admission to Ph.D. Programme was based upon the academic performance in the qualifying examinations, written aptitude test and interviews conducted by the respective departments.

All the students are required to stay in the Institute Hostels, unless permitted to reside outside under special circumstances. Students have to strictly adhere to the rules and regulations of the institute.

6. ADMISSIONS FOR 2022-23

6.1 The number of candidates admitted are as follows:

I. B.Tech.

		OP	EWS	OBC	SC	ST	PwD	
1	Admission through JEE (Main) Rank	938	363	93	239	139	69	18 (OP), 3 (EWS), 10 (OBC), 2 (SC), 2 (ST)
2	G.O.I. Nominee-through Ministry of External Affairs (Education & Welfare)	05						
3	DASA Scheme	75						
	Total	1018						

II. M.Tech./M.Tech. (By Research)

- i) **M.Tech Programme:** The number of candidates admitted to First Year M.Tech. Programmes are:

		OP	EWS	OBC	SC	ST	PwD	
1	With GATE qualifications for scholarship seats	628	274	54	174	94	31	1 (OP)
2	Sponsored candidates	--						
3	L&T Sponsored Candidates	26						
4	ICCR Sponsored	--						
5	Self Finance	94						
6	QIP (P)	01						
7	BGSW sponsorned	21						
	Total	770						

II. M.Tech. (By Research)

		OP	EWS	OBC	SC	ST	PwD	
1	GATE qualified with Scholarship	25	16	0	7	2	00	0
2	Non-Scholarship	12						
	Total	37						

IV MCA.:

Selection of candidates for admission to MCA, were made on the basis of rank obtained in NIT MCA Common Entrance Test (NIMCET). Admissions were made through a Centralized counseling conducted by N.I.T. Raipur. A Total 64 candidates admitted were as follows:-

1	OP	22
2	OBC	15
3	EWS	06
4	SC	09
5	ST	04
6	PWD (1 OP, 1 OBC)	02
7	Self Finance	10
	Total	68

IV M.B.A.:

Selection of candidates were made on the basis of CAT/MAT/GATR among candidates applied to NITK, Surathkal, Group Discussion and interview. A total 45 candidates were admitted as follows:-

1	OP	32
2	OBC	16
3	EWS	0
4	SC	0
5	ST	0
6	Self Finance	8
	Total	56

V. M.Sc (Chemistry & Physics):- Selection were made on the basis of score obtained JAM 2021. Admissions were made through CCMN conducted by MNIT, Jaipur. Following are the admission details:

i. M.Sc (Chemistry)

1	OP	13
2	OBC	9
3	EWS	3
4	SC	4
5	ST	3
6	Self Finance	2
	Total	34

ii M.Sc (Physics)

1	OP	11
2	OBC	8
3	EWS	4
4	SC	4
5	ST	0
6	Self Finance	7
	Total	34

VI. Ph.D. Programme:

Fellowship Holders

1	OP	34
2	OBC	10
3	EWS	1
4	SC	12
5	ST	2
6	PWD	02
	Total	59

Others

1	Full Time Sponsored- Non scholarship	3
2	Full Time Non-Sponsored Non Scholarship	15
3	QIP	8
4	External Registrants	42
5	Internal Registrants	12
	Total	80

A total number of 1018 candidates have been admitted to the First Year B.Tech. Programmes according to the guidelines, instructions issued by the Ministry of Education (erstwhile MHRD). The PG & Ph.D. admissions have been made according to the Rules and Regulations issued by the Senate of the Institute.

6.2 B.Tech. Students Strength for the year 2022-23

B.Tech I Year	SC			ST			OBC			DASA			ICCR			EWS			GENERAL			TOTAL		
	M	F	To	M	F	To	M	F	To	M	F	To	M	F	To	M	F	To	M	F	To	M	F	To
Civil Engg	15	2	17	7	2	9	23	6	29	1	1	2	0	0	0	8	3	11	37	8	45	91	22	113
Mechanical Engg.	22	4	26	10	3	13	38	8	46	10	0	10	1	0	1	13	4	17	51	15	69	145	34	179
Electrical & Electronics Engg.	14	3	17	6	3	9	25	6	31	8	1	9	2	0	2	10	2	12	37	10	47	102	25	127
Electronics & Communication Engg.	13	3	16	6	2	8	25	6	31	12	5	17	2	0	2	10	2	12	37	10	47	105	28	133
Chemical Engg.	6	1	7	2	1	3	11	1	13	2	1	3	0	0	0	5	1	6	18	5	23	44	10	54
Metallurgical & Materials Engg.	6	3	9	3	1	4	12	3	15	0	0	0	0	0	0	5	1	6	16	5	21	42	13	55
Mining Engg.	7	2	9	3	2	5	11	3	14	0	0	0	0	0	0	5	1	6	18	5	23	44	13	57
Computer Engg.	12	5	17	6	3	9	24	7	31	14	2	16	0	0	0	9	2	11	38	9	47	103	28	131
Information Technology	7	3	10	4	1	5	15	5	20	6	2	8	0	0	0	6	2	8	27	5	32	65	18	83
Artificial Intelligence	5	1	6	2	1	3	9	2	11	3	1	4	0	0	0	3	1	4	13	3	16	35	9	44
Computational & Data Science	4	1	5	2	0	2	6	2	8	4	1	5	0	0	0	2	1	3	9	2	11	27	7	34
Total	111	28	139	51	19	70	199	49	249	60	14	74	5	0	5	76		96	301	77	381	803	207	1010

B.Tech II Year	SC			ST			OBC			DASA			ICCR			EWS			GENERAL			TOTAL		
	M	F	To	M	F	To	M	F	To	M	F	To	M	F	To	M	F	To	M	F	To	M	F	To
Civil Engg	13	4	17	4	5	9	26	6	32	0	0	0	0	0	0	8	2	10	37	8	45	88	25	113
Mechanical Engg.	21	5	26	9	3	12	36	9	45	9	1	10	0	0	0	13	4	17	53	12	65	141	34	175
Electrical & Electronics Engg.	14	3	17	6	2	8	25	6	31	6	2	8	1	0	1	10	2	12	36	10	46	96	25	121

Electronics & Communication Engg.	13	3	16	5	3	8	25	6	31	15	3	18	0	0	0	10	2	12	36	10	46	104	27	131
Chemical Engg.	7	2	9	2	2	4	12	3	15	2	1	3	0	0	0	5	1	6	18	4	22	46	13	59
Metallurgical & Materials Engg.	7	2	9	2	2	4	11	3	14	0	0	0	0	0	0	5	1	6	17	4	21	42	12	54
Mining Engg.	7	2	9	3	1	4	13	3	16	0	0	0	0	0	0	5	1	6	18	3	21	46	10	56
Computer Engg.	14	3	17	7	2	9	24	7	31	13	3	16	0	0	0	9	2	11	38	9	47	105	26	131
Information Technology	9	2	11	4	1	5	15	5	20	5	2	7	0	0	0	6	2	8	26	5	31	65	17	82
Artificial Intelligence	5	1	6	2	1	3	9	2	11	4	0	4	0	0	0	3	1	4	13	3	16	36	8	44
Total	110	27	137	44	22	66	196	50	246	54	12	66	1	0	1	74	18	92	292	68	360	769	197	966

B.Tech III Year	SC			ST			OBC			DASA			ICCR			EWS			GENERAL			TOTAL		
	M	F	To	M	F	To	M	F	To	M	F	To	M	F	To	M	F	To	M	F	To	M	F	To
Civil Engg	15	4	19	5	1	6	26	8	34	3	2	5	2	0	2	10	2	12	34	12	46	95	29	124
Mechanical Engg.	21	5	26	11	4	15	38	10	48	12	1	13	3	0	3	14	3	17	56	15	71	155	38	193
Electrical & Electronics Engg.	15	4	19	4	4	8	25	7	32	8	4	12	1	0	1	11	2	13	40	9	49	104	30	134
Electronics & Communication Engg.	14	3	17	6	3	9	24	7	31	15	2	17	0	0	0	10	2	12	39	10	49	108	27	135
Chemical Engg.	7	2	9	2	1	3	13	3	16	4	2	6	0	0	0	5	1	6	18	4	22	49	13	62
Metallurgical & Materials Engg.	6	2	8	3	0	3	9	2	11	0	0	0	0	0	0	4	2	6	18	6	24	40	12	52
Mining Engg.	6	2	8	4	0	4	12	2	14	0	0	0	0	0	0	3	2	5	13	2	15	38	8	46
Computer Engg.	12	4	16	7	2	9	25	6	31	15	1	16	2	1	3	9	2	11	38	11	49	108	27	135
Information Technology	15	4	19	6	3	9	26	7	33	4	8	12	0	1	1	11	2	13	40	10	50	102	35	137
Total	111	30	141	48	18	66	198	52	250	61	20	81	8	2	10	77	18	95	296	79	375	799	219	1018

B.Tech IV Year	SC			ST			OBC			DASA			ICCR			EWS			GENERAL			TOTAL		
	M	F	To	M	F	To	M	F	To	M	F	To	M	F	To	M	F	To	M	F	To	M	F	To
Civil Engg	14	2	16	7	2	9	21	2	23	4	2	6	0	0	0	6	2	8	32	8	40	84	18	102
Mechanical Engg.	22	3	25	11	2	13	39	8	47	21	0	21	1	0	1	7	1	8	64	15	79	165	29	194
Electrical & Electronics Engg.	15	2	17	7	2	9	24	4	28	8	4	12	2	0	2	4	1	5	41	8	49	101	21	122
Electronics & Communication Engg.	14	2	16	6	1	7	23	5	28	11	5	16	0	0	0	4	3	7	38	7	45	96	23	119
Chemical Engg.	5	2	7	3	1	4	12	3	15	4	2	6	1	1	2	1	2	3	18	7	25	44	18	62
Metallurgical & Materials Engg.	6	2	8	3	0	3	12	2	14	0	0	0	0	0	0	3	0	3	16	2	18	40	6	46
Mining Engg.	6	1	7	3	1	4	11	2	13	0	0	0	0	0	0	3	0	3	17	3	20	40	7	47
Computer Science & Engg.	15	2	17	4	2	6	25	6	31	11	4	15	0	0	0	4	2	6	41	8	49	100	24	124
Information Technology	14	2	16	6	0	6	25	5	30	8	4	12	0	0	0	5	2	7	37	9	46	95	22	117
Total	111	18	129	50	11	61	192	37	229	67	21	88	4	1	5	37	13	50	304	67	371	765	168	933

M.Tech. Students Strength for the year 2022-23

M.Tech (I Year)	SC			ST			OBC			EWS			Sponsored /L&T			QIP			GENERAL			Self Finance			TOTAL		
	M	F	To	M	F	To	M	F	To	M	F	T	M	F	To	M	F	To	M	F	To	M	F	To	M	F	To
Structural Engg.	3	2	5	3	0	3	6	3	9	3	0	3	0	0	0	0	0	0	11	2	13	4	0	4	30	7	37
Geotechnical Engg.	3	0	3	1	0	1	5	0	5	1	0	1	0	0	0	0	0	0	5	2	7	4	0	4	19	2	21
Environmental Engg.	3	2	5	2	0	2	4	5	9	2	1	3	0	0	0	0	0	0	10	4	14	2	1	3	23	13	36
Transportation Systems Engg.	3	1	4	3	0	3	4	4	8	3	0	3	0	0	0	0	0	0	8	5	13	2	1	3	23	11	34
Construction Technology & Mgt.	2	3	5	2	1	3	7	2	9	2	1	3	23	3	26	0	0	0	8	5	13	0	0	0	44	15	59
Marine Structures	3	2	5	0	0	0	6	3	9	0	0	0	0	0	0	0	0	0	10	3	13	0	0	0	19	8	27
Water Resources Engg. & Management	2	1	3	0	0	0	2	3	5	2	0	2	0	0	0	0	0	0	5	2	7	1	1	2	12	7	19
Geoinformatics	3	1	4	0	0	0	5	2	7	1	0	0	0	0	0	0	0	0	7	5	12	0	0	0	16	8	24
Thermal Engg.	2	0	0	0	0	0	5	0	0	2	0	0	0	0	0	0	0	0	6	0	6	3	2	5	18	2	20
Mechatronics Engg.	5	0	0	0	0	0	7	2	9	3	0	3	0	0	0	0	0	0	11	1	12	5	0	5	31	3	34
Manufacturing Engg.	1	0	1	0	0	0	4	1	5	2	0	2	0	0	0	0	1	1	6	0	6	6	1	7	19	3	22
Mechanical Design	3	0	3	1	0	1	4	1	5	2	0	2	0	0	0	0	0	0	7	0	7	5	0	5	22	1	23
Power & Energy Systems	3	1	4	2	1	3	6	2	8	2	0	2	0	0	0	0	0	0	11	0	11	7	1	8	31	5	36
Power Electronics & Control for Electric													19	2											19	2	21
VLSI Design	5	0	5	2	0	2	7	1	8	2	1	3	0	0	0	0	0	0	9	3	12	3	5	8	28	10	38
Signal Processing & Machine Learning	2	1	3	2	0	2	7	1	8	2	1	3	0	0	0	0	0	0	9	1	10	4	2	6	26	6	32
Communication Engg. & Networks	4	1	5	0	0	0	3	6	9	2	1	3	0	0	0	0	0	0	10	2	12	4	4	8	23	14	37
Environmental Science & Technology	0	0	0	0	1	1	4	5	9	0	1	1	0	0	0	0	0	0	8	6	14	0	0	0	13	12	25

Chemical Engg.	2	0	2	0	0	0	1	1	2	0	0	0	0	0	0	0	0	2	5	7	3	0	3	8	6	14	
Industrial Biotechnology	2	3	5	0	0	0	3	3	6	3	0	3	0	0	0	0	0	5	7	12	0	3	3	13	16	29	
Process Metallurgy	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	3	1	4	7	1	8	
Materials Engg.	2	0	2	0	0	0	7	0	7	0	0	0	0	0	0	0	0	10	2	12	0	0	0	19	2	21	
Nanotechnology	1	1	2	0	0	0	0	1	1	0	0	0	0	0	0	0	0	4	2	6	0	0	0	5	4	9	
Computer Science & Engg	3	2	5	2	1	3	5	2	7	4	0	4	0	0	0	0	0	10	2	12	2	2	4	26	9	35	
Computer Science & Engg. - Information Security	4	1	5	1	1	2	7	2	9	2	1	3	0	0	0	0	0	11	1	12	4	1	5	29	7	36	
Computational & Data Science	5	0	5	1	1	2	7	0	7	3	0	3	0	0	0	0	0	13	0	13	2	2	4	31	3	34	
INFORMATION TECHNOLOGY	3	2	5	3	0	3	6	2	8	4	0	4	0	0	0	0	0	10	2	12	1	1	2	27	7	34	
TOTAL	69	24	86	25	6	31	122	52	169	47	7	51	42	5	26	0	1	1	210	62	272	65	28	93	581	184	765

M.Tech (II Year)	SC			ST			OBC			DASA			Sponsored /L&T			ICCR			GENERAL			Self Finance			TOTAL		
	M	F	To	M	F	To	M	F	To	M	F	T	M	F	To	M	F	To	M	F	To	M	F	To	M	F	To
CIVIL ENGG :- Structural Engg.	3	0	4	1	2	3	3	6	9	0	0	0	0	0	0	0	0	0	10	2	12	4	1	5	24	11	35
Geotechnical Engg.	2	1	3	0	1	1	1	4	5	0	0	0	0	0	0	0	0	0	5	1	6	2	3	5	12	10	22
Environmental Engg.	5	1	6	0	2	2	6	3	9	0	0	0	0	0	0	0	0	0	6	8	14	0	5	5	19	20	39
Transportation Engg.	5	0	5	2	1	3	7	2	9	0	0	0	0	0	0	0	0	0	7	5	12	2	0	2	26	8	34
Construction Technology & Mgt.	3	2	5	3	0	3	7	2	9	0	0	0	23	6	29	0	0	0	10	2	12	0	0	0	47	14	61
Water Resources and Ocean Engg. Marine Structures	1	1	3	1	0	1	2	1	3	0	0	0	0	0	0	0	0	0	19	4	23	0	0	0	23	6	29

Water Resources Engg. & Management	2	1	3	1	0	1	3	2	5	0	0	0	0	0	0	0	0	0	5	1	6	2	0	2	13	6	19	
Remote Sensing & GIS	3	1	4	1	1	2	1	3	4	0	0	0	0	0	0	0	0	0	10	10	20	0	0	0	15	15	30	
MECHANICAL ENGG :- Thermal Engg.	2	1	3	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	6	0	6	7	2	9	20	3	23	
Mechatronics Engg.	3	1	4	1	0	1	6	2	8	0	0	0	0	0	0	0	0	0	9	1	10	5	0	5	26	4	30	
Manufacturing Engg.	3	0	3	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0	7	1	8	9	0	9	26	1	27	
Mechanical Design	2	0	2	0	1	1	4	0	4	0	0	0	0	0	0	0	0	0	5	0	5	8	1	9	23	3	24	
ELECTRICAL & ELECTRONICS ENGG:- Power & Energy Systems	4	1	5	2	0	2	6	2	8	0	0	0	0	0	0	0	0	0	9	3	12	7	3	1	0	31	10	41
ELECTRONICS & COMMUNICATION ENGG:- VLSI Design	3	0	3	2	0	2	8	1	9	0	0	0	0	0	0	0	0	0	11	1	12	2	5	7	29	7	36	
Signal Processing & Machine Learning	3	1	4	0	0	0	7	1	8	0	0	0	0	0	0	0	0	0	10	3	13	5	2	7	27	7	34	
Communication Engg.& Network	2	3	5	0	0	0	5	3	8	0	0	0	0	0	0	0	0	0	6	6	12	4	1	5	20	13	33	
CHEMICAL ENGG:-	0	0	0	0	0	0	3	1	4	0	0	0	0	0	0	0	0	0	6	1	7	2	1	3	11	3	14	
Environmental Science & Technology	3	1	4	2	1	3	5	3	8	0	0	0	0	0	0	0	0	0	10	4	14	0	1	1	22	10	32	
Industrial Biotechnology	4	0	4	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	5	8	13	0	0	0	15	13	28	
M & M ENGG:- Process Metallurgy	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	4	0	4	
Materials Engg.	4	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	9	0	9	0	0		25	0	25	
Nanotechnology	3	0	3	0	0	0	3	1	4	0	0	0	0	0	0	0	0	0	7	0	7	1	0	1	15	1	16	

COMPUTER ENGG:- Computer Science & Engg	5	0	5	3	0	3	6	1	7	0	0	0	0	0	0	0	0	0	11	3	14	3	1	4	30	7	37
Computer Science & Engg. - Information Security	4	0	4	2	0	0	7	2	9	0	0	0	0	0	0	0	0	0	12	2	14	3	2	5	30	7	37
MACS:- Computational & data science.	4	0	4	2	0	2	9	0	9	0	0	0	0	0	0	0	0	0	13	0	13	4	0	4	35	0	35
INFORMATION TECHNOLOGY	4	1	5	3	0	3	7	1	8	0	0	0	3	2	5	0	0	0	11	0	11	3	0	3	35	0	35
TOTAL	77	16	91	26	9	33	123	41	160	0	0	0	26	8	34	0	0	0	222	66	288	73	28	101	603	179	780

M.Tech Research	SC			OBC			EWS			GENERAL			TOTAL		
	M	F	To	M	F	To	M	F	To	M	F	To	M	F	To
Marine Structure	0	0	0	0	0	0	0	0	0	1	1	2	1	1	2
Remote Sensing & GIS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Water Resources Engg. & Management	0	0	0	0	0	0	0	0	0	1	4	5	1	4	5
Structural Engg.	1	0	1	1	1	2	1	0	1	5	5	10	8	6	14
Geotechnical Engg.	0	0	0	0	0	0	0	1	1	1	1	2	1	2	3
Environmental Engg.	0	0	0	1	1	2	0	0	0	0	0	0	1	1	2
Transportation Engineering	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1
Thermal Engg.	0	0	0					0			0			0	0
Mechatronics Engg.	2	0	2	4	0	4	0	0	0						0
Manufacturing Engg.	0	0	0	0	0	0	0	0	0	5	0	5	5	0	5
Mechanical Design	0	0	0	3	0	3	0	0	0	2	0	2	5	0	5
Mechatronics and Automation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Design and Precision Engg.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Power & Energy Systems	0	0	0	1	0	1	0	0	0	5	0	5	6	0	6
VLSI Design	0	1	1	1	0	1	0	0	0	2	1	3	3	2	5
Communication Engg	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1
Communication Engg. and Network	0	0	0	1	0	1	0	0	0	1	3	4	2	3	5
Signal Processing and Machine Learning	1	0	1	0	0	0	0	0	0	1	0	1	2	0	2
Materials Engg.	0	0	0	1	0	1	0	0	0	5	0	5	6	0	6
Nanotechnology	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Industrial Pollution Control	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1
Chemical Engg	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1
Industrial Biotechnology	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1
Environmental Science & Technology	0	0	0	0	0	0	0	0	0	1	0	1	1	0	1
Computer Science & Engg	1	0	1	2	0	2	0	0	0	2	0	2	5	0	5

Computer Science & Engg. - Information Security	0	0	0	0	0	0	0	0	1	1	3	0	3	3	1	4
Rock Excavation Technology & Mgt	0	0	0	1	0	1	0	0	0	0	2	0	2	3	0	3
Information Technology	0	0	0	1	0	1	1	0	1	1	1	1	2	3	1	4
Computational and Data Science	0	0	0	2	0	2	1	0	1	2	0	2	5	0	5	
TOTAL	5	1	6	19	3	22	3	2	5	40	20	60	61	26	87	

MCA Students Strength for the year 2022-23

Year	SC			ST			OBC			EWS			GENERAL			Self Finance			TOTAL		
	M	F	To	M	F	To	M	F	To	M	F	To									
I	7	2	9	3	1	4	15	1	16	6	0	6	18	5	23	9	2	11	57	11	68
II	7	2	9	3	1	4	12	3	15	6	0	6	19	4	23	6	0	6	53	10	63
III	5	3	8	4	0	4	14	2	16	1	5	6	16	7	23	0	0	0	40	17	57
TOTAL	19	7	26	10	2	12	41	6	47	13	5	18	53	16	69	15	2	17	150	38	188

M.B.A- 2022-23

YEAR	SC			ST			OBC			EWS			GENERAL			Self Finance			TOTAL		
	M	F	To	M	F	To	M	F	To	M	F	To	M	F	To	M	F	To	M	F	To
I	0	0	0	0	0	0	10	5	16	0	0	0	17	15	32	3	5	8	30	25	55
II	0	0	0	0	1	1	3	4	7	1	0	1	14	14	28	4	3	7	22	22	44
TOTAL	0	0	0	0	1	1	12	9	21	1	0	1	31	29	60	3	5	8	54	47	99

M.Sc(Chemistry) Students Strength for the year 2022-23

YEAR	SC			ST			OBC			EWS			GENERAL			Self Finance			TOTAL		
	M	F	To	M	F	To	M	F	To	M	F	To	M	F	To	M	F	To	M	F	To
I	3	1	4	2	1	3	8	1	9	2	1	3	9	4	3	0	2	3	24	10	34
II	3	2	5	1	1	2	5	3	8	1	2	3	6	7	13	1	4	5	20	16	36
TOTAL	6	3	9	3	2	5	13	6	17	3	3	6	15	11	16	1	6	8	44	26	70

M.Sc(Physics) Students Strength for the year 2022-23

YEAR	SC			ST			OBC			EWS			GENERAL			Self Finance			TOTAL		
	M	F	To	M	F	To	M	F	To	M	F	To	M	F	To	M	F	To	M	F	To
I	4	0	4	0	0	0	5	1	6	1	3	4	9	2	11	4	3	7	23	9	32
II	4	1	5	0	1	1	7	2	9	5	1	6	8	2	10	0	4	4	25	10	35
TOTAL	8	1	9	0	1	1	14	3	15	6	4	10	17	4	21	0	7	11	48	19	67

Part time Ph.D. (Ph.D. Students Strength for the year 2022-23)

Branch	SC			ST			OBC			EWS			GENERAL			TOTAL		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Civil	0	0	0	0	0	0	2	4	6	0	0	0	20	6	26	22	10	32
Water Resources and Ocean Engg.	1	0	1	0	0	0	1	2	3	0	0	0	13	8	21	15	10	25
Mechanical	4	1	5	3	1	4	7	0	7	0	0	0	30	3	33	49	5	54
E&E		1	1	0	0	0	3	3	6	0	0	0	11	5	16	14	9	23
E&C	0	0	0	0	0	0	3	1	4	0	0	0	14	4	18	17	5	22
Chemical		2	2	0	0	0	0	0	0	0	0	0	0	2	2	0	4	4
Metallurgy	0	0	0	0	0	0	3	0	3	0	0	0	8	2	10	11	2	13
Mining	2	0	2	0	0	0	4	1	5	0	0	0	14	0	12	20	1	21
Computer	0	2	2	0	0		4	2	6	0	0		5	8	10	9	12	21
Information Technology	0	0	0	1	0	1	2	2	4		0		2	6	8	5	8	13
Physics	0	0	0	0	0	0	1	0	0	0	0	0	2	1	3	3	1	4
Chemistry	1	0	1	0	0	0	2	1	3	0	0	0	4	2	4	7	3	10
MACS	0	0	0	0	0	0	0	2	0	2	0	0	0	3	3	3	3	6
School of Mgt.	8	6	14	0	0	0	32	18	47		0	0	12	7	17	12	7	19
Total	16	12	28	4	1	5	64	36	94	2	0	0	135	57	183	187	80	267

Ph.D. Students Strength for the year 2022-23 (Full Time)

Branch	SC			ST			OBC			EWS			QIP			ICCR			Ethiopian			VTU Scheme			GENERAL			TOTAL		
	M	F	T	M	F	T	M	F	M	F	T	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Civil	8	4	12	3	1	4	12	7	28	22	50	1	4	2	6	1	0	1	1	0	1				28	22	50	58	36	94
App. Mechanics	6	0	6	4	1	5	8	4	32	26	58	3	1	1	2	3	0	3	0	0	0	0	0	0	32	26	58	56	33	89
Mechanical	25	1	25	8	1	9	35	0	95	6	101	1	11	0	11	3	0	0	0	0	0	0	0	95	6	101	181	9	190	
E&E	5	2	7	6	0	6	20	5	35	8	43	4	6	1	7	0	0	0	0	0	0			35	8	43	75	17	92	
E&C	2	1	3	4	1	5	9	3	42	15	57	1	6	4	10	0	0	0	0	0	0	0	0	42	15	57	64	24	88	
Chemical	1	1	2	0	1	1	4	9	7	13	20	0		0		0	0	0	0	0	0	0	0	7	13	20	12	24	36	
Metallurgy	3	0	3	1	0	1	6	1	17	1	18	2	0	0	0	0	0	0	0	0	0	0	0	17	1	18	29	2	31	
Mining	1	0	1	0	0	0	4	0	6	1	7	0	0	0	0	0	0	0	0	0	0	0	0	6	1	7	11	1	12	
Computer Science and Engg.	0	4	4	0	2	2	5	1	10	10	20	0	6	1	7	0	0	0	0	0	0	0	0	10	10	20	21	18	39	
Information Technology	4	0	4	2	0	1	3	2	5	10	15	1	0	0	0	0	0	0	0	0	0	0	0	5	10	15	14	12	26	
Physics	4	1	5	2	1	3	1	2	7	13	20	1	0	0	0	0	0	0	0	0	0	0	0	7	13	20	16	17	33	
Chemistry	3	2	5	1	0	1	5	9	13	16	29	1	0	0	0	0								13	16	29	23	27	50	
MACS	0	1	1	2	0	2	2	4	16	10	26	1	0	0	0	0	0	0	0	0	0	0	0	16	10	26	21	15	36	
School of Mgt.	2	1	3	0	0	0	8	3	6	16	16	2	0	0	0									6	16	16	16	21	37	
Total	64	18	81	33	8	40	122	50	319	167	480	18	34	7	43	3			2		2			319	167	480	597	256	853	

6.3 ADMISSION STATISTICS Undergraduate Programmes – B. Tech.
Particulars of sanctioned intake and admissions made during 2022-23

Sl. No.	Courses offered	Sanctioned intake				Admissions made to Undergraduate Programmes									
		Normal Intake	ICCR + MEA	DASA	Total								ICCR	DASA	Total Admission
						OC	EWS	OBC	SC	ST	PWD	Total			
1	Civil Engineering	115	3	16	134	43	11	28	16	9	2 OPEN, 1OBC, 1SC	111	0	2	113
2	Mechanical Engineering	175	3	24	202	65	16	44	27	13	4 OPEN, 1 EWS, 2 OBC	172	1	11	184
3	Electrical & Electronics Engineering	116	4	14	134	45	12	29	17	9	2 OPEN, 2 OBC	116	2	9	127
4	Electronics & Communication Engineering	116	3	17	136	45	11	30	16	7	2 OPEN, 1 EWS, 1OBC, 1ST	114	2	17	133
5	Chemical Engineering	58	2	9	69	21	6	13	8	4	2 OPEN	54	0	3	57
6	Metallurgical & Materials Engineering	58	0	2	60	21	6	15	9	4	-	55	0	0	55
7	Mining Engineering	60	0	1	61	23	6	14	9	5	--	57	0	0	57
8	Computer Science & Engineering	115	2	16	133	45	10	29	16	9	2 OPEN, 1 EWS, 2 OBC, 1SC	115	0	16	131
9	Information Technology	76	0	8	84	30	8	19	10	4	2 OPEN, 1 OBC, 1ST	75	0	8	83
10	Artificial Intelligence	40	0	4	44	15	4	10	6	3	1 OPEN, 1 OBC	40	0	4	44
11	Computational and Data Science	30	0	5	35	10	3	8	5	2	1OPEN	29	0	5	34
Total		959	17	116	1092	363	93	239	139	69	18 OPEN, 3 EWS, 10 OBC, 2 SC, 2 ST	938	5	75	1018

Details of Male & Female admissions – course wise and category wise

Sl.No.	Programme	OC		EWS		OBC		SC		ST		ICCR		DASA		Total Admission		
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	Total		
1	Civil Engg	35 + 2 PH	8	8	3	22+1PH	6	13+1PH	3	7	2	0	0	1	1	90	23	113
2	Mechanical Engg	51 + 3PH	14+1PH	12 +1PH	4	36+2PH	8	22	5	10	3	1	0	11	0	149	35	184
3	Electrical & Electronics Engg	36+1PH	9+1PH	10	2	23+2PH	6	14	3	6	3	2	0	8	1	102	25	127
4	Electronics & Communications	37	8+2PH	9+1PH	2	24+1PH	6	13	3	5+1PH	2	2	0	12	5	105	28	133
5	Chemical Engg	17+1PH	4+1PH	5	1	11	2	7	1	3	1	0	0	2	1	46	11	57
6	Metallurgical & Materials Engg	16	5	5	1	12	3	6	3	3	1	0	0	0	0	42	13	55
7	Mining Engg	18	5	5	1	11	3	7	2	3	2	0	0	0	0	44	13	57
8	Computer Engg	37+1PH	8+1PH	8+1PH	2	23+1PH	6+1PH	11+1PH	5	6	3	0	0	14	2	103	28	131
9	Information Technology	25+2PH	5	6	2	15	4+1PH	7	3	3+1PH	1	0	0	6	2	65	18	83
10	Artificial Intelligence	12+1PH	3	3	1	8+1PH	2	5	1	2	1	0	0	3	1	35	9	44
11	Computational and Data Science	8 + 1PH	2	2	1	6	2	4	1	2	0	0	0	4	1	27	7	34
	Total	292+12PH	71+6PH	73+3PH	20	191+8PH	48+2PH	109+2PH	30	50+2PH	19	5	0	61	14	808	210	1018

PH= PWD

M. Tech. Programme - Particulars of Intake during 2022-23

Sl. No.	Name of the Programmes	Sanctioned Intake (through GATE)	Sponsored /L&T	DASA	ICCR	Self Finance Scheme	Total
1	Structural Engg.	33	1	0	1	5	40
2	Geotechnical Engg.	18	1	1	1	5	26
3	Environmental Engg.	33	1	0	1	5	40
4	Transportation Engg.	33	1	0	1	5	40
5	Construction Technology & Management	33	1 + 30 L&T	0	1	0	65
6	Marine Structures	33	1	1	1	5	41
7	Water Resources Engineering & Mgt.	18	1	0	1	5	25
8	Geoinformatics	33	1	1	1	5	41
9	Mechanical Design	18	1	0	1	10	30
10	Manufacturing Engg.	18	1	0	1	10	30
11	Mechatronics Engg.	33	1	0	1	5	40
12	Thermal Engineering	18	1	1	1	10	31
13	Power & Energy Systems	33	1	0	1	10	45
14	VLSI Design	33	1	1	1	8	44
15	Communication Engineering and Networks	33	1	1	1	8	44
16	Signal Processing and machine learning	29	1	1	1	8	40
17	Chemical Engineering	18	1	0	1	5	25
18	Environmental Science and Technology	33	1	0	1	5	40
19	Industrial Biotechnology	33	1	0	1	5	40
20	Materials Engg.	33	1	0	1	5	40
21	Process Metallurgy	18	1	1	1	5	26
22	Nanotechnology	18	1	0	1	5	25
23	Computer Science & Engg.	33	1	1	1	5	41
24	Computer Science & Engg. – Information Security	33	1	0	1	5	40
25	Information Technology	33	1	0	1	5	40
26	Computational and Data Science	33	1	0	1	5	40
	Total	734 (CCMT)	26 + 30 L&T	9	26	154	979

M.Tech. Programme - Particulars of Admissions during 2022-23

Sl. No.	Name of the Programmes	Admitted					Out of the total admissions-No. of candidates admitted under category																	
		GATE (Scholarship seats)	Other	Total			SC			ST			OBC			EWS			OC			PWD		
				M	F	TO	M	F	TO	M	F	TO	M	F	TO	M	F	TO	M	F	TO	M	F	TO
1	Structural Engg.	33	4 SF	30	7	37	3	2	5	3	0	3	6	3	9	3	0	3	11+4 SF	2	17	-	-	-
2	Geotechnical Engg.	17	4 SF	17	4	21	3	0	3	1	0	1	3	2	5	1	0	1	5+4 SF	2	11	-	-	-
3	Environmental Engg.	33	4 SF	24	13	37	3	2	5	2	0	2	4	5	9	2	1	3	10+3SF	4+1SF	18	-	-	-
4	Transportation Engg.	31	3 SF	23	11	34	3	1	4	3	0	3	4	4	8	3	0	3	8+2SF	5+1SF	16	-	-	-
5	Construction Technology & Management	33	26 L&T	44	15	59	2	3	5	2	1	3	7	2	9	2	1	3	8+23L &T	5+3L &T	39	-	-	-
6	Marine Structures	27	-	19	8	27	3	2	5	0	0	0	6	3	9	0	0	0	10	3	13	-	-	-
7	Water Resources Engineering & Management	17	2 SF	12	7	19	2	1	3	0	0	0	2	3	5	2	0	2	5+1SF	2+1SF	9	-	-	-
8	Geoinformatics	25	-	18	7	25	3	1	4	0	0	0	5	2	7	1	0	1	9	4	13	-	-	-
9	Mechanical Design	18	5 SF	22	1	23	3	0	3	1	0	1	4	1	5	2	0	2	7+5SF	0	12	-	-	-
10	Manufacturing Engg.	14	7 SF 1 QIP Poly	19	3	22	1	0	1	0	0	0	4	1	5	2	0	2	6+6SF	1SF+1 QIP POLY	14	-	-	-
11	Mechatronics Engg.	29	5 SF	31	3	34	5	0	5	0	0	0	7	2	9	3	0	3	11+5SF	1	17	-	-	-

Sl. No.	Name of the Programmes	Admitted					Out of the total admissions-No. of candidates admitted under category																	
		GATE (Scholarship seats)	Other	Total			SC			ST			OBC			EWS			OC			PWD		
				M	F	TO	M	F	TO	M	F	TO	M	F	TO	M	F	TO	M	F	TO	M	F	TO
12	Thermal Engineering	15	5 SF	18	2	20	2	0	2	0	0	0	5	0	5	2	0	2	6+3SF	2SF	11	-	-	-
13	Power Electronics and Control for Electric Vehicle	-	21 BGSW Sponsored	19	2	21	3	1	4	2	1	3	6	2	8	2	0	2	19 BGSW Sponsored	2 BGSW Sponsored	21	-	-	-
14	Power & Energy Systems	28	8 SF	31	5	36	5	0	5	2	0	2	7	1	8	2	1	3	11+7SF	1SF	19	-	-	-
15	VLSI Design	30	8 SF	28	10	38	4	1	5	0	0	0	3	6	9	2	1	3	9+3SF	3+5SF	20	-	-	-
16	Communication Engineering and Networks	29	8 SF	23	14	37	2	1	3	2	0	2	7	1	8	2	1	3	10+4SF	2+4SF	20	-	-	-
17	Signal Processing and machine learning	27	6 SF	27	6	33	2	0	2	0	0	0	1	1	2	0	0	0	10+4SF	1+2SF	17	-	-	-
18	Chemical Engineering	11	3 SF	8	6	14	0	0	0	0	1	1	4	5	9	0	1	1	2+3SF	5	10	-	-	-
19	Environmental Science and Technology	25	-	12	13	15	2	3	5	0	0	0	3	3	6	3	0	3	8	6	14	-	-	-
20	Industrial Biotechnology	26	3 SF	13	16	29	3	0	3	0	0	0	7		7	0	0	0	5	7+3SF	15	-	-	-
21	Materials Engg.	22	-	20	2	22	0	0	0	0	0	0	0	0	0	0	0	0	10	2	12	-	-	-
22	Process	4	4 SF	7	1	8	1	1	2	0	0	0	0	1	1	0	0	0	4+3SF	1SF	8	-	-	-

M.TECH. PROGRAMME (BY RESEARCH) 2022-23

OC	OC PwD	EWS	EWS PwD	OBC	OBC PwD	SC	SC PwD	ST	ST PwD	Total
25	1	6	0	16	1	9	0	5	0	63

Sl. No.	Name of the Programme	No. of candidates admitted		Total number of candidates admitted		
		Gate Scholarship Seat	Non-Scholarship Seat	M	F	Total Admission
DEPARTMENT OF CIVIL ENGINEERING						
1	Structural Engineering	4 OC 1 OBC	-	1	4	5
2	Geotechnical Engineering	1 OBC	-	1	0	1
3	Construction Technology and Management	1 OBC	-	1	0	1
DEPARTMENT OF METALLURGICAL AND MATERIALS ENGINEERING						
1	Geoinformatics		1 IR (OC)	1	0	1
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING						
1	VLSI Design	2 OBC	-	1	1	2
2	Signal Processing and machine learning	1 OBC 1 SC	-	1	1	2
DEPARTMENT OF MECHANICAL ENGINEERING						
1	Mechanical Design	1 OC	-	1	0	1
2	Mechatronics Engineering	2 OC	2 IR (OC) 1 IR (OBC)	5	0	5
3	Thermal Engineering	1 SC	1 IR (OC)	1	1	2
DEPARTMENT OF MINING ENGINEERING						
1	Rock Excavation Technology and Management	-	1 ER (OBC)	1	0	1
DEPARTMENT OF WATER RESOURCES AND OCEAN ENGG.						
1	Water Resources Engineering & Mgt.	1 OC	1 IR (OC)	2	0	2
2	Marine Structures	-	1 IR (OC)	1	0	1
DEPARTMENT OF CHEMICAL ENGINEERING						
1	Industrial Biotechnology	1 OC	-	1	0	1
2	Chemical Engineering	1 OC	-	1	0	1
3	Environmental Science & Technology	-	2 ER (OC) 1 ER (SC)	3	0	3
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING						
1	Power and Energy Systems	1 OC	-	1	0	1
COMPUTER SCIENCE & ENGINEERING						
1	Computer Science and	2 OC	1 IR (OC)	1	2	3

	Engineering					
2	Computer Science and Engineering - Information Security	2 OC	-	1	1	2
DEPARTMENT OF MACS						
1	Computational and Data Science	1 OC 1OBC	-	1	1	2
	Total	16 OC 7 OBC 2 SC	6 IR (OC) 2 IR (OBC) 2 ER (OC) 1 ER (OBC) 1 ER (SC)	26	11	37

M.C.A., M.B.A. AND M.Sc. PROGRAMMES**Particulars of Admissions during 2022-23**

Sl. No.	Programme	Sanctioned Intake	Total Admission			SC		ST		OBC		OC		EWS		PwD		Self - Financed	
			M	F	Total	M	F	M	F	M	F	M	F	M	F	M	F	M	F
1	Master of Computer Applications (MCA)	58+ 1**+10* **	57	11	68	7	2	3	1	14	1	17	5	6	0	10C 10BC	0	8	2
2	Master of Business Administration (MBA)	80+5*+ 1**+10* **	30	26	56	0	0	0	0	11	5	16	16	0	0	-	-	3	5
3	M.Sc. (Chemistry)	33+ 1**+5** *	23	11	34	3	1	2	1	8	1	8	5	2	1	-	-	0	2
4	M.Sc. (Physics)	33+ 1**+7** *	25	9	34	4	0	0	0	7	1	9	2	1	3	-	-	4	3
	Total	204+ 5*+ 4** +32***= 245	135	57	192	14	3	5	2	40	8	50	28	9	4	2	0	15	12

* Seats reserved for DASA candidates

** Additional seats for the international students under ICCR Scheme

*** Self-Financed Scheme

PwD – Persons with Disabilities

Ph.D. PROGRAMME**Ph.D. Intake for the year 2022-23**

OC	OC PWD	EWS	EWS PWD	OBC	OBC PWD	SC	SC PWD	ST	ST PWD	Total
72	4	18	1	48	2	27	1	14	1	188

Details of Admissions made during 2022-23

Sl No.	Name of the Department	Admitted Full time Programme						Admitted Under External Registrants (Part Time)		Out of the total Full time scholars, Number of Candidates belonging to the category of									
		Fellowship Holder		Other category-Non Fellowship+ QIP+ Sponsored + Ethiopian						OC		EWS		OBC		SC		ST	
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F		
1	Civil Engg.	4	6	1 QIP (R) (OC)	1 QIP (R) (OC)	3 IR (OC)	1 ER (OC)	3	3	0	0	0	2	1	1	0	0		
				1 ER (OBC) 1 ER (OC)	3 ER (OC) 1 ER (OBC)	6 ER (OC)	1 ER (OBC)												
2	Water Resources and Ocean Engg.	2	0	-	1 IR (OC)	1 ER (OC)	1 ER (OBC)	1	0	1	0	0	0	1	0	0	0		

Sl No.	Name of the Department	Admitted Full time Programme				Admitted Under External Registrants (Part Time)		Out of the total Full time scholars, Number of Candidates belonging to the category of									
		Fellowship Holder		Other category-Non Fellowship+ QIP+ Sponsored + Ethiopian				OC		EWS		OBC		SC		ST	
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
3	Mechanical Engg.	8	1	1 QIP (R) (OC) 1 FT-SPON - NSCH (OC) 1 FT-SPON - NSCH (OBC) 2 FT-NSPON- NSCH (OC)		4 ER (OC) 3 ER (OBC) 2ER (SC) 1ER (SC) 1 IR (OC)		4	1	0	0	0	0	4	0	0	0
4	Electrical & Electronics Engg.	3	0	1 QIP (R) (OC) 1 QIP (R) (OBC)	-	3 ER (OC) 1ER (OBC) 1 IR (OBC)	3 ER (OC)	2	0	0	0	0	0	1	0	0	0

Sl No.	Name of the Department	Admitted Full time Programme				Admitted Under External Registrants (Part Time)		Out of the total Full time scholars, Number of Candidates belonging to the category of									
		Fellowship Holder		Other category-Non Fellowship+ QIP+ Sponsored + Ethiopian				OC		EWS		OBC		SC		ST	
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
5	Electronics & Communication Engg	3	3	1 QIP (R) (OC)	1FT-NSPON-NSCH (OC)	2 ER (OC) 1 ER (OBC) 2 ER (SC)	1 ER (OC) 1 IR (OC) 1 IR (OBC)	3	1	0	0	0	1	0	1	0	0
6	Chemical Engg	0	0	-	-	-	1 ER (OC) 1 IR (OBC)	0	0	0	0	0	0	0	0	0	0
7	Metallurgical & Materials Engg	1	0	-	-	1 IR (OBC)	1 ER (OC)	0	0	0	0	1	0	0	0	0	0
0	Mining Engg	0	0	-	-	1ER (OC) 1ER (OBC)	-	0	0	0	0	0	0	0	0	0	0

Sl No.	Name of the Department	Admitted Full time Programme				Admitted Under External Registrants (Part Time)		Out of the total Full time scholars, Number of Candidates belonging to the category of									
		Fellowship Holder		Other category-Non Fellowship+ QIP+ Sponsored + Ethiopian				OC		EWS		OBC		SC		ST	
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
9	Computer Science & Engg	0	3	1 QIP (R) (OC) 1 FT-SPON - NSCH (OC)	1 QIP (R) (OC) 1 NSCH-NSPN (OC)	-	1ER (OC) 1ER (OBC)	0	1	0	0	0	0	0	1	0	1
10	Information Technology	0	0	-	-	1 ER (OC)	1 ER (OC)	0	0	0	0	0	0	0	0	0	0
11	Physics	3	1	1 NSCH-NSPN (EWS)	1 NSCH-NSPN (OC)	-	-	1	1	0	0	1	0	1	0	0	0
12	Chemistry	5	2	-	3 NSCH-NSPN (OC) 1 NSCH-NSPN (OBC)	2 IR (OBC)	1 IR (OC) 1 IR (OBC)	2	2	0	0	2	0	1	0	0	0
13	Mathematical & Computational Sciences	5	3	1 NSCH-NSPN (EWS) 2 NSCH-NSPN (OBC)	1 NSCH-NSPN (OC)	1 IR (OBC)	-	2	2	1	0	1	1	0	0	1	0

Sl No.	Name of the Department	Admitted Full time Programme				Admitted Under External Registrants (Part Time)		Out of the total Full time scholars, Number of Candidates belonging to the category of									
		Fellowship Holder		Other category-Non Fellowship+ QIP+ Sponsored + Ethiopian				OC		EWS		OBC		SC		ST	
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
14	School of Humanities, Social Sciences and Management	3	3	-	1 NSCH-NSPN (OBC)	3 ER (OC)	2 ER (OC)	1	3	0	0	2	0	0	0	0	0
		37	22	6 QIP	2 QIP	6 IR	6 IR	20	14	1	0	6	4	9	3	1	1
				3 FT-SPON-NSCH		27 ER	15 ER										
				6 NSCH-NSPN	9 NSCH-NSPN												

Spon= Sponsored. QIP = Admitted Under AICTE QIP Scheme, PwD – Persons with Disabilities

Total Student's Strength

Programme

Strength

1. Undergraduate	3927
2. Post Graduate (Including MCA /M.Tech./M.Tech (Research)/MBA/M.Sc.)	2056
3. Ph.D. Programme	<u>1120</u>
Total	<u>7103</u>

7. EVALUATION AND EXAMINATION

7.1 EDUCATION SYSTEM

The normal duration of programmes leading to B.Tech degree in Engineering is eight semesters. For full time M.Tech. Programmes, the duration of study is a minimum of four semesters and a maximum of four years. For Master of Science, programme the duration of study shall be a minimum of four semesters and a maximum of four years. For Master of Computer Application (MCA) the duration of study shall be a minimum of six semesters and a maximum of six years. For Master of Business Administration (MBA), the duration of study is a minimum of four semesters and a maximum of four years. For Doctoral Programmes (Ph.D.) the duration of study is a minimum of two years and maximum of seven years for all categories of research scholars.

Each academic year is divided into two semesters. A semester that is typically from August to Mid- December is called the ODD SEMESTER, and the one that is from January to Mid-May is called EVEN SEMESTER.

The medium of instruction, examination and project work is English only.

7.2 EXAMINATION & EVALUATION PROCEDURE

The examination and evaluation work of all the B.Tech./M.Tech./MCA/MSc/MBA students and Ph.D./M.Tech by Research candidates were carried out by the respective Faculty Members in their concerned Departments itself as per the regulations approved by the Senate of the Institute. The Grades obtained by each student with details of attendance in each course are submitted to the Examination/Evaluation Section for processing their Grade Cards as per the regulations of the Institute. The results are declared and published on the website of the Institute in time and Grade Cards were issued to all eligible students.

8. EXAMINATION RESULTS FOR 2022

UNDER GRADUATE

Result 2022									
Under Graduate									
Sl.No.	Branch	Total No. Appeared	No. of students passed in				Total Pass	Percentage of passes	No. of SC/ST candidates passed
			CGPA above 7 & below 10	CGPA above 6 & below 7	CGPA above 5 & below 6	CGPA below 5			
1.	Civil Engineering	107+2*	85+1*	15	6	1*	106+2*	99%	20+1*
2.	Mechanical Engineering	174+2*	140	30	2+1*	1*	172+2*	99%	33+2*
3.	Electrical And Electronics Engineering	108	92	15	1	0	108	100%	22
4.	Electronics And Communication Engineering	109	86	19	4	0	109	100%	20
5.	Chemical Engineering	52	29	17	6	0	52	100%	10
6.	Metallurgical And Materials Engineering	44	31	11	2	0	44	100%	10
7.	Mining Engineering	36	27	9	0	0	36	100%	10
8.	Computer Science & Engineering	116+1*	94	12	6+1*	0	112+1*	97%	19
9.	Information Technology	102+1*	81+1*	15	3	0	99+1*	97%	17
		848+6*					838+6*	99%	

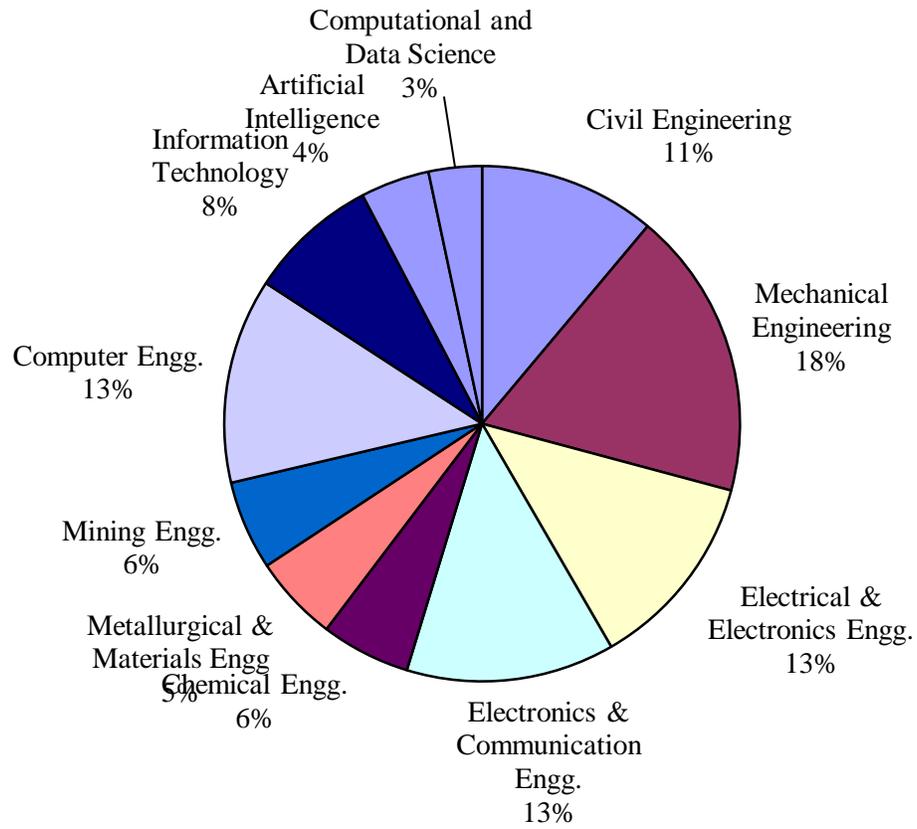
*- Repeaters

POST GRADUATE

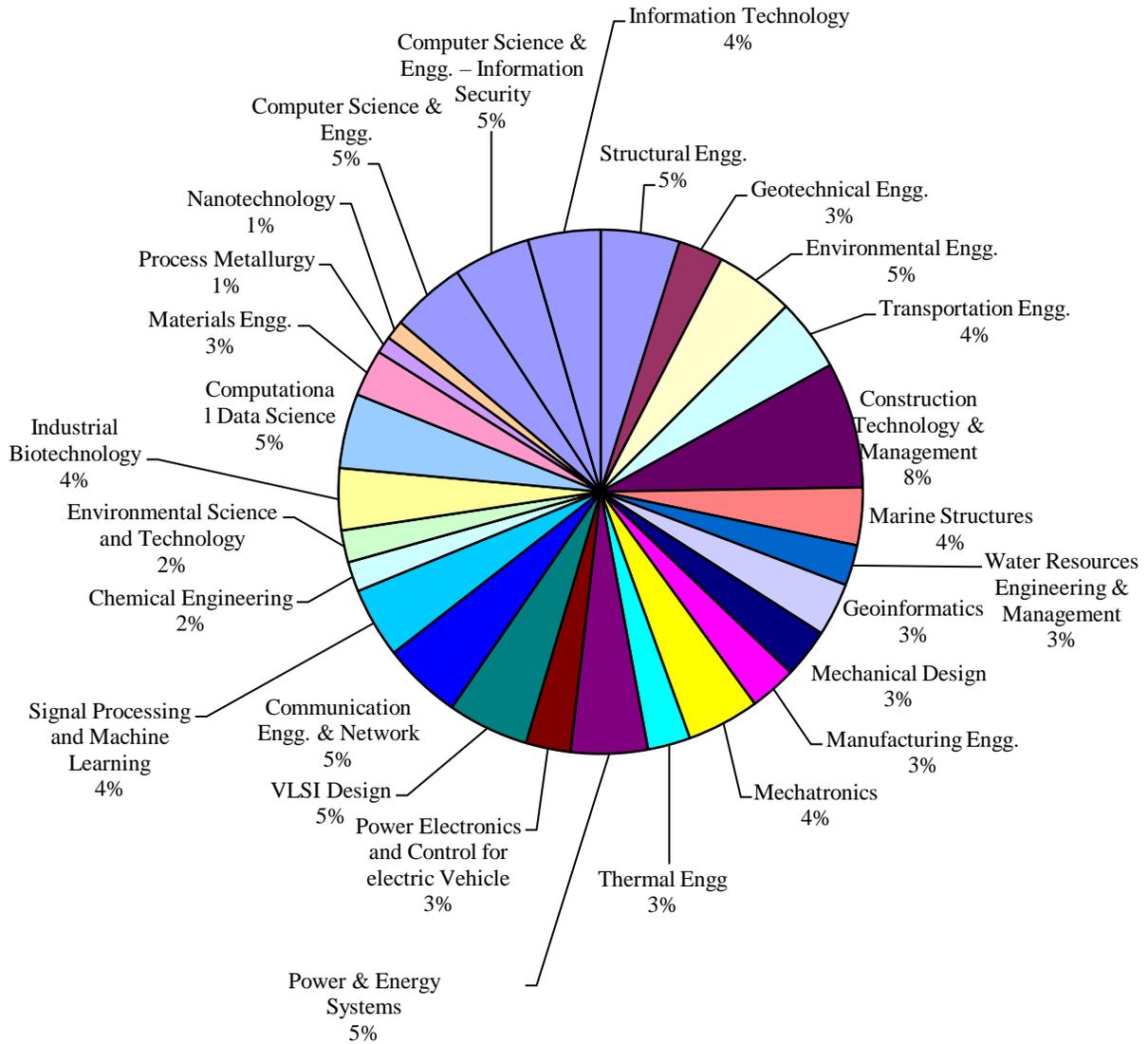
Branch	Total No. Appeared	No. of students passed in			Total Pass	Percentage of passes	No. of SC/ST candidates passed
		CGPA above 7 & below 10	CGPA above 6 & below 7	CGPA above 5.50 & below 6			
Construction Technology & Management	61	61	0	0	61	100.00	8
Structural Engineering	33	32	0	0	32	96.97	8
Geotechnical Engineering	18+1*	19	0	0	19	100.00	4
Environmental Engineering	30	30	0	0	30	100.00	4
Transportation Engineering	29	28	1	0	29	100.00	7
Marine Structures	32	30	1	0	31	96.88	6
Remote Sensing & Geographic Information System	24	20	0	0	20	83.33	3
Water Resources Engineering & Management	16	16	0	0	16	100.00	3
Mechanical Design	17	16	0	0	16	94.12	4
Manufacturing Engineering	18	18	0	0	18	100.00	4
Mechatronics Engineering	28	28	0	0	28	100.00	7
Thermal Engineering	12	12	0	0	12	100.00	2
Power & Energy Systems	29	29	0	0	29	100.00	8
VLSI Design	27	26	1	0	27	100.00	6
Communication Engineering and Networks	30	28	2	0	30	100.00	6
Signal Processing and Machine Learning	21	20	1	0	21	100.00	3

Chemical Engineering	16	16	0	0	16	100.00	2
Industrial Biotechnology	25	23	2	0	25	100.00	2
Enivronmental Science and Technology	12	11	1	0	12	100.00	1
Process Metallurgy	17	17	0	0	17	100.00	3
Materials Engineering	22	22	0	0	22	100.00	5
Nanotechnology	17	17	0	0	17	100.00	3
Computational Data Science	32	31	1	0	32	100.00	7
Computer Science and Engineering	32	30	2	0	32	100.00	8
Computer Science and Engineering - Information Security	30	30	0	0	30	100.00	7
Information Technology	29+1*	25	2+1*	1	28+1*	96.67	7
Master of Computer Applications	52	47	4	0	51	98.08	12
Master of Business Administration	29	28	1	0	29	100.00	0
Master of Science (Chemistry)	31	31	0	0	31	100.00	7
Master of Science (Physics)	27	24	3	0	27	100.00	5

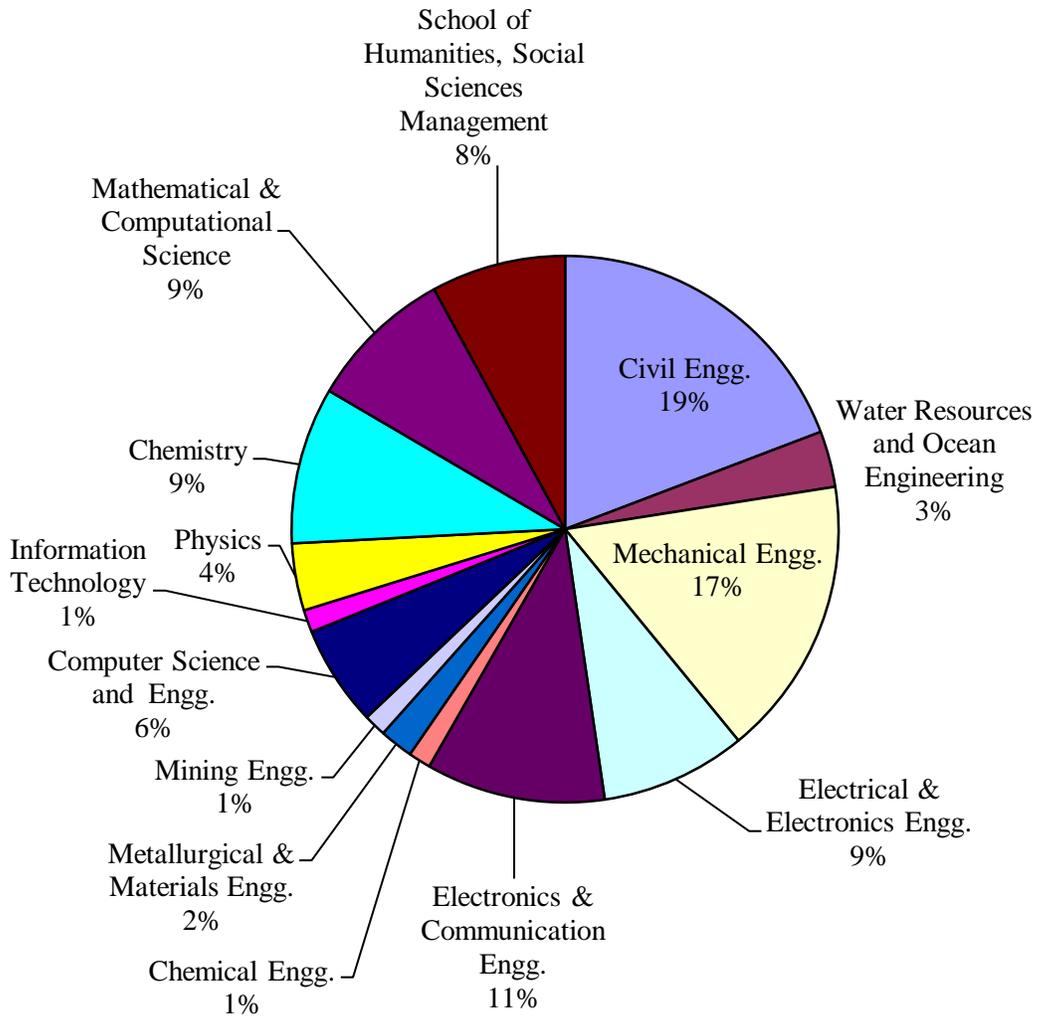
Pie chart showing discipline wise B.Tech. admissions 2022-23

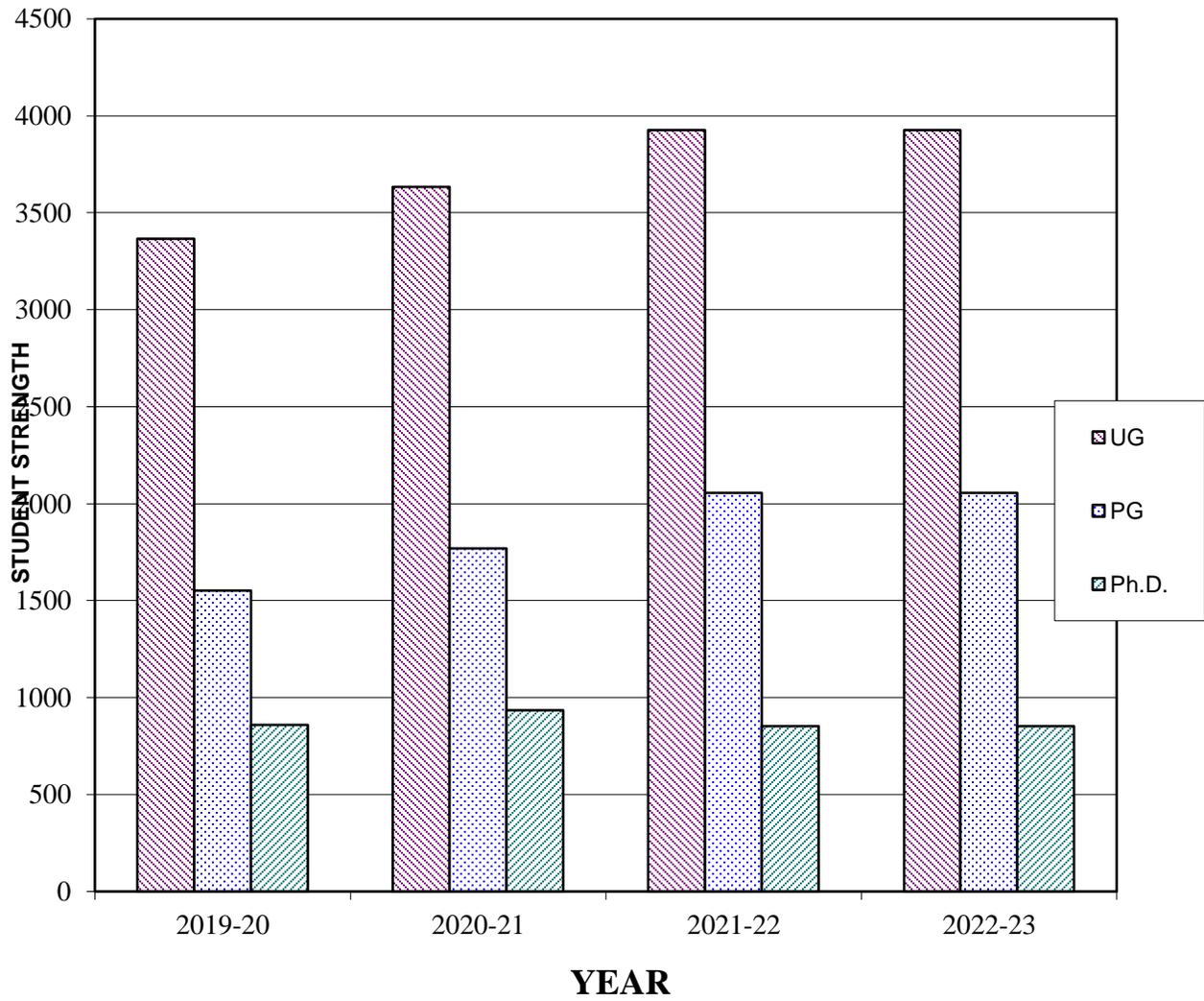


Pie chart showing discipline wise M.Tech. admissions 2022-23

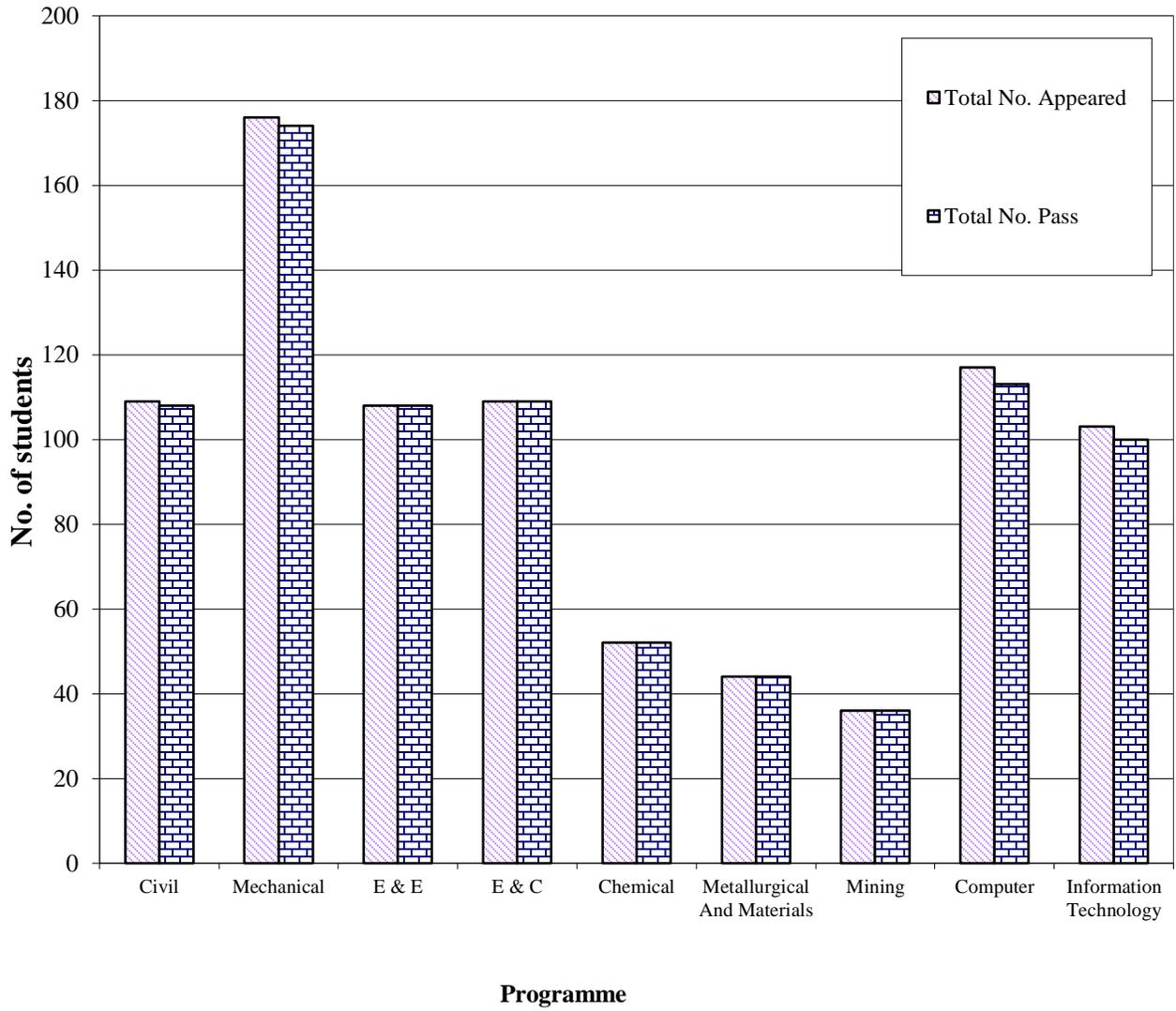


Pie chart showing discipline with Ph.D. admissions 2022-23

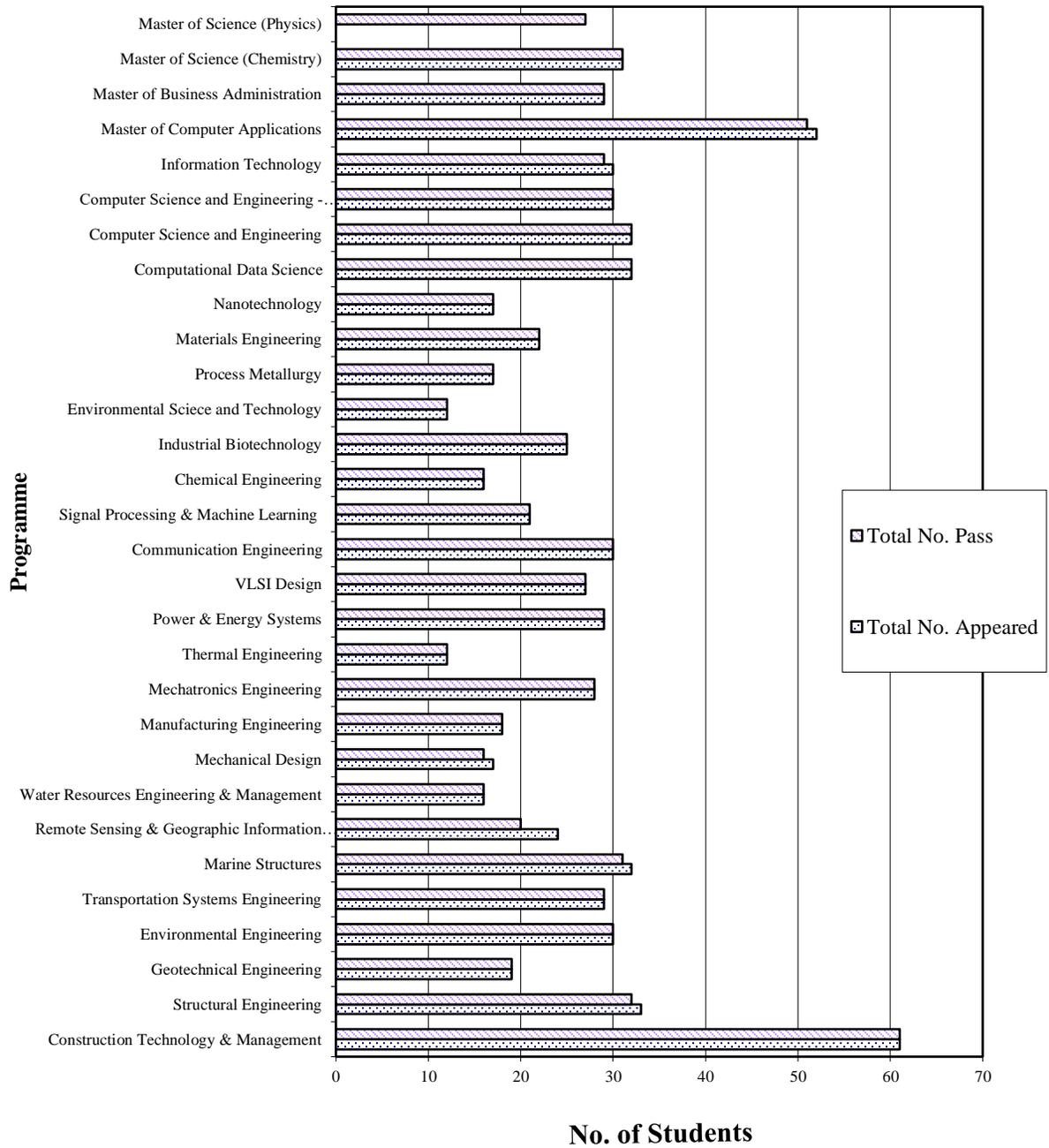




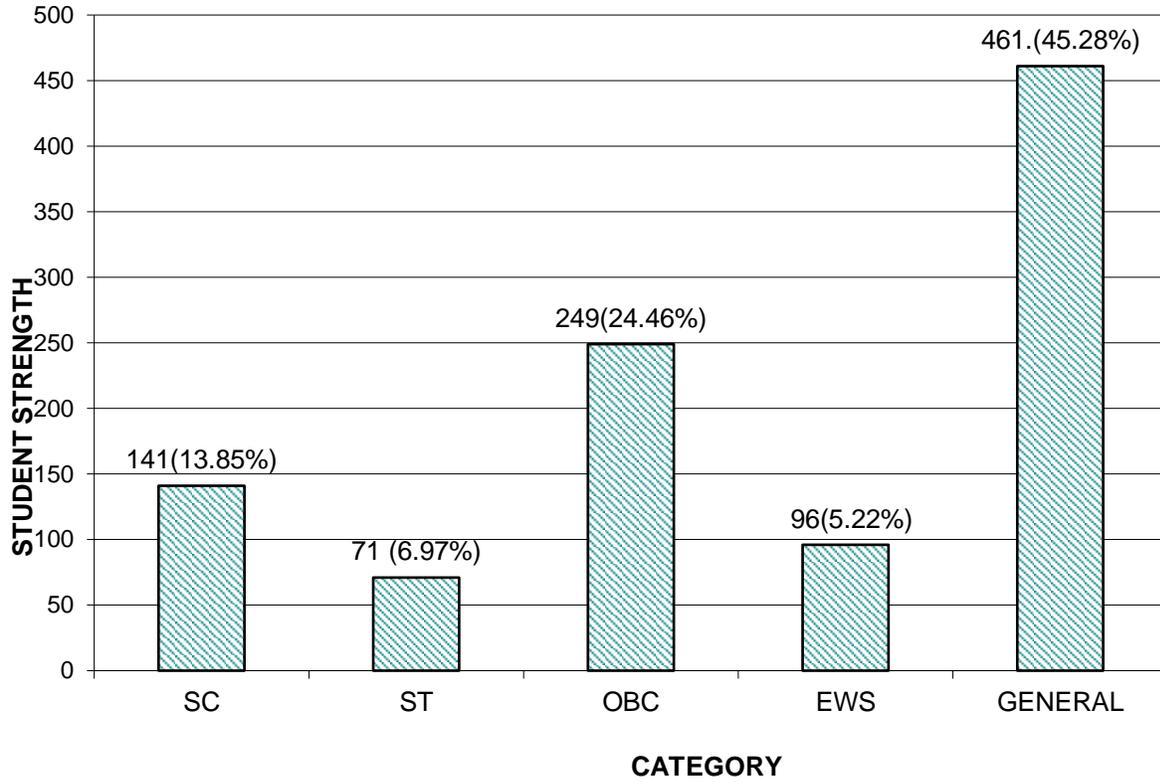
Growth enrolment UG/PG/Ph.D. students during last 5 years 2019-2020 to 2022-23



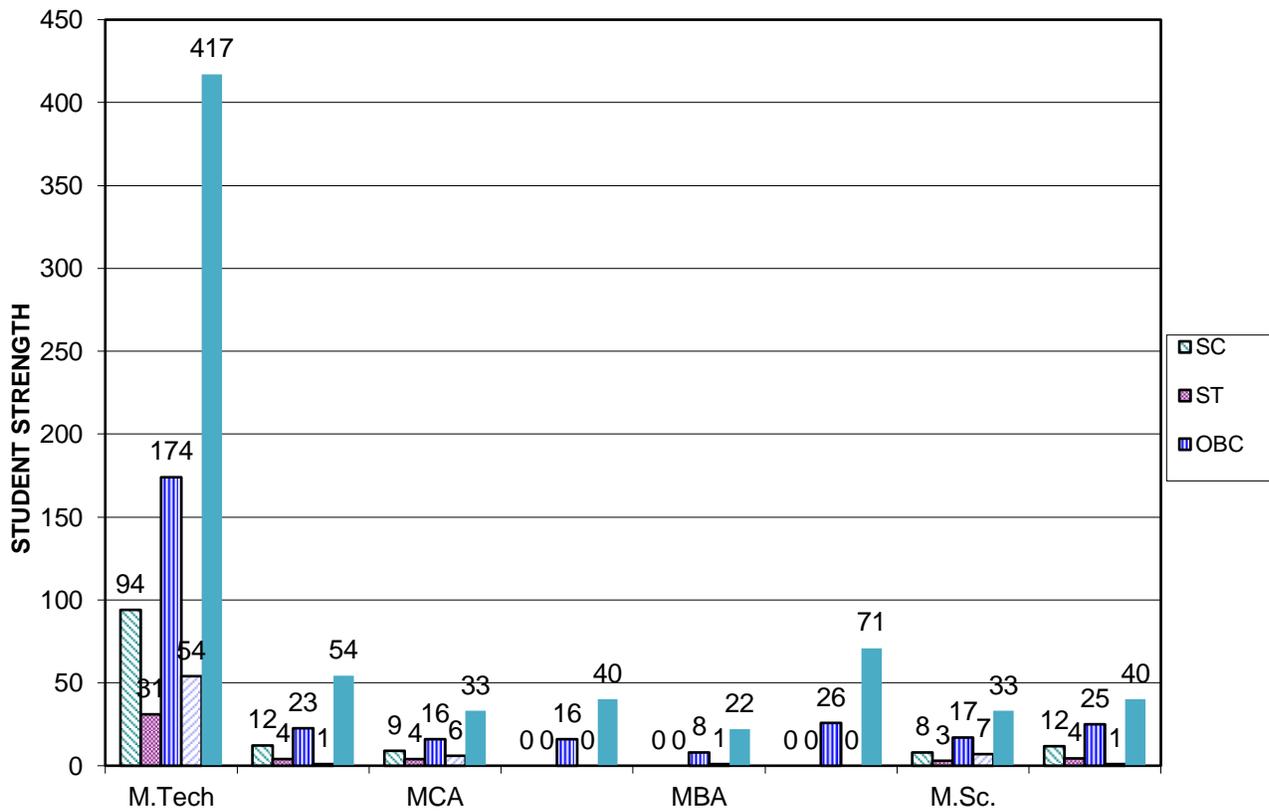
Examination Results 2022(UG)



Examination Results 2022 (PG)



Category wise details of UG admissions 2022-23



Category wise details of PG admissions 2022-23

Ranks secured by the B.Tech./M.Tech./MCA/MBA/M.Sc. (Physics & Chemistry) Examination held in April/May, 2022

Sl. No.	Branch	Reg. No.	Name of the Student
1	CHEMICAL ENGINEERING	181462CH002	ABHIJEET SINGH 1) Institute Medal 2) Mohan V Hosur Gold Medal 3) 1986 Batch Gold Medal
2	CIVIL ENGINEERING	181430CV123	<u>SUDEEPHI NALLA</u> 1) Institute Medal 2) Prof. M. N. Shivshankar Gold Medal 3) Dr. R.K. Yaji Gold Medal 4) 1986 Batch Gold Medal
3	COMPUTER SCIENCE AND ENGINEERING	181131CO146	SAI SREE HARSHA 1) Institute Medal
4	ELECTRONICS & COMMUNICATION ENGINEERING	181686EC139	RANGARAJAN ROSHAN 1) Institute Medal 2) 1986 Batch Gold Medal
5	ELECTRICAL & ELECTRONICS ENGINEERING	181651EE103	ADITYA C 1) Institute Medal 2) Prof. M.R. Shenoy Memorial Prize 3) Prof. K. M. Hebbar Gold Medal 4) 1986 Batch Gold Medal
6	INFORMATION TECHNOLOGY	181516IT132	<u>P AKSHARA</u> 1) Institute Medal
7	MECHANICAL ENGINEERING	181496ME239	<u>KRITI SHUKLA</u> 1) Institute Medal 2) 1986 Batch Gold Medal 3) Prof. Shuichi Torii Gold Medal
8	METALLURGICAL & MATERIALS ENGINEERING	181056MT007	ANANT RAGHOTHAM ARNI 1) Institute Medal 2) Karthik Alloys Gold Medal 3) Prof. H. V. Sudhaker Nayak Gold Medal 4) SMIORE Gold Medal 5) 1986 Batch Gold Medal
9	MINING ENGINEERING	181802MN018	KARTHIK MENON 1) Institute Medal 2) Hutti Gold Mines Medal

POST GRADUATES

Sl. No.	Branch	Reg. No.	Name of the Student
1	Marine Structures	202281MS029	SREEBHADRA M N 1) Institute Medal
2	Remote Sensing & Geographic Information System	202432RS028	VINEETH RUSSELL 1) Institute Medal
3	Water Resources Engineering & Management	202596WR011	<u>JOSHITHA T N</u> 1) Institute Medal
4	Chemical Engineering	202050CG003	DENISH VIRANI 1) Institute Medal
5	Industrial Biotechnology	202191IB002	AJITHKUMAR V 1) Institute Medal
6	Environmental Science and Technology	202113ES004	<u>GANDHI BANSI HITENDRABHAI</u> 1) Institute Medal
7	Construction Technology & Management	202054CM022	<u>KANUPRIYA DHIMAN</u> 1) Institute Medal
8	Environmental Engineering	202129EN023	NITHIN VARGHESE JOHN 1) Institute Medal
9	Geotechnical Engineering	202159GT004	AMAL JOSE 1) Institute Medal
10	Structural Engineering	202490ST013	<u>JENNA MARIA JALEEN</u> 1) Institute Medal
11	Transportation Engineering	202529TS022	RISHABH KUMAR 1) Institute Medal
12	Computer Science & Engineering	202659CS007	<u>DIVYA MEENA</u> 1) Institute Medal
13	Computer Science & Engineering – Information Security	202607IS015	KUSHAGRA GUPTA 1) Institute Medal
14	Power & Energy Systems	202397PS017	PARANGE OMKAR RAM 1) Institute Medal
15	Communication Engineering and Networks	202347CN022	<u>S NANDANA</u> 1) Institute Medal
16	VLSI Design	202561VL006	CHINMAY MALKHANDI 1) Institute Medal
17	Signal Processing and Machine Learning	202456SP015	MAYANK RAJPUROHIT 1) Institute Medal
18	Information Technology	202205IT014	MULE HANUMANT VILAS 1) Institute Medal
		202218IT021	<u>RENUKA SAINI</u> 1) Institute Medal
19	Computational and Data Science	202013CD031	VAIBHAV PANT 1) Institute Medal
20	Mechanical Design	202246MD007	<u>KAJAL CHOURASIA</u> 1) Institute Medal 2) Prof. K. L. Bhat & Prof. P. Prasad Rao Gold

			Medal 3) Department of Mechanical Engineering Gold Medal
21	Manufacturing Engineering	202324MF016	<u>SHWETA JOSHI</u> 1) Institute Medal
22	Mechatronics Engineering	202007MC011	CHRIS EDBERG 1) Institute Medal
23	Thermal Engineering	202542TH002	ABHIJITH C 1) Institute Medal 2) Dr. B. S. Samaga Award
24	Materials Engineering	202251ML029	VIKRANT KALA 1) Institute Medal 2) Prof. K R Hebbar Gold Medal 3) Prof. K. L. Bhat & Prof. P. Prasad Rao Gold Medal
25	Nanotechnology	202365NT015	SHUBHANG KHARE 1) Institute Medal
26	Process Metallurgy	202378PM005	DEVENDER SHARMA 1) Institute Medal 2) Smt. Sarojini Pillay Gold Medal

Master of Computer Applications – 2022

Sl. No.	Branch	Reg. No.	Name of the Student
27	Master of Computer Applications	194037CA018	<u>DEYASHINI BHATTACHARYA</u> 1) Institute Medal 2) Dr. Saroja R Hebbar Gold Medal

Master of Business Administration – 2022

Sl. No.	Branch	Reg. No.	Name of the Student
28	Master of Business Administration	205004SM009	<u>JHALAK SAXENA</u> 1) Institute Medal

Master of Science - 2022

Sl. No.	Branch	Reg. No.	Name of the Student
29	Chemistry	206060CY023	<u>JADHAV SNEHAL RAMNATH</u> <u>MADHURI</u> 1) Institute Medal 2) Prof. G. H. Kulkarni Gold Medal
30	Physics	206059PH028	VARUN R P 1) Institute Medal 2) K. Subbarayappa Gold Medal

9. Ph.D.PROGRAMMES & DOCTORATES AWARDED

PH.D. PROGRAMMES – EXISTING & PROPOSED

DEPARTMENT OF CIVIL ENGINEERING

EXISTING SPECIALIZATION:

Construction Technology and Management, Environmental Engineering, Geotechnical Engineering, Structural Engineering, Transportation Engineering, Earth Sciences.

DEPARTMENT OF CHEMICAL ENGINEERING

EXISTING SPECIALIZATION:

Chemical Engineering-Process Dynamics and Control, Process Modelling and Simulation, System Identification, Subspace Identification, Process Systems Engineering, Process Optimization, Renewable Energy

PROPOSED

Computational Fluid Dynamics (CFD), Multi Phase Flow, Microfluidics, Nano Technology, Bioenergy, Process Dynamics and Control.

DEPARTMENT OF CHEMISTRY

Corrosion science, Nanofluids, Electro chemistry, Nanocoating, Photocatalysis, Supercapacitors, Thermoelectrics, Materials for energy and environmental applications. Medicinal Chemistry, Organic electronics, Membrane technology, Materials Chemistry, Environmental Chemistry, Polymer composites, Perovskite solar cells, Organic Synthesis, Green Chemistry,

Organometallic Chemistry, Renewable synthesis and catalysis, Porphyrin Chemistry, Natural products and total synthesis. Dyes for optical applications.

PROPOSED SPECIALIZATION:-

Enzyme technology, Biosensors, Green hydrogen production, waste to fuel and hydrogen synthesis, Biomimetic organic reactions, Electroorganic Synthesis, C-H Functionalization Reactions, Multicomponent Reactions, Green hydrogen production, waste to fuel, and materials science.

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING:

EXISTING SPECIALIZATION:-

Computer Networks, Software Engineering, Distributed Computing, Data Management, Information Security, High Performance Computing, Computer Vision, Cloud Computing, Image Processing, Speech Processing, Mobile computing Graph Theory, Graph Algorithms, Big Data Analytics, Internet of Things (IoT), Network-on-Chip(NoC)– 2D, 3D, Wireless and Photonic., Testing and Fault-Tolerance, Hardware Security, Formal Verification, and Cyber-Physical Systems, Computer Systems and Architecture, Machine Learning and Distributed Systems, Cloud Computing, FOG Computing, Internet of Things (IoT) Security, Blockchain, Server less Computing

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

EXISTING SPECIALIZATION

Digital VLSI Design, Analog and Mixed Signal Design, Digital Signal Processing, Speech, Audio, Image and Video

Processing, Digital Communication, Error Control Coding, Free Space Optics, RF MEMS, Microwave and RF Circuits, Wireless Sensor Networks, High Frequency Electronics, Semiconductor Devices, Embedded Systems, Reconfigurable Computing.

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

EXISTING SPECIALIZATION

Power and Energy Systems, Power Electronics and Electric Drives, Control Systems, New and Renewable Energy Systems, Insulation and High Voltage Engineering, Application of Signal Processing, Artificial Intelligence (AI)/Machine Learning (ML), Algorithms in Electrical Engineering.

DEPARTMENT OF INFORMATION TECHNOLOGY

EXISTING SPECIALIZATION

Affective Computing, Big Data Analytics, Blockchain Technologies, Cloud/Edge/Fog Computing, Cloud Security, Computer Networks, Cyber Security, Databases, Data Mining, Deep Learning Applications, Distributed Computing, Future Internet Architecture, Healthcare Informatics, High Performance Computing, Information Retrieval, Information Security, Internet of Things, Mobile Software Engineering, Natural Language Processing, Network Security, Semantic Web Technology, Social Multimedia/Social Network Analysis, Software Engineering, Web Services, Wireless Sensor Networks.

PROPOSED

Quantum Computing and Quantum Cryptography, Spatial Data Analytics.

DEPARTMENT OF MECHANICAL ENGINEERING

EXISTING SPECIALIZATION

Thermal Engineering
Manufacturing Engineering
Design and Precision Engineering
Mechatronics Engineering

DEPARTMENT OF MINING ENGINEERING

EXISTING SPECIALIZATION

Rock Mechanics and Ground Control, Drilling and Blasting, Mine Planning, Environmental Management, Waste Management, Reliability and Safety Engineering, Occupational Ergonomics.

DEPARTMENT OF METALLURGICAL AND MATERIALS ENGINEERING

EXISTING SPECIALIZATION

Process Metallurgy, Physical Metallurgy, Mechanical Metallurgy, Materials Engineering, Nanotechnology, Biomaterials.

DEPARTMENT OF PHYSICS

EXISTING SPECIALIZATION

Solid State Physics, Materials Science, Theoretical Physics, Electromagnetics, Photonics, Compound Semiconductor thin films, Organic Electronics (OLED, Photovoltaics), Cosmology and Early Universe Theoretical investigation of strongly correlated systems and solar cells.

PROPOSED

Plasmonics, Nanomaterials and Nanostructures, Organic Spintronics Theoretical studies of Quantum materials & topological insulators Nonlinear dynamics Active Matter Electrode Materials

SCHOOL OF HUMANITIES, SOCIAL SCIENCES AND MANAGEMENT

EXISTING SPECIALIZATION

Strategic Management, International Business, Technology Management, Organizational Behaviour, Human Resource Management, Marketing, Corporate Finance, Capital Markets, Behavioural Finance, Development Economics, International Economics, Agricultural Economics, Rural Development, Applied Econometrics, Operations Management, Information Systems, E-Governance, English and Comparative Literature, and Other related areas.

PROPOSED

Business Analytics

DEPARTMENT OF WATER RESOURCES AND OCEAN ENGINEERING

EXISTING SPECIALIZATION

- (i) Coastal Engineering
- (ii) Water Resources Engineering
- (iii) Geoinformatics

DOCTORATES AWARDED

DEPARTMENT OF CHEMICAL ENGINEERING

No. of PhD Awarded:-04 (including those for which viva has been successfully completed).

1. Ms. Manasa M. “Synthesis and characterization of boron and cerium codoped titanium dioxide photocatalysts for antibiotic degradation and microbial disinfection under solar light”, 2022, Dr. Hari Mahalingam
2. Ms. Archana “Transdermal delivery of Donepezil Niosomes for Alzheimer’s disease : synthesis, *Ex vivo* permeation

- and Brain Targeting studies”, 2022, Dr. Keyur Raval, Dr. G. Srinikethan
3. Ms. Smitha C.K. “Hydroxypropyl- β -Cyclodextrin modified Nickel ferrite nanocomposites for removal of Pharmaceutical Pollutants”, 2022, Dr. Raj Mohan B.
4. Ms. Priyank Bhat ““Studies on expression of Recombinant Chimeric Chitin Deacetylase”, 2022, Dr. Keyur Raval

DEPARTMENT OF CIVIL ENGINEERING

No. of PhD Awarded:-08 (including those for which viva has been successfully completed).

1. Arpitha, D., “Studies on Durability Performance of Concrete Under Marine Environment Incorporating Metallic Slags as Sand Replacement”, April 2022. Supervisor: Dr. Rajasekaran, C.
2. Thanu, H.P., “Building Performance Score Model for Assessing the Sustainable Performance in Life Cycle of Building”, April 2022. Supervisor: Dr. Rajasekaran, C.
3. Panditharadhya B J, “Experimental investigations on alkali-activated concrete developed by incorporating marginal materials for rigid pavement”, April 2022. Supervisors: Dr. Raviraj H.M. and Dr. A. U. Ravi Shankar.
4. Hemantha Kumar V., “Effect of Working Temperature on Rheological Properties of Crumb Rubber Modified Binders with Warm Mix Additives”, May 2022. Supervisor: Dr. Suresha S. N.
5. Ashik Bellary, “Experimental and Numerical Study on Performance of Undowelled Joints in Concrete Pavements”, June 2022. Supervisor: Dr. Suresha S. N.
6. Nityanand S. Kudachimath. “Use Of Aluminium Refinery Residue (Red

Mud) As A Construction Material for Pavements”, September 2022. Supervisor: Dr. Raviraj H. M and Dr. B. B. Das.

7. Sreya M V, “Seismic Response of RC Buildings Incorporating Effective Soil Isolation with Sustainable Materials”, November 2022. Supervisors: Prof. B R Jayalekshmi and Prof. Katta Venkataramana.
8. Nimisha P, “Development of Effective Baffle Configuration for Slosh Response Control in Liquid Storage Tanks”, February 2023. Supervisors: Prof. B R Jayalekshmi and Prof. Katta Venkataramana.

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

DURING PERIOD 1ST APRIL 2022 TO 31ST March 2023:- No. Awarded: 4

1. Ms. Swathi P (Reg.No. 187052CO005) “Study and Analysis of Scalability, Interoperability and Transition Difficulty in Permissioned Blockchain”, 2022, Dr. M. Venkatesan
2. Tojo Mathew (165005CS16P01) “Automated analysis of cancer histopathology Images using machine learning Techniques”, 2022, Dr. Jeny Rajan
3. Mr. Ramteke Pravin Bhaskar (Reg.No. 138042CS13F08) “Phonology Analysis from Childrens’ Speech”, 2022, Dr. Shashidhar G Koolagudi
4. Mr. Raviraj Holla M (Reg.No.177128CO502) “Analysis and Design of GPGPU-Based Secure Visual Secret Sharing (VSS) Schemes”, 2022, Dr. Alwyn Roshan Pais

DEPARTMENT OF CHEMISTRY

NO. of PH.Ds AWARDED UPTO 31ST MARCH 2022: 104
DURING PERIOD 1ST APRIL 2022 TO 31ST March 2023: 02

1. Harsha Bantawal, ‘Perovskite Alkaline Earth Titanates Based Nanomaterials as Photocatalysts’, 2022, Prof. D. Krishna Bhat.
2. RASMI BHASKARAN P, “Facile Synthetic Routes to Functionalized Nitrogen and Oxygen Heterocycles via Zwitterion Annulations” 2022, Dr. Beneesh P B.

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

DETAILS OF PHDS AWARDED

UPTO 31ST MARCH 2022:- No. of Ph.Ds Awarded (including those for which viva has been successfully completed):-58

DURING PERIOD 1ST APRIL 2022 TO 31ST MARCH 2023:- No. Awarded (including those for which viva has been successfully completed):-13

(FOR PERIOD OF REPORT ONLY)

1. Nallagonda Vijaya Ratnam, "Performance Analysis Of UAV Based FSO Communication System" 30th May 2022, Dr. Prabu K.
2. Rajesh G., "Correlation Analysis and Tensor Data Modeling in Multimodal Environment Wireless Sensor Networks", 15th June 2022, Dr. Ashvini Chaturvedi.
3. Vignesh R., "Design and Analysis of Reconfigurable RF Front-End Amplifier for Wireless Broadband Multimedia Communications", 5th August 2022, Dr. Sandeep Kumar.
4. Naveen Jacob, "Metamaterial Inspired Reconfigurable Antenna for Cognitive Radio Applications", 11th August 2022, Dr. Muralidhar Kulkarni and Dr. Krishnamoorthy K.
5. Bethi Pardhasaradhi "Development of GPS Spoofing and Anti-Spoofing Algorithms with Data Association and Target Tracking Frameworks" 9th September 2022, Dr. P. Srihari and Dr. Aparna.

6. B. Anudeep, "Mitigation of Mutual Coupling in Compact Low Profile, Dual Polarized MIMO Antennas with Wave Propagation Models for 5G Applications", 29th September 2022, Dr. Krishnamoorthy K.
7. Geriki Polaiiah, "An Efficient Low Power Rectifier Integrated Antennas for RF Energy Harvesting and Autonomous Frequency Reconfiguration", 1st October 2022, Dr. Muralidhar Kulkarni and Dr. Krishnamoorthy K.
8. Dhruvakumar T., "Stochastic Modelling and Performance Analysis of Intelligent Reflecting Surface Assisted Wireless Communication Systems", 3rd October 2022, Dr. Ashvini Chaturvedi.
9. Sushma B., "Low Complexity Encoding and Summarization of Wireless Capsule Endoscopy Video", 2nd November 2022, Dr. Aparna P.
10. Usha L. "Design and Analysis of Multiband Circularly Polarized Dielectric Resonator Antennas", 17th December 2022, Dr. Krishnamoorthy K.
11. L. Bhargava Kumar "Performance Analysis of Relay Assisted Convergent Free Space Optical – Underwater Wireless Optical Communication System" 22nd December 2022, Dr. Prabu K.
12. Lakshmi, "Area efficient hardware architectures of intra-prediction and sample adaptive offset filter for HEVC encoder", 11th January 2023, Dr. Aparna P.
13. Pradeep Gorre "Design and Performance Analysis of Optical Front-End Transceiver using Nano-Scale Integrated Circuits" 21st February 2023, Dr. Sandeep Kumar.

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

DURING PERIOD 1ST APRIL 2022 TO 31ST MARCH 2023: - No. Awarded: **06**

1. Banavath Shiva Naik, "Investigation and Design of Capacitor-Based Multilevel Inverters", 2022, Dr. Y. Suresh.
2. Shreeram V Kulkarni, "Operation and control of Microgrid in Islanded and Grid connected mode of Operation", 2022, Dr. Dattatraya N. Gaonkar.
3. R. T. Senthilkumar, "Investigation on Transient Behavior of Grounding Systems in Multilayer Earth Structure" 2022, Dr. Dattatraya N. Gaonkar.
4. Pramod S V, "Investigation of the effect of energy shaping via interconnection and damping assignment passivity-based control on the performance of active suspension systems", 2023, Dr. Krishnan C. M. C. and Dr. Sheron Figarado (IIT Goa).
5. Ravikiran Hiremath, "Low Voltage Ride Through Enhancement Capabilities of Doubly Fed Induction Generator Based Wind Energy Conversion System", 2023, Dr. Tukaram Moger.
6. K. Rajkumar, "Power Quality Enhancement Using Transformerless Dynamic Voltage Restorer Based on T-Type Multilevel Inverter", 2022, Dr. P. Parthiban.

DEPARTMENT OF INFORMATION TECHNOLOGY

UPTO 31ST MARCH 2022: 30

DURING PERIOD 1ST APRIL 2022 TO 31ST MARCH 2023: 4

1. Natesha B V (IT16FV05) "Fog Based Frameworks for IOT/IIOT Service Placement and Data Analytics in Smart Application Environments" May 2022, Prof. G. Ram Mohana Reddy.
2. Karkthik K (177149IT500) "Automated Quality Enhancement, Modelling and Management of Diagnostic Scan Images with AI Techniques" May 2022, Dr. Sowmya S Kamath.

3. Veena Mayya (187054IT004) "AI-based Clinical Decision Support Systems using Multimodal Healthcare Data" June 2022, Dr. Sowmya S Kamath.
4. Dinesh Naik (110652IT11P01) "A Region Based Semantic Composition Framework to Visual Image and Video Event Specification" January 2023, Dr. Jaidhar C D.

DEPARTMENT OF MATHEMATICAL & COMPUTATIONAL SCIENCES

UPTO 31ST MARCH 2022:- 54

**DURING PERIOD 1ST APRIL 2022 TO 31ST MARCH 2023:- 8
(FOR PERIOD OF REPORT ONLY)**

1. M. Chitra, "Fractional Regularization methods for ill-posed problems in Hilbert scales", 2022, Dr. Santhosh George and Dr. Jidesh P
2. K. Mahesh Krishna, "*Metric, Schauder and Operator-Valued Frames*", 2022, Dr. P. Sam Johnson.
3. Sumukha S, "A Study on Lambert series Associated with Cusp Forms and Rankin-Cohen Brackets associated with Hermitian- Jacobi Forms", 2023, Dr. B R Shankar
4. Venkatramana P B, "A Study on Solutions of Some Convection Diffusion Equations", 2023, Dr. B R Shankar and Dr. Engu Satyanarayana.
5. Sanjay, "Domain name System (DNS) Security: Health measurement and Intrusion Detection", 2022, Dr Pushparaj Shetty D and Dr Balaji.
6. Pradeep Kanchan "Improved Nature Inspired Algorithms For Optimization Problems In Wireless Sensor Networks", 2022, Dr. Pushparaj Shetty D.
7. Chandra Naik G "Computational Intelligence algorithms for Optimization problems in Wireless Sensor Networks", 2022, Dr Pushparaj Shetty D.
8. Smitha A, "Retinal Disorders Detection And Analysis From Fundus And Optical Coherence Tomography Images Using

Deep Learning Models", 2022, Dr. Jidesh P.

DEPARTMENT OF MECHANICAL ENGINEERING

Number of Doctorates awarded (1st April 2022 to 31st March 2023) – 31

1. Prakash H Jadhav, "Numerical Analysis of Conjugate Heat Transfer in the presence of Porous Medium", 2022, Dr. Gnanasekaran N and Dr. Arumuga Perumal D.
2. Narendran G, "Heat and Fluid Flow in an Integrated Rectangular Microchannel: A combined Numerical-Experimental Study", 2022, Dr. Gnanasekaran N and Dr. Arumuga Perumal D.
3. Sailesh R, "Sound Absorption and Transmission Loss Characteristics of 3D Printed Porous Bio-degradable Material", 2022, Dr. P. Jeyaraj and Dr. M. R. Doddamani.
4. Mr. Mithun Kumar, "Fabrication and Characterization of Polyphenylsulfone Based Ultrafiltration Hollow Fiber Membranes for Groundwater Treatment Studies", 2022, Dr. Somasekhara Rao T. and Dr. Arun M. Isloor.
5. Ratnesh Kumar Singh, "An Experimental Investigation on Properties of Shape Memory Alloy wires of Cu-Al-Be Doped with Grain Refiners for the Structural Applications", 2022, Prof. S. M. Murigendrappa and Dr Subhaschandra Kattimani.
6. Kalinga T, "An Experimental Investigation on the Properties of Cu-Al-Be-X Shape Memory Alloys for Vibration Damping Applications", 2022, Prof. S. M. Murigendrappa and Dr Subhaschandra Kattimani.
7. Addisu Frinjo Emma, "Experimental Investigation of Coffee Husk Biodiesel as a Renewable Fuel in Compression Ignition Engine", 2022, Dr. A. Sathyabhama and Dr. Ajay Kumar Yadav.
8. Jeena Joseph, "Effect of Humpback Whale inspired Tubercles on Vertical

- Axis Wind Turbine Blade”, 2022, Dr. A. Sathyabhama.
9. Vinayak Basavanth Kallannavar, “Study of Vibration Characteristics of Skew Laminated Composite Sandwich Plates and Shells Operating in Hygro and Thermal Environments”, 2022, Dr Subhaschandra Kattimani.
 10. Naveen Kumar H S, “Geometrically Nonlinear Vibration Analysis of Functionally Graded Porous Plates and Shells”, 2022, Dr Subhaschandra Kattimani.
 11. Esayas Lateno Shirko, “Numerical Study on Nonlinear Vibration Characteristics and Control of Functionally Graded Magneto-Electro-Elastic Plates with Porosity and Crack”, 2022, Dr Subhaschandra Kattimani.
 12. Nidhul K, “Computational and Experimental Study of Solar Air Heater with Various Duct Cross Sections and Artificial Roughness”, 2022, Dr. Ajay Kumar Yadav and Dr. Anish S.
 13. Prithvi Rajan S, “Studies on Mechanical Properties and Corrosion Behavior of ZE41 Magnesium Alloy Subjected to Equal Channel Angular Pressing”, 2022, Prof. Narendranath S and Prof. Vijay H Desai.
 14. Uzwalkiran Rokkala, “Surface Modification of Mg-Zn-Dy Alloy using Plasma Spray and Friction Stir Processing for Biomedical Applications”, 2022, Dr. Srikanth Bontha and Dr. Ramesh M R.
 15. Jagadish C, “Performance, Combustion and Emission Studies of a Single Cylinder Diesel Engine by Dual Fuel Mode Propelled with Biogas Derived from Food Waste”, 2022, Dr. Veershetty Gumptapure.
 16. Manoj I V, “Investigation of Dimensional Accuracy on Slant Type Taper Cutting by WEDM of Ni-Based Superalloy for High Temperature Applications”, 2022, Prof Narendranath S.
 17. Kumara, “Solar Energy Based Desalination System using Humidification-Dehumidification Process”, 2022, Veershetty Gumptapure.
 18. Gudala Suresh, “Development of Tungsten Inert Gas and Microwave Treated Claddings in Improving Resistance to Wear at Elevated Temperatures”, 2022, Dr. Ramesh M R.
 19. Subbarao Medabalimi, “Studies on High Temperature Wear and Erosion Behaviour of Partially Oxidized Plasma Spray Coatings”, 2022, Prof. Ravikiran Kadoli and Dr. Ramesh M R.
 20. Santhosh K, “Experimental Investigation of Hydrogen and Higher Alcohol Blends on Engine Characteristics of CRDI Diesel Engine”, 2022, Dr. Kumar G N.
 21. Praveen J, “Development of HDPE Composite for Biomedical Application using 3 D Printing”, 2022, Dr. Srikanth Bontha and Dr. Mrityunjay Doddamani.
 22. Sachin S, “Investigations on Interlaminar Fracture Toughness of T300/914 Composite and Severe Plastic Deformation of C70600 Alloy”, 2022, Dr. Shivananda Nayaka H.
 23. Patil Mukund Arun, “Free Vibration Studies on Terfenol-D Composite Actuated Layered Functionally Graded Structures using Differential Quadrature Approaches”, 2022, Prof. Ravikiran Kadoli.
 24. Ishwaragouda S Patil, “Characterization of ZrO₂ Reinforced Al-12.5Si Alloy Matrix Composite Fabricated Through Spray Forming Technique”, 2022, Prof. Srikantha S Rao and Dr. Mervin A Herbert.
 25. Biradar Madagonda K, “Numerical and Experimental Study of Subcritical/ Supercritical CO₂ Based Naturally Circulated Solar Thermal System”, 2023, Dr. Ajay Kumar Yadav.
 26. Anil Kumar B C, “Development of Solar Cooker with Temperature Controlled Thermal Energy Storage Units”, 2023, Dr. Ranjith M and Dr. Anish M.
 27. Bonthu Dileep, “Mechanical Response of 3D printed Functionally Graded Foam”, 2023, Dr. Mrityunjay Doddamani.
 28. Jayashish Kumar Pandey, “Study of Hydrogen Port Injection S I Engine”, 2023, Dr. Kumar G N.
 29. Deepak Naraynan, “An Investigation into the Aerodynamic Behaviour of a

Compressor Cascade in a Particle Laden Flow”, 2023, Dr. Anish S.

30. Anteneh Wogasso Wodajo, “Effect of Diethyl Ether Addition in Karaja Biodiesel Blend in Compression Ignition Engines”, 2023, Dr. Ajay Kumar Yadav and Dr. Kumar G N.
31. Dinesh M H, “Experimental Investigation of Low-Carbon and Carbon-Free Fuels in a Spark Ignition Engine”, 2023, Dr. Kumar G N.

DEPARTMENT OF MINING ENGINEERING

During the 1st April 2022 to 31st March 2023: No. Awarded -02

1. N. V. Sharathbabu Goripari (MN15F09), Simulation and Experimental Studies on Belt Conveyor Drive System for Energy Conservation in Underground Mines, June 2022, Prof. Ch. S. N, Murthy and Dr, Aruna Mangalpaday.
2. Harish H. (Reg. No. 165072MN16F01); Design and development of hydro-squeeze classifier assisted grinding ball mill for narrow size particle separation; September, 2022, Prof. Harsha Vardhan & Prof. M. Govinda Raj

DEPARTMENT OF METALLURGICAL AND MATERIALS ENGINEERING

No. awarded (including those for which viva has been successfully completed) Up to 31st March 2022:- 72

During period 1st April 2022 to 31st March 2023:- 03.

1. D. Satish Kumar, was awarded Ph.D. degree for his work on “Development of ferritic rolling process for the production of interstitial free automotive steel”, July 2022, Guide: Prof. Udaya Bhat K.
2. Pavankumar R. Sondar, was awarded Ph.D. degree for his work on “Effect of Cryogenic Treatment on Low Alloy Steels”, December 2022, Guide: Dr. Subray R. Hegde.
3. Robbi Vivek Vardhan, was awarded Ph.D. degree for his work on “Solution-Processed Metal Oxides and their Thin Films/Coatings towards Antifouling and

Annual Report 2022-23

Gas Sensing Applications”, January 2023, Guide Dr. Saumen Mandal

DEPARTMENT OF PHYSICS

No. awarded (including those for which viva has been successfully completed) Up to 31st March 2022:- **56**

During period 1st April 2021 to 31st March 2022”:-**06**

1. Nayana Devaraj was awarded Ph.D. degree for his work on “Spin Transport in low dimensional materials: A study from first principle electronic structure calculation”, 2022, Dr. Kartick Tarafder.
2. Sterin N S was awarded Ph.D. degree for his work on “Transition metal oxide devices for nonvolatile memory applications” 2022, Dr. Partha Pratim Das.
3. Mr. Sripadaraja K was awarded Ph.D. degree for his work on “Simulation Studies on Microdroplet and trapping in T-junction Devices” 2022, Prof. M N Satyanarayan, Prof. G. Umesh
4. Sunakya Maity, was awarded Ph.D. degree for his work on “Polyoxometalates-Carbonaceous based electrode materials for energy storage applications;”, 2022, Dr. Partha Pratim Das, Dr. Sib Sankar Mal (Co-Guide)
5. Jithin M A., was awarded Ph.D. degree for his work on “Synthesis, Characterization and laser patterning of pulsed dc magnetron sputtered NiTi shape memory alloys and TiN thin films”, 2023, Prof. N K Udayashankar.
6. Rajani K V, was awarded Ph.D. degree for his work on “Extended Phase Space Thermodynamics of Regular Bardeen Black Hole”, 2023, Dr. Deepak Vaid.

DEPARTMENT OF WATER RESOURCES AND OCEAN ENGINEERING

Doctorate awarded : Upto 31st March 2022 : 116

During period 1st April 2022 to 31st March 2023 : 12

1. Palani Kumar. P, was awarded Ph.D. degree for his work on “Effect of Sliding Speed and Rise in Temperature at the Contact Interface on Coefficient of Friction during full Sliding of SS304” April 2022, Dr. Subrahmanya Kundapura, Dr. N. Gnanasekaran
2. Pramodkumar, was awarded Ph.D. degree for his work on “Hydraulic Modelling of Unsteady Flow and Flood Routing in Nethravathi River Basin, INDIA” April 2022, Dr. M.K. Nagaraj, Dr. Paresh Chandra Deka.
3. Dinesh Kumar M, was awarded Ph.D. degree for his work on “Multivariate Analysis of Hydro-Meteorological Extreme Events” May 2022, Dr. A. Mahesha.
4. Raja Pandi, was awarded Ph.D. degree for his work on “Design of fretting Rig and Thin contact displacement sensor for fretting experiments” August 2022, Dr.Vadivuchezhian K.
5. Punithraj G, was awarded Ph.D. degree for his work on “Surface Soil Moisture Retrieval over heterogeneous Agricultural Plots using SAR observations”, December 2022, Dr. Pruthviraj. U, Prof. Amba Shetty
6. Kumaran V, was awarded Ph.D. degree for his work on “Studies on Caisson type breakwater – A physical and Numerical approach” December 2022, Dr. Manu, Prof. Subba Rao
7. Sahaj K V, was awarded Ph.D. degree for his work on “Performance of Baffles in A Sway Excited Sloshing Rectangular Tank” December 2022, Dr. T . Nasar
8. Dinu Maria Jose, was awarded Ph.D. degree for his work on “Analysis Of Influence of Landuse Landcover and Climate Changes on Stream Flow of Nethravathi Basin, India” December 2022, Prof. G. S Dwarakish.
9. Sharannya T M, was awarded Ph.D. degree for his work on “Hydrological impact of Land Use and Climate change on the west coast river basin of Karnataka” December 2022, Prof. Amai Mahesha
10. Nithya R Govind, was awarded Ph.D. degree for his work on “Modelling the impact of Landcover change on Urban Heat/Cool Island of Bengaluru Metropolitan City” January, 2023, Dr. Ramesh. H
11. Shruthi Kambalimath, was awarded Ph.D. degree for his work on “Streamflow forecasting using wavelet coupled soft computing techniques and Fuzzy logic-based approach for stream water quality – quantity assessment” February 2023, Prof. Lakshman Nandagiri
12. Tom Eias, was awarded Ph.D. degree for his work on “Physical Model studies on breakwaters with Geotextile sand container armour units” February, 2023, Prof. Kiran G Shirlal

SCHOOL OF HUMANITIES, SOCIAL SCIENCES AND MANAGEMENT

Doctorate awarded : Upto 31st March 2021 : 60

During period 1st April 2022 to 31st March 2023 : 12

1. Ms. Vanitha P.S., “E-learning Service Using Cloud Technologies: A Study in Indian Context”, 04.05.2022, Dr. Sreejith A.
2. Mr. Jayan V., “Social Media and Health Care: A Select Study in Indian Context”, 04.05.2022, Dr. Sreejith A.
3. Mr. V. Madhusudhan Goud, “An Empirical Study of Internal Branding on Organizational Citizenship Behaviours: The Mediating Roles of Work Engagement and Job Satisfaction”, 11.05.2022, Dr. Sheena
4. Ms. Bhagavatula Aruna " Assessing the Impact of Energy Price Volatility on

- Indian Stock Market: Evidence from Energy Intensive Firms ”, 10.06.2022, Dr. Rajesh Acharya H.
5. Ms. Veena, “Impact of Employee Experience on Organizational Commitment and Organizational Effectiveness”, 27.06.2022, Dr. Rashmi Uchil
 6. Mr. Shrisha Srinivasan, “Perception of Demand, Markets and Innovation: A Study on Indian MSMEs”, 28.06.2022, Prof. K.B. Kiran
 7. Ms. Raksha R Deshbhag, “Effects of Celebrity Endorsement on Consumer Product Evaluation in Attitude Formation”, 08.07.2022, Dr. Bijuna C. Mohan
 8. Mr. Sunith Hebbar,” Comprehensive Adoption Model of M-Government: A Citizens' Perspective from the Smart Cities of Karnataka”, 18.08.2022, Prof. K. B. Kiran.
 9. Mr. Sunil Khosla, “Measuring Household Vulnerability to Poverty and Assessing Impact of Welfare Programs on Vulnerability to Poverty: An Empirical Study in Odisha”, 26.08.2022, Dr. Pradyot Ranjan Jena.
 10. Mr. Anshab V., “Impact of Behavioural and Social Factors on the Intention to Adopt Electric Vehicles: An Empirical Investigation”. 26.08.2023, Dr. S. Pavan Kumar.
 11. Ms. Haritha S., “Cognitive Dissonance in Online Shopping with Reference to Select Product Categories “.15.03.2023, Dr. Bijuna C. Mohan
 12. Ms. Poulami Saha, “An investigation on factors influencing behavioural intention: a study on usage of Unified Payment Interface”., 17.03.2023, Prof. K.B. Kiran

10.0 HUMAN RESOURCES

10.1 STAFF POSITION

Teaching Staff Number

Professors	69
Associate Professors	70
Assistant Professors (REGULAR)	85
Other staff, A.P.D. & System Manager	02
Contract Faculty	
Asst. Professor Grade – II	<u>41</u>
	<u>267</u>

Non-Teaching Staff

Administrative Officers	22
Technical staff	41
Non-technical supporting staff	<u>46</u>
	<u>109</u>

THE STAFF

(A) Administrative Staff

Director: (Head of the Institution)

Udayakumar R Y, Ph.D. from 17.02.2022 to 24.8.2022
Prasad Krishna, Ph.D, from 25.08.2022 to till date

Dean (Academic)

Vidya Shetty K, Ph.D. from 1.10.2021

Associate Dean (Academic)

PG

Ramesh Kini M, Ph.D. from 01.10.2021

UG

Manjunatha Sharman K, Ph.D. from 15.07.2021

Dean (Planning and Development)

K S Babu Narayana, Ph.D. from 30.07.2021

Dean (Faculty Welfare)

G C Mohan Kumar, Ph.D. from 16.03.2022.

Associate (Faculty Welfare) -1

P Sam Johnson, Ph.D. from 29.07.2021
Harsha Vardhan, Ph.D. from 29.07.2021

Dean (Alumni Affairs & Institutional Relations)

Vijay Desai, Ph.D., from 1.09.2021 to 31.1.2023
Shrikantha S Rao, Ph.D. from 1.2.2023

Associate (Dean AA & IR) -1

Navin Karanth P, Ph.D. 29.07.2021

Dean (Student Welfare)

Narendranath S, Ph.D. from 18.10.2021

Associate (Dean Students Welfare) -1

Alwyn Roshan Pais, Ph.D., from 29.07.2021
C P Devatha, Ph.D., from 29.07.2021

Dean (Research & Consultancy)

S M Kulkarni, Ph.D. from 31.12.2021

Associate Dean (R&C) -1

Subhaschandra Kattimani, Ph.D. 29.07.2021
Hari Prasad Dasari, Ph.D. from 29.07.2021

ACADEMIC STAFF (TEACHING)

Department of Water Resources and Ocean Engineering Professors:

N. Lakshman, Ph.D., (I.I.Sc., Bangalore)
Subba Rao, Ph.D. (Mangalore University),
G.S. Dwarakish, Ph.D. (Anna University)
Mahesh A, Ph.D. (IIT Bombay)
Kiran G. Shirlal, Ph.D. (NITK),
Amba Shetty, Ph.D. (NITK)

B.M. Dodamani, Ph.D. (NITK) H.O.D.
from 25.03.2021 till 24.03.2023

Associate Professors

K Varija, Ph.D. (IISc. Bangalore), HOD
from 25.03.2023

H.Ramesh, Ph.D. (NITK)

Manu, (Ph.D. NITK)

Nasar T, Ph.D. (IIT, Madras)

Assistant Professors:

K. Subrahmanya, Ph.D. NITK

Pruthviraj U., Ph.D. (NITK)

K. Vadivuchezhian, Ph.D. (IIT Madras)

Debabrata Karmakar, Ph.D., (IIT
Kharagpur)

Shwetha Hassan Rangaswamy, Ph.D.
(IISc, Bangalore) (Contractual)

Department of Chemical Engineering

Professors:

Gopal Mugeraya, Ph.D. (I.I.Sc.
Bangalore)

M.B. Saidutta, Ph.D. (I.I.T. Bombay)

B. Raj Mohan., Ph.D. (I.I.T., Kharagpur)

K. Vidya Shetty, Ph.D. (NITK)

Associate Professors:

Hari Mahalingam, Ph.D. (Singapore)

Prasanna B.D., M.E. (Ph.D. NITK)

I Regupathi, Ph.D., (Anna University,
Chennai)

P.E. Jagadeeshbabu, Ph.D. (Anna Univ.
Chennai), HOD From 3.9.2021

S. Gangamma, Ph.D. (IIT, Bombay)

Keyur Raval, Ph.D. (Aachen Den
University)

Hari Prasad Dasari, Ph.D. (Korea
Institute of Science and Technology,
Korea)

Assistant Professors:

Jitendra Pal S., Ph.D. (IIT Delhi)

B. Ashraf Ali, Ph.D. (IIT Madras)

Jagannathan T K, Ph.D. (IIT Madras)

Contractual

Chinta Sarkar Rao, Ph.D. (IIT, Madras)

Mahesh Kumar Poddar, Ph.D., (IIT
Guwahati) (Contractual)

Vaishakh Nair, Ph.D. (IIT, Madras)

Department of Civil Engineering Professors:

M.C. Narasimhan, Ph.D. (IIT Madras)

Katta Venkataramana, Dr.Eng. (Kyoto
University, Japan)

A.U. Ravi Shankar, Ph.D (Univ. of
Roorkee)

K. Swaminathan. Ph.D. (I.I.T. Bombay)
V.R.S. from 31.3.2023

Varghese George, Ph.D. (I.I.T. Bombay)

S. Shrihari, Ph.D. (Univ. of Roorkee)

Sitaram Nayak, Ph.D. (I.I.Sc. Bangalore)
Subhas C. Yaragal, Ph.D. (IISc.

Bangalore)

K.S. Babunarayan, Ph.D. (NITK)

B.R. Jayalekshmi, Ph.D. (NITK) HOD
from 22.4.2021

Associate Professors:

Sunil B.Malegole, Ph.D. (NITK)

Basavaraj Manu, Ph.D. (IIT, Bombay)

Suresha S N, Ph.D. (NITK)

Arun Kumar Thalla (IIT Rourkee), Ph.D.

Bibuti Bhushan Das, Ph.D., (IIT Bombay)

Gangadhar Mahesh, Ph.D. (Hongkong)

A. S Balu, Ph.D. (IIT Madras)

C.P. Devatha, Ph.D. (IIT Roorkee)

Assistant Professors:

Prashanth M.H., Ph.D. (IISc, Bangalore)

Raviraj H. Mulangi, Ph.D., (IISc,
Bangalore)

C Rajasekaran, (IIT Madras)

Adani Azhoni, Ph.D. (IIT, Delhi) on Lien
from 18.1.2023

T Palanisamy, Ph.D.

Sreevalsa Kolathayar, Ph.D., (IISc,
Bangalore)

Contractual

Babloo Chaudhary, Ph.D., (Kyoto, Japan)

Anupama Surejan, Ph.D., (IIT, Madras)

J Vijaya Vengadesh kumar, Ph.D.(IIT,
Madras)

Sreekumar M, Ph.D. (IIT, Bombay)

Vinoth S, Ph.D. (Anna University,
1Chennai)

Mithun Mohan, Ph.D.(IIT Roorkee)

Pavan G S, Ph.D. (IISc, Bangalore)
Sridhar G, Ph.D. (IIT, Madras, & NUS.
Singapore (Joint Degree)

Department of Computer Science & Engineering

Professors:

K. Chandrasekaran, Ph.D. (J.N.T.U.)
P Santhi Thilagam, Ph.D. (NITK)
Annappa, Ph.D (NITK, Surathkal)

Associate Professors

Vani M., M.Tech. (NITK, Surathkal)
Alwyn Roshan Pais, Ph.D. (NITK)
Shashidhar G Koolagudi, Ph.D. (IIT
Kharagpur) HOD -15.02.2021 to
14.2.2023

Manu Basavaraju, Ph.D. (IISc,
Bangalore) HOD from 15.02.2023

Assistant Professors:

Saumya A. Hegde, Ph.D. (NITK)
B.R. Chandavarkar, Ph.D. (NITK)
Mahendra Patap Singh, Ph.D.
(I.I.T.Kharagpur)
Jeny Rajan, Ph.D. (University of
Antwerpen, Belgium)
Mohit P. Tahiliani, Ph.D. (NITK)
Basavaraj Talawar, Ph.D. (IISc
Bangalore)
M Venkatesan, Ph.D. (VIT University,
Vellore) on lien 18.09.2021

Contractual

Biswajit Bhowmik, Ph.D. (IIT Guwahati)
Sourav Kumar Pandey, Ph.D. (NIT,
Rourkela)

Department of Chemistry

Professors:

A. Nityananda Shetty, Ph.D. (Mangalore
Univ.)
A. Chitharanjan Hegde, Ph.D. (Mangalore
Univ.)
B. Ramachandra Bhat, Ph.D. (Mangalore
Univ.)
Krishna Bhat, Ph.D. (Mangalore Univ.)
Arun Mohan Isloor, Ph.D. (Mangalore
University)

Associate Professors:

Udaya Kumar D., Ph.D. (NITK,
Surathkal), HOD from 11.08.2021
Darshak R. Bhai Trivedi, Ph.D.
(Bhavnagar University)

Assistant Professors:

Sib Sankar Mal, Ph.D. (JUB Germany)
Beneesh P. B., Ph.D. (University of
Kerala)
Debashree Chakraborty, Ph.D. (IIT
Kanpur)
Saikat Dutta, Ph.D. (University of Iowa,
USA)
Vijayendra S Shetti, Ph.D. (IIT, Bombay)
Lakshmi Vellanki, Ph.D. (IIT, Bombay)

Department of Electronics And Communication Engineering Professors:

S. Sumam David, Ph.D. (I.I.T. Madras)
Muralidhar Kulkarni, Ph.D. (JMI – New
Delhi) V.R.S. on 31.12.2022
M. Shankarnarayan Bhat, Ph.D. (I.I.Sc.,
Bangalore)
John D'Souza, Ph.D. (I.I.T.Kharagpur)
U. Shripathi Acharya, Ph.D., (I.I.Sc.,
Bangalore)
Laxminidhi T., Ph.D. (IIT, Madras)
Ashvini Chaturvedi, Ph.D. (MUM
Malaysia) HOD from 16.04.2021
Neelavar Shekar Shet, Ph.D. (NITK)

Associate Professors:

M. Ramesh Kini, Ph.D. (NITK)
Deepu Vijayasanen, Ph.D. (EPFL,
Switzerland)

Assistant Professors:

Rekha S., Ph.D.
Kalpana G. Bhat, Ph.D. (NITK)
Aparna P., Ph.D. (NITK)
B. Nagavel, M.Tech.
Krishna Moorthy K., Ph.D. (IIT, Bombay)
Prashantha Kumar H, Ph.D. (NITK)
Raghavendra B S, Ph.D. (IISc,
Bangalore)
A V Narasimhadhan, Ph.D. (IISc),
Bangalore

Pathipati Srihari, Ph.D. (Andhra University)
Shyam Lal, Ph.D. (BIT Ranchi)
Ratnamala Rao, Ph.D. (IIT Madras)
Prabhu K, Ph.D. (NIT, Tiruchirapalli)

Contractual

Sushil Kumar Pandey, Ph.D. (IIT, Indore)
Sandeep Kumar, Ph.D. (Indian School of Mines Institute, Dhanbad)
Mandeep Singh, Ph.D. (IIT, Roorkee)
Nikhil K S, Ph.D. (IIT, Madras)

Department of Electrical And Electronics Engineering

Professors:

Udayakumar R.Y., Ph.D. (IIT Bombay)
K. Panduranga Vittal, Ph.D. (Mangalore Univ.)
Shubhanga K.N., Ph.D. (IIT, Bombay),
Gururaj S. Punekar, Ph.D. (IIT, Kharagpur) HOD till 16.5.2022
Venkatesa Perumal, Ph.D. (IIT Delhi)

Associate Professors:

Jora M. Gonda, Ph.D. (NITK)
K. Rajagopal, M.Tech. (I.I.T. Kharagpur)
Vinatha U., Ph.D. (NITK, Surathkal)
K. Manjunatha Sharma, Ph.D. (NITK)
Dattatraya N. Goankar, Ph.D. (IIT, Roorkee) HOD from 17.5.2022
Debashisha Jena, Ph.D. (NIT Rourkela)
Parthiban, Ph.D. (IIT, Roorkee)

Assistant Professor :

Iddya Raghavendra Rao M.Tech. (Mangalore Univ.)
Nagendrappa H., Ph.D. (Canada)
Tukaram Moger, Ph.D. (IISC, Bangalore)
Girisha Navada, M.Tech. (University of Calicut)
Karthikeyan, Ph.D. (NIT, Thiruchirapalli)
R Kalpana, Ph.D. (IIT, New Delhi)
Y Suresh, Ph.D. (NIT Rourkela)
Krishnan C M C, Ph.D. (Ghent University, Ghent, Belgium)
Shashidhara Mecha Kotian, Ph.D. (NITK, Surathkal)

Contractual

Yashawanth Kashyap, Ph.D. (IIT, Mandi)
B Dastagiri Reddy, Ph.D. (NIT, Tiruchirapalli)
Arun Dominic D, Ph.D.(IIT Roorkee)
Vignesh Kumar V, Ph.D. (NIT, Tiruchirapalli)
Ravi Raushan, Ph.D. (IIT (ISM), Dhanbad)
Dharavath Kishan, Ph.D. ((NIT, Tiruchirapalli)
Md Waseem Ahmad, Ph.D. (IIT, Kanpur)
Prajof P, Ph.D. (IIT, Bambay)

School of Humanities, Social Sciences and Management

Professors

A.H. Sequeira, Ph.D., (Mysore University) retired on 31.5.2022
K.B.Kiran, Ph.D. (Mangalore Univ.)
Shashikantha K., Ph.D. (University of Hyderabad)

Associate Professors:

S. Pavan Kumar, Ph.D., (IIT Kharagpur)
Sheena, Ph.D., (University of Calicut) HOD from 25.1.2023
Ritanjali Majhi, Ph.D.(BIT, Mersay)
Rajesh Acharya H, Ph.D., (University of Hyderabad)HOD till 24.1.2023
Dhishna P, Ph.D., (University of Pondicherry)
Pradyot Ranjan Jena, Ph.D. (IIT Kanpur)

Assistant Professors:

Bijuna C. Mohan, Ph.D. (NITK, Surathkal)
Rashmi Uchil, Ph.D. (NITK, Surathkal)
Suprabha K. R, Ph.D., (VTU)
Gopalakrishna B V, Ph.D., (University of Mysore)
Sreejith A, Ph.D. (IIT, New Delhi) on lien from 17.12.2021
Savita Bhat, Ph.D. (IIT, Bombay)

Department of Information Technology

Professors:

Ananthanarayana V.S., Ph.D. (I.I.Sc. Bangalore)

G. Ram Mohan Reddy, Ph.D. (Edinburgh, U.K.)

Associate Professors:

Jaidhar C D, Ph.D. (NIT, Tiruchirappalli), HOD from 19.08.2021

Assistant Professors:

Dinesh Naik, M.Tech. (VTU, Belgaum)

Geetha V., Ph.D. (NITK)

Biju R. Mohan, Ph.D. (NITK) HOD till 18.8.2021

Sowmya Kamath S., Ph.D. (NITK)

Nagamma Patil, Ph.D. (IIT, Roorkee)

Anand Kumar M, Ph.D.

Contractual

Kiran M, Ph.D. (NITK, Surathkal)

Bhawana Rudra, Ph.D. (IIT Allahabad)

Shrutilipi Bhattacharjee, Ph.D. (IIT, Kharagpur)

Department of Mathematical & Computational Sciences

Professors:

A. Kandasamy, Ph.D. (I.I.T. Bombay)

Suresh M. Hegde, Ph.D. (Delhi Univ.)

Santhosh George, Ph.D. (Goa University)

Murulidhar N.N., Ph.D. (I.I.T. Bombay)

Shyam Srinivas Kamath, Ph.D.

(Karnataka Univ.)HOD till 15.08.2021

B.R. Shankar, Ph.D. (I.I.Sc., Bangalore)

Associate Professors:

R. Madhusudhan., Ph.D. (IIT, Roorkee), HOD from 16.08.2021

P. Sam Johnson, Ph.D. (Alagappa University)

D. Pushparaj Shetty, Ph.D. (IIT Delhi)

V. Murugan, Ph.D. (IIT, Madras)

Chandhini G, Ph.D. (IIT, Madras)

Assistant Professors:

Vivek Sinha, Ph.D (IIT, Bombay)

Jidesh P., Ph.D. (NITK)

Vishwanath Kadaba Puttanna, Ph.D., (NITK)

Kedarnath Senapati, Ph.D.

Srinivasa Rao Kola, Ph.D. (IIT, Kharagpur)

A Senthil Thilak, Ph.D. (NIT, Tiruchirappalli)

Jothi Ramalingam, Ph.D. (Queensland University of Technology, Brisbane, Australia)

Contractual

Falguni Roy, Ph.D. (IIT, Kharagpur)

Department of Mechanical Engineering

Professors:

G.C. Mohan Kumar, Ph.D. (IIT, Chennai)

H. Suresh Hebbar, Ph.D. (I.I.T. Delhi)

Prasad Krishna, Ph.D., (Univ. of Michigan, Ann Arbor, USA) on lien Director at NIT Calicut 18.10.2021

Satyabodh M Kulkarni, Ph.D. (I.I.Sc., Bangalore)

Gangadharan K.V., Ph.D. (I.I.T., Madras)

Ravi Kiran Kadoli, Ph.D. (IIT, Madras)HOD from 1.12.2021

Vijay Desai, M.E. (Ph.D. NITK) V.R.S. on 31.1.2023

Narendranath S., Ph.D. (IIT, Kharagpur)

Shrikantha S Rao, Ph.D. (NITK)

S.M. Murigendrappa, Ph.D. (I.I.T., Bombay)

Associate professors

Mervin A. Herbert, Ph.D. (I.I.T., Kharagpur)

Kumar G.N., Ph.D. (IIT, Delhi)

Subhaschandra Kattimani, Ph.D. (IIT, Kharagpur)

Jeyaraj P, Ph.D., (IIT Madras)

Hemantha Kumar, Ph.D., (IIT, Madras)

Ramesh M.R, Ph.D., (IIT, Roorkee)

Sathyabhama A., Ph.D., (NITK)

Shrikanth Bontha, Ph.D. (Wright State)

Arun M, Ph.D. (University of Greenwich, London, UK)

Guruprasad K.R., Ph.D. (I.I.Sc., Bangalore) Lien from 28.6.2022

Shivananda Nayak H., Ph.D. (IIT Roorkee)

Veershetty Gumtapure, Ph.D. (IIT, Madras)

Navin Karanth P., Ph.D. (NITK)

Anish S, Ph.D. (IIT, Madras)

Sharnappa Joladarashi, Ph.D. (IIT, Madras)

Assistant Professors

Vasudeva M., Ph.D. (I.I.T. Bombay)
Sudhakar Jambagi, M.Tech. (Persuing Ph.D. at IIT Kharagpur)
Ajay Kumar Yadav, Ph.D. (I.I.T. Kharagpur) on lien from 22.11.2022
Mrityunjay R. Doddamani, Ph.D. (NITK, Surathkal) on Lien from 18.8.2022
N. Gnanasekaran, Ph.D. (IIT, Madras)
Arumuga Perumal D, Ph.D. ((IIT Guwahati)
Somasekhara Rao Todeti, Ph.D., (IISc Bangalore)
Ranjith M., Ph.D., Dong-A University, Busan, South Korea
Poornesh Kumar Koorata, Ph.D.(Inha), Unioversity of Korea

Contractual

Saurabh Chandraker, Ph.D. (NIT, Rourkela)
Parthasarathy P, Ph.D. (Karlsruhe Institute of Technology, Germany)
Arun Kumar Shettigar, Ph.D. (NITK)
Mruthyunjaya Swamy K B, Ph.D.(IIT, Kharagpur)
Ranjeet Kumar Sahu, Ph.D. (IIT, Madras)
A S S Balan, Ph.D. (IIT, Madras)
P S Suvin, Ph.D. (IISc., Bangalore)
Khyati Verma, Ph.D. (IIT, Delhi)

Department of Mining Engineering

Professors:

V. Rama Sastry, Ph.D. (B.H.U. Varanasi)
C.H. Suryanarayana Murthy, Ph.D. (IIT Kharagpur) retired on 3.3.2023
M. Govinda Raj, Ph.D. (Mangalore University)
Harsha Vardhan, Ph.D. (Indian School of Mines Dhanbad)

Associate Professor:

M. Aruna, Ph.D. (University of Dhanbad)
HOD from 20.04.2021
Karra Rama chandar, Ph.D. (NITK)

Assistant Professor:

Anup Kumar Tripathi, Ph.D. (IIT, Madras)
Bijay Mihir Kunar, Ph.D. (IIT, Kharagpur)
Sandi Kumar Reddy, Ph.D. (NITK)

Department of Metallurgical & Materials Engineering

Professors:

K. Narayan Prabhu, Ph.D. (Mangalore Univ.)
Jagannatha Nayak, Ph.D. (NITK)
Udaya Bhat, Ph.D. (I.I.Sc., Bangalore)
Anandan Srinivasan, Ph.D. (I.I.T., Kharagpur)

Associate Professor:

Kumkum Banerjee, Ph.D. (IIT Kharagpur)
Ravishankar K.S., Ph.D. (NITK) HOD from 13.01.2022
Mohammad Rizwanur Rahman, Ph.D., (Keio University, Japan)
Subray R. Hegde, Ph.D. (University of Canada)
Preetham Kumar G V, Ph.D. (IIT, Madras)

Assistant Professor:

Shashi Bhushan Arya, Ph.D. (IIT, Bombay)
Saumen Mandal, Ph.D. (IIT, Kanpur)
Rajasekaran B, Ph.D. (IIT, Madras)

Contractual

Sumanth Govindarajan, Ph.D. (IISc, Bangalore)
Selvakumar Murugesan, Ph.D. (IIT, Kharagpur)

Department of Physics

Professors:

H.D. Shashikala Ph.D (Osmania Univ.)
Udayashankar N.K., Ph.D. (I.I.Sc. Bangalore) from 10.3.2022
M.N. Satyanarayan, Ph.D. (I.I.Sc., Bangalore)

Associate Professor:

Nagaraj H.S., Ph.D. (Mangalore University),
Ajith K. Madam, Ph.D. (University of Hyderabad) HOD from-11.03.2020 till 9.3.2022

Assistant Professors:

Partha Pratim Das, Ph.D. (University of Cineinnati Elec Engg.)
Deepak Vaid, Ph.D. (USA)
T. K. Shajahan, Ph.D. (IISC, Bangalore)
Kartick Tarafder, Ph.D. (Jadavpur University)

Contractual

Sreenath V, Ph.D. (IIT, Madras)

ADMINISTRATIVE AND OTHER STAFF

Registrar:

Ravindranath K., M.A. (Mangalore University)

Joint Registrar:

Ram Mohan Y, M.Com. (Mysore), LL.B. (Mangalore University)

Assistant Registrars

Bansod Pritam Ramesh, (M.Com, MBA)
Gaurav Chowdhury, (MBA)
Priyanka Dattanand Amadalli, (M.Sc.)
Harish M Shetty (Officiating)
Sandhya, M.Com., i/c

Medical Officer:

Dr. B. Srimathi, M.B.B.S. (Mysore Univ.)

Medical Officer:

Dr. M.L. Balabhaskara

Professor Incharge Hostel Affairs:

Rajmohan, Ph.D. from 14.07.2021 till 13.10.2022
S Narendranath, Ph.D. from 14.10.2022

NITK ENGG. COY N.C.C.

Officer Commanding:

Col. MG HS Rajan in charge

Associated NCC Officer Incharge (ANO):

P Sam Johnson, Ph.D.
Shivananda Nayak, Ph.D.

Faculty in charge (Security)

A S Balu, Ph.D. from 15.06.2021

Security Officer on contract:

Ramprasad Bhat

Chief Vigilance Officer:

Jagannatha Nayak, Ph.D. from 11.04.2022

Central Public Information Officer (CPIO):

Miss. Priyanka Datanand Amadalli from 3.10.2022

Assistant Public Information Officer (ACPIO)

Baby Kishori, SG-II, from 1.8.2022

OTHER SECTIONS

Career Development Centre Professor:

Shrihari, Ph.D.

Centre for Innovation, IPR and Industrial Consultancy (CIC) Faculty Incharge I/c.:

Pathipati Srihari, Ph.D. from 11.11.2021

SC/ST Cell Liaison Officer

Nagendrappa H, Ph.D. from 15.06.2021

OBC Cell

I Regupathi, Ph.D. from 12.11.2020 till 29.12.2022
V Murugan, Ph.D. from 30.12.2022

Assistant Physical Director (Sr. Scale):

A. Shivaram, M.P.Ed. (Mangalore Univ.)

SAS Officer:

Hem Prasad Nath, Ph.D. (Nagpur University)

Manoj Kumar, Ph.D. (Techno Global University)

Librarian:

Mallikarjuna Angadi, Ph.D. (Gulbarga University).

Asst. Librarian

Anasuya Chakari, M.A. M.Lib.Sc. (Karnataka University)

**Central Computer Centre
Chairman:**

P Santhi Thilagam, Ph.D. from 02.08.2021

System Manager

P G Mohanan, M.Tech. (Cochin University)

Senior Scientific Officer:

Vijayakumar Ghode, M.Tech.

**NITK - Science & Technology
Entrepreneurs' Park**

Professor Incharge

Arun M Isloor, Ph.D. form 30.08.2021

**Centre for Continuing Education
Co-ordinator & QIP**

Neelavar Shekar Shet, Ph.D. (NITK)

**NON-ACADEMIC STAFF
(NON-TEACHING) as on 31.3.2022**

6	Assistant Registrar (Academic) (Officiating)	1
7	Assistant Registrar (A/cs) (Purchase)	1
8	Assistant Librarian	1
9	Technical Officer	8
10	SAS Officer	2
11	Senior Scientific Officer	1
12	Medical Officer	2
13	Executive Engineer	1+1 (on contract)
14	Senior Superintendent	2
15	Superintendent (SG - II)	1
16	Private Secretary	1
17	Assistant (SG -I)	4
18	Senior Assistant	3
19	Superintendent	2
20	Junior Assistant	5
21	Assistant (SG-II)	14
22	Stenographer (SG-I)	4
23	Assistant Engineer (SG-I)	10
24	Assistant Engineer (SG-II)	5
25	Technical Assistant	5
26	Technical Assistant (SG-I)	1
27	Technical Assistant (SG-II)	6
28	Technician (SG-I)	2
29	Technician (SG-II)	2
30	Technician	8
31	Office Attendant (SG-I)	1
32	Office Attendant (SG-II)	4
33	Senior Office Attendant	3
34	Senior Technician	1
35	Senior Tech. Asst.	1
36	Senior Lab Attendnat	1
	Total	109

Sl. No	Name of the Posts	In Position
1	Registrar	1
2	Librarian	1
3	Joint Registrar	1
4	Assistant Registrar (Admin)	1
5	Assistant Registrar (Accounts)	1

11.0 FACILITIES/AMENITIES

11.1 Hostels

National Institute of Technology Karnataka, Surathkal (NITKS) is an autonomous Institute of the Government of India under the Ministry of Education imparting technical education. National Institute of Technology Karnataka, Surathkal is one of the "Institutes of National Importance" declared under the NIT Act – 2007 (Act No.29 of 2007). The NITK Hostel Trust looks after NITK Hostel activities.

All students including foreign students are accommodated in hostels as per the following details:

Total number of boy's hostel = 12

Total number of girl's hostel = 05 +
02 (MS & ISH)

Total number of Rooms for boys =
3152

Total number of rooms for girls = 968

Sl. No.	Block	No. of Students	No. of Rooms	Total no. of rooms
1	Karavali (I Hostel)	233	77	86
2	Aravali (II Hostel)	234	80	86
3	Vindhya (III Hostel)	392	130	134
4	Satpura (IV Hostel)	262	129	134
5	Nilgiri (V Hostel)	246	246	256
6	Pushpagiri (PG Hostel)	454	149	152
8	PG New Hostel	505	505	508
7	Sahyadri (VII Hostel)	474	158	162
8	Trishul (VIII Hostel)	471	157	162
9	Everest (Mega Tower- I)	542	507	511
10	Himalaya (Mega Tower- II)	544	510	511
11	Kailash (Mega Tower- III)	539	504	511
12	Ganga (GH 1 st Hostel)	80	39	39

13	Kaveri (GH 2 nd Hostel)	98	49	50
13	Yamuna (GH 3 rd Hostel)	459	153	153
14	Sharavathi (GH 4 th Hostel)	331	331	332
15	Netravathi (GH 5 th Hostel)	253	253	253
16	ISH	95	95	100
17	MS	59	48	48
	Total	6023 (B-4901, G-1122)		

In order to accommodate the students, a new single room hostel viz PG New Hostel with the capacity of 505 (Tower 1,2 and 3) started accommodating in this academic year.

There are 11 messes operating in various hostel blocks to cater the needs of inmates, out of which one vegetarian and one non-vegetarian messes are running in the girl's hostel and four vegetarian messes and five non-vegetarian messes are running in the boy's hostel. All the messes are provided with necessary infrastructure to cater to the different food habits of the students drawn from various parts of the country.

Total number of messes

S.No.	Name of the Mess
1	Karavali (I Block-Non Veg)
2	Aravali (II Block- Non-Veg))
3	Vindhya (III Block- Non Veg- Outsource)
4	Satpura (IV Block -Non Veg- Outsource)
5	Nilgiri (V Block -Non Veg- Outsource)
6	Pushpagiri (PG Block -Veg - Outsource)

7	Sahyadri (VII Block-Veg)
8	Thrishul (VIII Block Mess -Veg- Outsource)
9	Mega Block Mess (Veg- Outsource)
10	GH I Mess ,Ground Floor (Veg- Outsource)
11	GH II Mess , First Floor (Non Veg-Outsource)

All messes are managed by Hostel Administrative, with active participation of the Student mess managers and Mess council for preparation of the menu and other issues. Monthly mess bill accounts are audited by verifying the mess cards, stock sheets, purchase registers, mess membership issue register, mess bill calculation registers, petty cash book with vouchers and other records connected with monthly mess bill. Rationalization method is adopted to avoid the rate difference problem of various messes.

Total mess membership varies every month. Out of the 11 messes Vindhya (III Hostel), Satpura (IV Hostel) mess, Nilgiri (V Hostel) mess, Thrishul (VIII Hostel) mess, Pushpagiri (PG Hostel) mess, Mega Hostel Mess (Chaitanya) and Girls hostel messes are outsourced to private mess contractors.

During this academic year the cable TV facility has been extended to all the hostels. All the Hostel Rooms (Boys and Girls) have continuous high speed uninterrupted internet facilities to carry out their studies and research.

Crescendo Committee

Crescendo, a committee which organizes co-curricular activities for the students, is managed by a group of elected students from the hostel representatives. The Crescendo has organized AURORA DANCE EVENT during November 26th 2022 and Coliseum Event during 24th March to 2nd April 2023 which attracted many students from various branches for the

competitions. The winners were awarded with attractive prizes and certificates.

Phoenix committee

The Phoenix Committee is another student's committee which looks after the sports activities for the residents of the hostels and provides indoor game facilities to them. Phoenix is managed by a group of elected students from the hostel representatives. The phoenix recreation committee organized the Fresher' Cup during October 21st to 23rd 2022 , January 13th to 15th 2023, Flood lights Tournament during February 17th to 19th 2023 and Inter branch Tournament during 24th March to 2nd April 2023. All the events attracted many students from various branches for the competitions. The winners were awarded with attractive prizes and certificates.

Task Force

Task Force is a platform for students to showcase their talent in administrative work at NITK Surathkal. It has been instituted in NITK Hostel Administration to serve the well-being of all students. The members of the task force are elected by the hostel representatives.

Mess Concession

Mess Concession is offered to residents, who need financial assistance to continue their studies in the Institute. This financial assistance will be managed by the fund raised by the contribution from the hostellers i.e 10/- per semester along with hostel mess fees. The concessions are granted based on the information furnished by the individual applicants in the prescribed applications. The mess concession grantee must be regular in attendance and would have shown good performance in academics. The amount granted above

will be credited to the mess bill account of the respective student, and will not be paid in cash.

Celebrations:

Several festivals like Holi, Diwali and Ganesh Chaturthi are celebrated by hostellers. The expenses were managed by the fund raised by contribution i.e 40/- from the hostellers.

Medical Emergency:

During the year under report, Medical Relief to the tune of ₹

8,05,740/- has been sanctioned to students of the hostel blocks as per the recommendation of the Block Warden and Institute Resident Medical Officers, for their hospitalization in nearby Surathkal/Mangalore hospitals for treatment. This amount is met under "Self Sustaining Medicare Scheme"

Hostel Automation:

To improve the accounting process, computerization of accounts in the hostel has already been initiated. A new website and hostel model has been developed for the room booking and mess selection for the students. Using this new hostel portal students can book the room and mess of their choice online. Students are not required to be physically present in the hostel office to get the rooms and mess as it was done previously.

To receive feedback related to messes and maintenance issues, online complaint registration system is also initiated.

Auditing:

All the accounts of the hostels are duly audited by a Chartered Accountant every year.

Laundry Facility:

A Laundry Facility was established in Mega Tower II (Himalaya) of the NITK
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Hostels for the benefit of the students. The laundry facility was a total of 24 Lakh project which was funded by Karnataka State Minerals Corporation Limited, Bengaluru under the Project entitled "Laundry Facility in the Hostels of NITK Surathkal".

Hostel Office Bearers:

Prof. Narendranath S is the Professor in-charge Hostel Affairs NITK Hostels. Presently, the following faculty members are rendering their services as wardens in different Hostel Blocks as mentioned against their names:

1. Dr. Narendranath S
Professor In charge Hostel Affairs
2. Dr. Pushparaj Shetty D
Finance Warden
3. Dr. Ramesh M. R.
Quality Monitoring
4. Dr. Palanisamy T
Karavali (I Block)
5. Dr. Debabrata Karmakar
Aravali (II Block)/ Student Activity
6. Dr. Mandeep Singh
Vindhya (III Block)
7. Dr. Yashwant Kashyap
Satpura (IV Block)
8. Dr. P. S. Suvin
Nilgiri (V Block)
9. Dr. Beneesh P. B
Sahyadri(VIIBlock)
10. Dr. Pavan G. S
Trishul (VIII Block)
11. Dr. Gnanasekaran
Everest (MT-I)
12. Dr. Jothi Ramalingam
Everest (MT-I)
13. Dr. Mrithyunjaya Swamy K B
Himalaya (MT-II)
14. Dr. Kiran M
Himalaya(MT-II)/Student's Welfare
15. Dr. Sandeep Kumar
Kailash (MTIII)
16. Dr. Ranjeet Kumar Sahu Pushpagiri
(PG Block)
17. Dr. Vinoth S

New PG Block

18. Dr. Sumanth Govindarajan

New PG Block

19. Dr. Kalpana R

Sharavathi (GH IV Block)

20. Dr. Bhawana Rudra

Nethravathi (GH V Block)

21. Dr. Shwetha H R

Ganga (GH I Block) & Kaveri (GH II Block)

22. Dr. Anupama Surejan

Yamuna (GH III Block)

Prof. Prasad Krishna, Director (Additional-charge), NITK Surathkal, is Ex-Officio President of NITKS Hostels. He being the President for hostels will be giving guidance to the Council of Wardens from time to time for the smooth administration and function of the hostel activities.

11.2 CENTRAL COMPUTER CENTER

CCC has contributed in designing, building and maintaining an IT infrastructure for the Institute adequate to the academic needs, by providing quality IT services to support teaching, learning, research and innovations. CCC maintains the campus network backbone connectivity and internet connections on 24x7 basis. The CCC occupies the building opposite to the Silver Jubilee Auditorium. CCC was established in 1995 as a service providing/supporting facility that augments to the computing facilities in the teaching departments.

CCC is currently headed by Prof P Santhi Thilagam (Dept of CSE). CCC has the following permanent staff associated to it. One Systems Manager, One Senior Scientific Officer, Three Technical Officers, Two Assistant Engineers (SGII), One Technical Assistant and One Junior Assistant. CCC also has a highly skilled technical personnel, an Office Clerk, 2 Helpers, One Sweeper and One House Keeper working on contract basis.

Chairperson, CCC seeks the guidance of the CCA Committee in important decisions.

NITK has a Campus wide LAN reaching academic buildings, residences and hostel rooms through wired and wireless networks. The campus backbone services are provided with about 20 kms of 12 core OFC using 1 Gbps and 10 Gbps backbone to the different buildings and broad band to the residences. Departments, Residences (through the broadband), Directorate (and administrative net), Guest houses and Hostels are individually connected to the core switch. The hostel networks are integrated into the academic network of NITK sharing the Internet bandwidth of the Institute.

The first stage of the campus network was done in 1999 and the second stage of expansion was done in 2006 with the TEQIP funds. The Third Stage including Core Network Expansion and the Campus WiFi is completed in 2016 at a total cost of about Rs 6.78 crores. The expanded network including the Core Switches, Firewall, Backbone switches and the Campus Wi-Fi equipments are under annual maintenance.

The Wi-Fi network is provided as an extension of the wired networks in the different buildings. The WiFi expansion Phase 1 was carried out with 744 Ruckus R500 Indoor access points, 40 Ruckus T300 Outdoor access points, 5 Ruckus H500 wall switches, 89 Netgear 24 port 10/100/1000Mbps PoE switch with 4 SFP ports and other active and passive network components. Subsequent WiFi expansion (Phase 2) to the new CSE building and LHC-C were carried out with 97 Ruckus R510 Indoor Access Points, 4 Ruckus T300 Outdoor Access Points and 11 PoE switches.

NITK has 10 Gbps Internet bandwidth from BSNL and 1Gbps from National Knowledge Network (decision pending).

The total cost (recurring) for the 10Gbps is Rs 1.8 Crores + GST.

The NITK Data centre housed in the CCC Ground Floor acts as an integration hub of OFC/backbone. It houses Internet connections to BSNL & NKN, associated networking equipments and sufficient hardware to handle the critical backbone network services.

Main servers are connected to the data centre network. Critical services are accessible from inside and outside the network. CCC Uses Virtualisation with Blade Servers with VMWare, Dell /Lenovo Servers with Proxmox virtualisation environment / Ubuntu System containerisation environment. Eight new servers are being added to this environment.

NITK Website updates are entrusted with the CCC apart from the webserver maintenance. The domains of NITK (*nitk.ac.in* and *nitk.edu.in*) are also controlled by CCC.

CCC has coordinated the upgrade of Matlab license based on Total Academic Head Count. National Institute of Technology Karnataka Surathkal now offers a campus-wide license to MATLAB, Simulink, and companion products. All faculty, researchers, and students are eligible to download and install these products on their university computers as well as their personally-owned computers.

The ground Floor of CCC is reserved for the upcoming Data Centre with Smart Racks. The second floor houses the Skill Development Centre with VDI (thin clients) and a backend server established by the NITK Alumni. The first floor hall of CCC with about 90 Desktop computers is available for general purpose computing & browsing. The computers of CCC are used to support First year Computational Practice Labs, General Purpose Learning & Internet access, On-Line tests (Training & Placement) &

various co-curricular and other student activities.

The network infrastructure facility management of NITK is outsourced. Comprehensive onsite AMC is available for the Network switches. There is a helpdesk number 0824 2473085. There is also a rate contract with the firm to facilitate any immediate need of network alterations within a limit. The Campus backbone and WiFi (first phase) are under annual maintenance.

The facility has appropriate MESCOM Power and Diesel generator backup power. Two 20KVA, one 15 KVA online UPS systems and one 10 KVA UPS, provide backup power during the changeover. One 15 KVA and one 5 KVA UPS systems provide the power backup to the CCC LAN. The battery bank of 40 Nos was upgraded this year.

11.3 LIBRARY

ABOUT THE LIBRARY:

Central Library was established in the year 1960 along with the institute. Starting with a small collection of books, it has recorded impressive growth over the decades and is today considered as one of the best technical libraries in the country having modern facilities and fully automated library system. The Main Library is housed in a spacious three-storied building with the area of 3555.75 (Sq. mtr.) adjoining the main building of the Institute on the southern side. Being an integral part of academic and research work on the campus, the library caters to information services to support the teaching, learning and research activities of the Institute by providing state-of-the-art facilities and offering innovative services. Library operations are fully computerised with KOHA Integrated Library Management System and online catalogue for the entire holdings of books is accessible on/off the campus. The newly established e-Library Complex with the

area of 2260 (Sq. mtr.) is equipped with the State-of-the-Art digital infrastructural facilities like Digital Learning Centre for Lecture Recording & Live Streaming of online programmes, Digitization & Archiving Centre, Cyber Libraries to conduct hands-on training, Seminar Halls, Discussion Rooms, Laptop Zones and cafeteria. It provides 24x7 services to 8000 plus on-campus library users.

VISION & MISSION:

Library vision is to “To serve as one of the leading libraries of Technical & Engineering institutes in the country.”

Library mission is to “To provide the NITK user community with highest quality of information services to support their teaching-learning and research activities.”

LEARNING RESOURCES:

The library has a rich collection of research monographs, text books, current periodicals, periodical bound volumes, standards, conference proceedings, reference books, edited volumes etc. encompassing all disciplines taught and researched at the Institute. The collection of reading materials in the library is rich, diverse and growing day-by-day. Special emphasis has been given to e-Books and e-Journals, which one can access 24x7, whether on campus, at home, or on the move. Currently, the collection consists more than 90,000 print books, 16,357 periodical bound volumes, nearly 25,000 e-books, 70 print periodicals, 11,367 full-text e-journals, 777 e-Theses, and 32 databases.

LEARNING SPACES:

For many students, the library is a favoured place of learning and a popular meeting place in the campus. We offer more than 1000 seating capacity in the library. For teamwork, there are 6 group discussion rooms (of 10-students capacity) available in the *Annual Report 2022-23*

e-Library Complex. For those who prefer to study undisturbed, there are individual study places (carrels) in the Ground Floor of the e-Library Complex. More than 50% of the reading places have power sockets to recharge mobiles/laptops.

ARRANGEMENT OF BOOKS ON SHELF:

The library has open access policy for the books and periodicals on the shelves. The users are free to browse through the collection and pick any book of their interest. All books in print are classified as per the latest Dewey Decimal Classification system and arranged by classification numbers (subject wise) on the shelf. The detailed shelf & row guides are provided in the stack area for easy location. Print journals are arranged in alphabetical order and CDs by Accession Numbers.

DIGITAL LIBRARY:

The institute has established e-Library Complex in 2018 to provide digital library services and it has the State-of-the-Art digital infrastructural facilities like Digital Learning Centre for Lecture Recording & Live Streaming, Computer Labs to conduct hands-on training, Seminar Hall, Discussion Rooms, Laptop Zones etc. catering to more than 8000 on campus library users 24X7 along with in-housed cafeteria. As part of e-Library system, a dynamic library website (<http://library.nitk.ac.in>) has been developed by the library team to provide access to the e-resources from anywhere in the world and at any time using Remote Access facility. Institutional Digital Repository (<http://idr.nitk.ac.in>) provides access to all the publications of the NITK till today including the full text Ph.D theses. IRINS (<http://nitk.irins.org>) a web-based research information system provides faculty profiles and their research collaboration including their h-index and citation metrics.

Some of the services offered under Digital Library includes:

- Dynamic Library Website (<http://library.nitk.ac.in>)
- Online Access to e-Resources through e-Library Portal
- Online Library Catalogue (<http://opac.nitk.ac.in>)
- Institutional Digital Repository (<http://idr.nitk.ac.in>)
- Knimbus m-Library Remote Access Facility (<http://nitks.knimbus.com>)
- Mobile Library App (Android & iOS)
- Online Plagiarism Check through TURNITIN Software Access to Grammarly Software
- e-Studio facility to records faculty lectures and live streaming
- Digitisation and Archiving facility
- IRINS Faculty Profile Management System (<http://nitk.irins.org>)
- Online LiveChat with Library Staff
- QR Codes for Library Digital Services
- News@NITK Digital Newspaper Clipping Service (Monthly)
- Publications@NITK Article Alert Service (Monthly)

LIBRARY SERVICES:

- Borrowing of Reading Materials
- Reference and Information Services
- Document Delivery Service (DDS)
- New Arrivals of Books
- Photocopy Service (Out sourced)
- Ask A Librarian
- Literature Search & other Services
- Research Support Services
- User Awareness Programmes
- Instructional Services and Author Workshops
- Technical Support

LIBRARY FACILITIES:

- High speed internet connectivity with Wi Fi in all floors
- Air-conditioned reading rooms
- Dedicated Laptop Zones
- Reading tables with power sockets for recharging mobiles and laptops
- Individual Study Carrels

- Digital Learning Centre for soundproof lecture recording and live streaming of online programmes
- Digitisation and Archiving Centre
- Digital Library / Cyber Library
- Discussion Rooms for group study/presentations
- Air-conditioned soundproof Seminar hall (60 capacity) with 85 inches digital touch screen
- Drinking water (Hot, Normal & Cold)
- In-house Cafeteria
- Reprographic Services (Out Sourced)

LIBRARY MEMBERSHIP:

Central Library offers its services to the faculty members, students and staff who are primary users of the library free of cost. Upon joining the Institute, membership is enrolled by default. The borrowing privileges for different categories of members are:

Type of User	No. of Books	Period
Faculty Members	15	1 Year
Non-Teaching Staff	4	30 days
Research Scholars	5	1 Semester
Post Graduate Students	4	15 days
Under Graduate Students	4	15 days

Note: Late Fee (applicable to UG & PG categories of users) (Rs.1.00 per day/book)

CORPORATE LIBRARY MEMBERSHIP:

To facilitate industry linkages and interactions for mutual benefit, the Library has recently opened up its membership to the corporate organisations by offering access to its collection and services against a nominal fee. The members enrolled will be issued 5 Membership Cards and can borrow 5 books for 30 days period. In order to get the membership, the corporate organisations needs to fill in a separate form and pay the following membership fee.

Membership with Borrowing Facility	Amount (Rs.)
Annual Fee <i>including GST</i>	12,000.00
Library deposit (Refundable)	25,000.00

Note: Late Fee of Rs.5.00 per day/book will be charged.

ACADEMIC LIBRARY MEMBERSHIP:

To facilitate institutional linkages and interactions for mutual benefit, the Library has recently opened up its membership to the academic institutions by offering limited access to collection and services against a nominal fee. In order to get the membership, the academic institutions needs to fill in a separate form and pay the following membership fee.

Membership without Borrowing Facility	Amount (Rs.)
Annual Fee <i>including GST</i>	5000.00
Library Deposit (Refundable)	10000.00

AWARDS & RECOGNITIONS:

- The Central Library has received “Highest User Award for IEL on-line (IEE Explore)” in 2015 amongst INDEST-AICTE Consortium Level 2 member’s category.
- The Library received Dr. L M Padhya Best Library Award from Indian Library Association for the year 2020 in recognition of its innovative library services and state of the art infrastructural facilities.
- Received “Certificate of Excellence” award from Knimbus Online Pvt. Ltd. New Delhi as one of the Top Ten libraries for the highest usage of Knimbus Remote Access portal in India. The award ceremony was held online on 27.05.2022.
- Central Library received 3rd Prize in Clean Department Contest organised by the institute under the Swachhata Pakhwada programme held during the 1-15 September, 2023.

11.4 LABORATORIES

DEPARTMENT OF CHEMICAL ENGINEERING:-

Testing & Quality Control Lab : Flame Photometer, Tinto meter, Turbidity meter, C.O.D. Digester, Brook Field Viscometer, Flue Gas Analyser, Trinocular microscope, Bomb calorimeter, Conductivity meter, Spectro photometer, B.O.D. incubator, Noise Level Meter, Water Purification system.

Project Lab I & IA: Ultrasonic water Bath, Muffle furnace, Peristaltic pump, Ultrasonic Sonicator, UV Ozone Cleaner, Continuous homogeniser.

Project Lab II: Horizontal laminar flow work station, Gel document, spectro photo meter, Eppendorf centrifuge.

COMPUTER SIMULATION LAB: Ansys CFD, Aspenplus, MATLAB, Design Expert.

Project Lab III: Deep Freezer, Centrifuge, UV solid sampler, centrifuge, Microscope.

HEAT TRANSFER LAB: Jacketed vessels, Shell and tube heat exchanger, double pipe heat exchanger, Thermal conductivity of solids apparatus, High volume sampler, Portable gas sampler, Plate heat exchanger, Stack monitoring kit, Fluidized Bed Combustor (IIT Madras), Deep Freezer.

PROJECT LAB IV : Ultra Sonic water bath, Auto clave, Stirred Cell Membrane Unit, U V Irradiated membrane filtration Unit.

PROJECT LAB V: Flash point apparatus, Viscometer - (Redwood & Saybolt), Eddy current drive with motor & accessories, Ozone Generator, Jacketed vessels, Generator - 10 KVA, Ozone Monitor/TLA

BIOTECHNOLOGY LAB :Laboratory Centrifuge, Digital Refractometer, Orbital shaker, Hi-Anaerobic system,

Autoclave (vertical), Compound Microscope, Microwave Oven, Lyophilizer, Gel Electrophoresis, Continuous Homogenizer, Lab Bioreactor with variable Volume Fixtures, Brook Field Viscometer, Tangential Flow Filtration with ultrafiltration Module, Temp Controlled Digital Density Meter, Spectrophotometer, Incubator - shaker, Horizontal laminar flow work station, ultrasonic processor.

PROJECT LAB V : Elgi Centrifuge, Electric oven, Muffle Furnace, Surface tension meter, Membrane testing System, Peristaltic pump, Incubator - shaker , Vortex Mixer, rotating disc contactor, Continuous membrane filtration unit, Ice Flaker.

FERMENTATION LAB : Colony Counter, CO₂ Incubator, Microwave Digestion System, Muffle furnace, Incubator - shaker, High speed cooling centrifuge, Freeze dryer, C.O.D Analyser, Pestle & Mortar, Pellet Press, Slow Speed Cutting Machine, Vacuum Cleaner, ionic conductivity source meter.

ADVANCED INSTRUMENTS LAB: Electrochemical Workstation, cell ,C-Electrode, Gel Electrophoresis, Bio Sensor, Mini Protean Tetra cell, Trinocular microscope tific, Spectrophotometer, Total organic carbon analyser, Graphite furnace and hydride generator, Ultrapure water generator, AAS, Electrophoresis, High Performance liquid Chromatograph, Gas chromatography-Mass spectrophotometer, Ion Chromatography, High speed refrigerated cooling centrifuge

Immunology Lab: Micro Centrifuge, Power Pack for southern & Northern blots, Automated microplate reader, Western Bolt unit, Photometer for PCR Work, Polymerase Chain Reaction Machine.

Mass Transfer Lab: Liquid Extraction in Packed Bed, Vertical Tube Evaporator, Packed Distillation

Column, Absorption in Packed Tower, Spray Tower, Fluidized Bed Dryer (With air circulation) Model No.MT – 18, Wetted Wall Column (with air circulation), Batch Crystallizer, Forced Draft Tray Dryer, Diffusivity Measurement, Counter current leaching, Cross current leaching, Steam Distillation, Vapor liquid equilibrium, Surface evaporation, Liquid Extraction in Packed Bed.

PROCESS CONTROL & REACTION

ENGG: Batch reactor, RTD in tubes plug flow reactor, RTD in packed bed, RTD in CSTR, Reactor combination of PFR and CSTR, Magnet pump , Multi range conductivity meter , Digital online, Process control loop trainers, Non-interacting tank, Time constant of Pressure Vessel & mercury meter, Constant temperature bath.

HEAT TRANSFER LAB : Shell and Tube Heat Exchanger, Electrically Heated Boiler, Parallel flow / counter flow/Double pipe heat exchanger, Pool Boiling Heat Transfer Apparatus Forced Convection Heat Transfer , Natural Convention Heat Transfer Model, Stefan Boltzmann apparatus, Thermal conductivity of insulating Powders, Thermal conductivity of liquids, Horizontal Condenser & Vertical Condenser Steam, Heat Transfer through coils, Natural and forced convection in air, Heat Transfer through packed bed apparatus, Transient heat conduction-constant heat flux, Transient heat conduction-constant temperature, Heat Transfer through vertical barre and finned tube heat exchanger, Plate heat exchanger, Spiral plate heat exchanger, Heat losses by combined convention and radiation (for cylinder & sphere).

FLUID MECHANICS LAB: Flow through pipes and fittings, Flow through orifice meter, Flow through rotameter, Flow through fluidized bed, Flow through Packed bed, Flow through venturi meter, Flow through Notches, Flow through coils,

Characteristics of a centrifugal pump, Pitot tube, Open orifice, Annulus.

PARTICULATE TECHNOLOGY LABORATORY: Ball mill, Sieve Shaking Machine, Screen effectiveness, Air permeability, Jaw crusher, Air elutriation, Batch sedimentation, Leaf filter, Drop weight crusher, Attrition mill, Jaw Crusher, Vibrator

Environmental Immunology laboratory: Kinetic plate reader, universal plate reader, deep freezer, cooling centrifuge, CO₂ incubator, hot air oven, Gel electrophoresis units, minivol samplers, microbial samplers.

Systems and Control Laboratory: Heating and Cooling Circulator, Crystallizer, Lab scale Wastewater Treatment Set up.

Energy & Catalysis Materials Laboratory: - Dilatometer, Ionic conductivity meter, Fume hood, Hot air Oven, Tubular and horizontal Muffle furnaces, High temperature Muffle furnace, Pellet presser, Low speed cutting machine, CO Gas analyzer. Electric Agate mortar and pestle.

Particulate Technology Lab: Screen Effectiveness, Air Permeability, Jaw Crusher, Air Elutriation, Batch Sedimentation, Ball Milling, Cyclone Efficiency, Drop weight Crusher

Industrial Biotechnology Lab: Gel swinger, Bioreactor, Autoclave, Centrifuge, Digital Microscope

Environmental Sciences & Technology Lab : Biospectrometer, BOD System, COD System, Respirable dust sampler, Ambient fine dust sampler, Stack Monitor kit

DEPARTMENT OF CIVIL ENGINEERING

Transportation Engineering Laboratory: Marshall stability machine, Centrifuge extractor for bitumen, Servo controlled fatigue testing machine, Gyrotory compactor.

Transportation Design Studio: Video cameras, Radar Guns, Computing facility.

Earthquake Engineering Laboratory: Small shake Table and computing facility

Concrete Materials Laboratory: 2000 kN Compression Testing Machine, Accelerated Curing Tank, Pelletizer, Rebound Hammer, PUNDIT UPV-Tester, Setting Time of Concrete Apparatus, Equipment for testing rheological characteristics of SCC, Carbonation Chamber

Structural Engineering Laboratory: 100kN OHT (Manual), 200 kN Testing Frame, 50 kN Testing Frame, Column Testing M/c,

Environmental Engineering Laboratory: Gas Chromatography, HPLC, Atomic Absorption Spectrophotometer, High volume air sampler.

Soil Mechanics Laboratory: Compaction Test, Triaxial Testing Machine, Consolidation set up. CBR testing mould. Atterberg Limit apparatus, Rock Cutting machine.

Advanced Asphalt Characterisation and Rheology Laboratory: Modular Compact Rheometer system, Pressure Aging Vessel, Rolling Thin Film Oven, Rotational Viscometer, and Capillary Viscometer system.

Geo-Disaster Prevention Laboratory: Shake Table (2mx2m), Landslide Apparatus, Tsunami Flume, Submarine Landslide Apparatus, Wind Turbine Foundation Experimental facilities, Cyclic Loading System, Data Acquisition System, Dynamic Analyser, Accelerometers, Pore Water Pressure Transducers, Displacement Gauges, Hot Air Oven, Computing System.

AutoCAD Lab: 60 Desktop systems (2013 make) running on WINDOWS 7 OS.

Bio - Concrete Laboratory, spectrometer, encapsulates and concrete battery-related equipments, etc.

Geology lab: Rock and mineral samples, Electrical Resistivity meter (Hydrogeology Lab), Geological models (Structural Geology Lab)

Bioprocesses-Engineering Lab.: Automated Small scale decentralized Greywater treatment system 250 L/d Capacity, Portable Multiparameter analyzer, Digital ORP meter, Distillation unit, Bioreactor 10 L operating volume, Soxhlet apparatus, Deep Freezer, Peristaltic pumps-2 No., and other minor equipments.

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING:-

UG lab-1

- Dell Desktop OptiPlex 5070: Processor: Intel core i5 9500 RAM: 16 GB, HDD: 1 TB, (Ubuntu 18.04 LTS)-36
- HP Desktop EliteDesk 800 G1 TWR-Intel Core i&-4790 CPU @ 3.60 GHz 16 GB Ram 500 GB HDD (Windows 8, Ubuntu) -11
- Dell Optiplex 9010: Intel (R) Core (TM) i7-3770 CPU @ 3.40GHz, 8GB, 500GB, (Windows 8, Ubuntu)-01
- HP EliteDesk 800 G8 - Processor: Intel core i5, RAM: 16 GB, HDD: 1 TB, (Ubuntu 22.04 LTS)-23
- LAN – 100/1000 Mbps, Seamless Wi-Fi connectivity with WAPs

UG lab -2

- HP EliteDesk 800 G1 TWR: Intel Core i7-4790 CPU @ 3.60 GHz 16 GB Ram 500 GB HDD, (Windows 8, Ubuntu) - Out of warranty-41
- Dell OptiPlex 9010: Intel (R) Core (TM) i7-3770 CPU @ 3.40GHz, 8GB, 500GB, (Windows 8, Ubuntu)-03
- Lenovo ThinkCentre M93p MT-M 10A6-S2T300: Intel Core i7-4790 CPU @ 3.60 GHz 16 GB RAM 500 GB HDD, (Windows 7 Pro, Ubuntu)-01

- Dell Desktop OptiPlex 5070: Processor: Intel core i5 9500 RAM: 16 GB, HDD: 1 TB, (Ubuntu 18.04 LTS)-24
- Dell OptiPlex 9020- Processor: Intel core i7 4790, HDD:1 TB, RAM:16 GB, 19” TFT/LCD Monitor, Ubuntu/Windows10 Pro-01
- Canon LBP2900 -1
- LAN – 100/1000 Mbps , Seamless Wi-Fi connectivity with WAPs

UG lab-3

- Dell OptiPlex 5070: Processor: Intel core i5 9500, RAM: 16 GB, HDD: 1 TB, (Ubuntu 18.04 LTS)- 06
- Lenovo M920t: Processor: Intel core i7 8700, RAM: 8 GB, HDD: 1 TB, (Windows 10 pro, Ubuntu 18.04 LTS)-02
- Dell OptiPlex 9020- Processor: Intel core i7 4790, HDD:1 TB, RAM:16 GB, 19” TFT/LCD Monitor, Ubuntu/ Windows10 Pro-01
- HP laser jet 1020 plus – 01
- HP Photo Flat Bed Scanner – 01
- LAN – 100/1000 Mbps , Seamless Wi-Fi connectivity with WAPs

Digital Lab

- Digital IC Trainer Kit-65
- Digital IC Tester-02

I M.Tech (CSE) Lab

- HP Elitedesk 800 G8 - Processor: Intel core i5, RAM: 16 GB, HDD: 1 TB, (Ubuntu 22.04 LTS)-45
- HP Elitedesk 800 G8 - Processor: Intel core i7, RAM: 16 GB, HDD: 1 TB, (Windows 11 / Ubuntu 22.04 LTS)-11
- HP EliteDesk 800 G1 TWR - Intel Core i&-4790 CPU @ 3.60 GHz 16 GB Ram 500 GB HDD (Windows 8, Ubuntu)-01
- HP LaserJet M1005-01
- LAN – 100/1000 Mbps, Seamless Wi-Fi connectivity with WAPs

I M.Tech (CSE-IS) Lab

- HP Elitedesk 800 G8 - Processor: Intel core i5, RAM: 16 GB, HDD: 1 TB, (Ubuntu 22.04 LTS)-42
- Dell Optiplex 9010: Intel (R) Core (TM) i7-3770 CPU @ 3.40GHz, 8GB, 500GB, (Windows 8, Ubuntu)-01

- HP LaserJet 1010 – 01
- LAN – 100/1000 Mbps, Seamless Wi-Fi connectivity with WAPs

Research Lab 1

- HP Pro Desk 600 G3 MT: Processor: Intel core i5, RAM:8 GB HDD:1 TB, (Ubuntu 20.04)-03
- Dell Optiplex 9010 - Intel (R) Core (TM) i7-3770 CPU @ 3.40GHz, 8GB, 500GB (Windows 8, Ubuntu)-02
- Dell OptiPlex 9020- Processor: Intel core i7 4790, HDD:1 TB, RAM:16 GB, 19” TFT/LCD Monitor, Ubuntu/Windows10 Pro-01
- HP HPLJM1319-F – 01
- LAN – 100/1000 Mbps, Seamless Wi-Fi connectivity with WAPs

Research Lab – 2

- Lenovo ThinkStation- type 4353 (D30 Workstation): Intel Xeon E5-2650, 8 core 2.6 GHz, 64/128GB, 4TB (Windows 8 Pro, Ubuntu)-19
- Dell Optiplex 9010: Intel (R) Core (TM) i7-3770 CPU @ 3.40GHz, 8GB, 500GB (Windows 8, Ubuntu)-01
- Dell Precision Tower 7910: Intel Xeon E5-2670, 8 core 2.3 GHz, 128GB, 4TB (Windows 8, Ubuntu)-02
- Dell Precision 7820: Intel Xeon® Gold 5120 CPU @2.20GHzX28, 64GB, 4TB (Windows 10, Ubuntu)-01
- HP Pro Desk 600 G3 MT: Processor: Intel core i5, RAM:8 GB HDD:1 TB, (Ubuntu 20.04) -03
- Dell/OptiPlex 9020- Processor: Intel core i7 4790, HDD:1 TB, RAM:16 GB, 19” TFT/LCD Monitor, Ubuntu/Windows10 Pro-01
- LAN – 100/1000 Mbps, Seamless Wi-Fi connectivity with WAPs

Research lab -3

- Dell/OptiPlex 9020- Processor: Intel core i7 4790, HDD:1 TB, RAM:16 GB, 19” TFT/LCD Monitor, Ubuntu/Windows10 Pro– 01
- HP Pro Desk 600 G3 MT- Processor: Intel core i5, RAM:8 GB HDD:1 TB (Ubuntu 20.04) -03
- Lenovo M920t: Processor: Intel core i7 8700, RAM: 8 GB, HDD: 1 TB,

(Windows 10 pro, Ubuntu 18.04 LTS)-03

- HP Elitedesk 800 G8 - Processor: Intel core i7, RAM: 16 GB, HDD: 1 TB, (Windows 11 / Ubuntu 22.04 LTS)-01
- Lenovo Thinkstation Workstation-02
- LAN – 100/1000 Mbps, Seamless Wi-Fi connectivity with WAPs

Research lab – 4

- Lenovo ThinkCentre M910t: Processor: Intel Core i7 7700 CPU@3.60 GHz, RAM: 8 GB DDR4, HDD: 1 TB (Windows 10, Ubuntu)-13
- Lenovo ThinkCentre M920t: Processor: Intel Core i7 8700 RAM: 8 GB DDR4, HDD: 1 TB (Ubuntu 20.00)-02
- DELL OptiPlex 9010: Processor: Intel® Core™ i7 3770 @ 3.40 GHz RAM: 8 GB DDR4, HDD: 500 GB (windows 8, Ubuntu)-01
- HP Elitedesk 800 G8 - Processor: Intel core i7, RAM: 16 GB, HDD: 1 TB, (Windows 11 / Ubuntu 22.04 LTS)-02
- Lenovo ThinkCentre S-20 (2011)-01
- HP Pro Desk 600 G3 MT: Processor: Intel core i5, RAM:8 GB HDD:1 TB, (windows10 / Ubuntu 20.04)-03
- Dell OptiPlex 9020- Processor: Intel core i7 4790, HDD:1 TB, RAM:16 GB, 19” TFT/LCD Monitor, Ubuntu/Windows10 Pro (Project PC)-04
- Lenovo think station S30 workstation with 24” LCD monitor (2014)- out of warranty-01
- Lenovo Think station(P700) (Cluster) (2016)- out of warranty-07
- Dell High End Workstation (DT Precision 5820) (2018)-02
- Dell Precision 5820 Workstation (2020)-02
- HP EliteDesk 800 G1 TWR: Intel Core i7-4790 CPU @ 3.60 GHz 16 GB Ram 500 GB HDD, (Windows 8, Ubuntu)-01
- HP LaserJet 1010 – 01
- LAN – 100/1000 Mbps , Seamless Wi-Fi connectivity with WAPs

Research lab – 5

- HP Elite desk 800 G8 - Processor: Intel core i7, RAM: 16 GB, HDD: 1 TB, (Windows 11 / Ubuntu 22.04 LTS)-01
- Dell OptiPlex 9010 - Intel (R) Core (TM) i7-3770 CPU @ 3.40GHz, 8GB, 500GB (Windows 8, Ubuntu)-07
- Dell OptiPlex 9020: Processor: Intel core i7 4790, RAM: 16 GB, HDD: 1 TB, (Windows 10 pro, Ubuntu 16.04 LTS)-03
- Lenovo M920t: Processor: Intel core i7 8700, RAM: 8 GB, HDD: 1 TB, (Windows 10 pro, Ubuntu 18.04 LTS)-04
- Lenovo ThinkCentre M910t: Intel Core i7 7700 CPU 3.60 GHz, RAM: 8 GB DDR4, HDD: 1 TB, (Window 10 Pro 64 Bit, Ubuntu 3.28.1)- 06
- HP Pro Desk 600 G3 MT- Processor: Intel core i5, RAM:8 GB HDD:1 TB (Ubuntu 20.04)-03
- HP Pro Desk 600- 01
- Dell Workstation OptiPlex 5090 MT-01
- LAN – 100/1000 Mbps, Seamless Wi-Fi connectivity with WAPs

Research lab – 6

- Lenovo ThinkCentre M910t: Intel Core i7 7700 CPU 3.60 GHz, RAM : 8 GB DDR4, HDD : 1 TB, (Window 10 Pro 64 Bit, Ubuntu 3.28.1)- 08
- Dell Optiplex 9010, Intel (R) Core (TM) i7-3770 CPU @ 3.40GHz, 8GB, 500GB, (Windows 8, Ubuntu)- 04
- Dell Optiplex 9020: Processor: Intel core i7 4790, RAM: 16 GB, HDD: 1 TB, (Windows 10 pro, Ubuntu 16.04 LTS)-08
- HP Pro Desk 600 G3 MT: Processor: Intel core i5, RAM:8 GB HDD:1 TB, (Ubuntu 20.04)-09
- HP 280 G6 Project PC: Intel Core i5 10400, 8GB DDR4 RAM, 1TB HDD SATA, 128 GB SSD, Win 10 Pro-02
- HP EliteDesk 800 G1 TWR: Intel Core i7-4790 CPU @ 3.60 GHz 16 GB Ram 500 GB HDD, (Windows 8, Ubuntu)-01
- Dell –Optiplex 5050 Desktop MT XCTO Systems(Project)-01

- Dell Inspiron 3250 Mini (project)-01
- LAN – 100/1000 Mbps, Seamless Wi-Fi connectivity with WAPs

Research lab – 7

- HP Elitedesk 800 G8 - Processor: Intel core i7, RAM: 16 GB, HDD: 1 TB, (Windows 11 / Ubuntu 22.04 LTS)-01
- Lenovo ThinkCentre M920t: Intel Core i7 7700 CPU 3.60 GHz RAM : 8 GB DDR4, HDD : 1 TB, (Window 10 Pro 64 Bit Ubuntu 3.28.1)-04
- Dell Optiplex 9010: Intel (R) Core (TM) i7-3770 CPU @ 3.40GHz, 8GB, 500GB, (Windows 8, Ubuntu)-03
- Dell OptiPlex 9020: Processor: Intel core i7 4790, RAM: 16 GB HDD: 1 TB, (Windows 10 pro, Ubuntu 16.04 LTS)-04
- Dell/OptiPlex 9020- Processor: Intel core i7 4790, HDD:1 TB, RAM:16 GB, 19” TFT/LCD Monitor, Ubuntu/Windows10 Pro (with WiFi)-01
- HP EliteDesk 800 G1 TWR: Intel Core i7-4790 CPU @ 3.60 GHz 16 GB Ram 500 GB HDD, (Windows 8, Ubuntu) – 02
- Lenovo ThinkCentre M910t: Processor: Intel Core i7 7700 CPU@3.60 GHz, RAM: 8 GB DDR4, HDD: 1 TB (Windows 10, Ubuntu)- 04
- HP EliteDesk 600 G1 TWR: Intel Core i&-4790 CPU @ 3.60 GHz 16 GB Ram 500 GB HDD, (Windows 8, Ubuntu)-09
- HP EliteDesk 705 G1 TWR-01
- Dell Optiplex 5000-05
- Vantageo 15K0-W (Project-BT)-02
- LAN – 100/1000 Mbps, Seamless Wi-Fi connectivity with WAPs

DATA CENTRE LAB: Server Class

- IBM E Server with accessories – 01
- Dell power Edge Server R420 - 01
- Dell power Edge Server R720 – 01
- Dell power edge server T630 – 03
- Dell Server PE 730XD – 01
- Dell Server (R740) – 01

- C-Boston Sys- 5038K-j-KNL Development Workstation – 01
- Dell R7 power edge R7404 rack server – 03
- Dell EMC Switch 54112T – 01
- KVM Switch 8 port VGA – 01
- C-NVIDIA DGX P2787 – 01
- C-NVIDIA DGXS -01
- LAN – 100/1000 Mbps , Seamless Wi-Fi connectivity with WAPs

DEPARTMENT OF CHEMISTRY:-

UG Lab (02 Nos): Fume hood, Deionizer plant, Electronic weighing balance, Magnetic stirrers, Hot plates.

Instrumental Analysis lab: Spectrophotometer, Turbidity meter, pH meter, Potentiometer, Conductometer, Refractometer.

PG Labs: Organic Chemistry Lab, Inorganic Chemistry Lab and Physical Chemistry Lab: Fume hood, Rotary evaporator with chiller and pump, UV Cabinets, Hot air ovens, Ice flaking machine, Melting point apparatus, Heating mantles and magnetic stirrers, Bomb calorimeter, Electronic weighing balance, Vacuum pumps.

Research Labs: Material Science lab (02), Electrochemistry lab, Catalysis and materials chemistry lab, Membrane and Separation Technology Lab, Organic and materials chemistry lab, Material Science and Catalysis Lab, Synthetic Organic Chemistry and Catalysis Lab, Biophysical and computational chemistry lab, Renewable Chemistry and Catalysis lab, Macrocyclic Synthesis Laboratory, Synthesis and Materials laboratory, Chemistry general lab.

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING:-

Analog and Digital Electronic Circuits Lab - Comprises of Analog Circuit Trainer Kits, Digital Circuit Trainer Kits, Microprocessors and Microcontrollers, FPGA modules, Protocol Conversion and

Communication Units, Embedded System Design Modules.

Computer Laboratory - This Lab has got 60 computers with engineering softwares. The simulation exercises carried out will lead to better understanding of the concepts in Signals and Systems, Electrical Machines, Power System Modelling, Power Electronics, Computer Aided Design Packages for Design and Analysis of Power Systems, Distribution Systems, Mini and Major Project Execution.

High Voltage Testing Laboratory High Voltage Test System of 0-100 kV, 100 mA HVAC and corresponding High Direct and Impulse voltage generating system, Insulating oil test kit, 5 kV megger (Tera Ohm Insulation tester), 0-30 kV, 50 mA HVAC source, AEPD analyser with linear location system, DSO.

Control Systems Laboratory - Temperature Control Trainer Kit, Furnace: Heater Supply, 230V AC/50Hz, Lead-lag Compensation Kit, DC motor Speed Control Trainer Kit with DC Motor, PID Controller Trainer Kit, DC Motor Position Control Trainer Kit with DC Motor, AC Motor Position Control System with AC Motor, Time Response of Second Order System kit.

Electrical Machines (Induction Motors and Transformers) Lab - DC Generators and Motors, Single Phase and Three Phase Transformers, Single Phase and Three Phase Induction Motors, Synchronous Machines Stepper Motors, Servo Motors.

Electrical Machines (Synchronous Machines and DC Machines) Laboratory - Four MG-Sets, RLC-Loading Arrangements, Synchronization Setup, Thyristor Modules, Data Acquisition Systems.

Measurements and Instrumentation Lab - CT testing Unit, Energy Meter Calibration, Power Analyser, Earth Resistance Measurement Setup, Cable

Test Measurement Setup, Programmable Logic Controllers, Remote Terminal Unit, Distributed Control Systems.

Power Electronics Laboratory - Thyristors and Gate Control Modules, IGBTs, Drive Control Unit, DSP Based Controller Modules.

Power Systems Laboratory - Four MG-Sets, RLC-Loading Arrangements, Synchronization Setup, Thyristors Modules, Data Acquisition Systems.

Embedded Systems Laboratory OSEK RTOS, KEIL RTOS, KEIL IDE for 805x, ARM, CODEWARRIOR IDE for 68HCXX, TI DSC Code Composer Studio for 28XX MOTOROLA, INTEL, ARM, PIC DSC/MC units.

DSP Laboratory- On using Math Works based computational platform to write the code and uses of Simulink to understand the application of signal transformation in linear and nonlinear mixing, in typical communication systems such as AM, FM process. Understanding of Phase lock loop (PLL) functioning, Approximation of Ideal filter responses using FIR and IIR filters.

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Analog Electronics Lab :- DC Power Supplies, Function Generators, Digital Storage Oscilloscopes

Communication Lab:- Workstations , Digital Storage Oscilloscope, Function Generator, DC Regulated Power Supply, RF Equipment's, Spectrum Analyzer, RF Training Kit, RF Signal Generator, Vector Network analyzer, Network Analyzer, Mixed Signal Oscilloscope, Function/Arbitrary Waveform Generator Microwave experiment kits, communication modules, WSN Design kit, FSO setup, Wi-Communication-T kits, Fibre optic modules, Antenna Trainer , Outdoor

FSO Link Setup (Lightpoint), ADS 10 User Licence, Optsim 5 User License.

Digital System Design Lab :- Desktop computers, Xilinx EDA software, Digital Trainer Kits

Digital Signal Processing Lab:- Desktop computers, Dell Workstations, DSP boards, FPGA boards Matlab, Python tools, Xilinx EDA software.

Microprocessor & Embedded Systems Lab:- Desktop computers, Workstations, Embedded System Boards,

VLSI Lab:- License Servers, Workstations, EDA/CAD Tools, Document processing tools.

Microwave and Optical Communication Lab:-Digital Storage Oscilloscope, Function Generator, DC Regulated Power Supply, Desktops, Workstations, Microwave and optical communication kits.

Signal Processing and Machine Learning Lab:- Digital Storage Oscilloscope, Function Generator, Desktop computers, Workstations, DSP kits.

IC Design Lab:- Servers and Workstations, EDA Tools

RF and Antenna Systems Lab:- Workstations, PCB Prototype Machine (LPKF), Chemical Free Through Hole Plating System Access to all design tools available in the department.

Ultrathin Semiconductor Deposition Lab:- Binocular Research Microscope RH-85, Consumable and accessories for Chemical Vapor Deposition System
Wireless Communication and Networks Lab (WCN):- Work stations, WSN Design kits, Sensors, Exata Software: Network Simulator/Emulator, E9000B – Special Product Configuration Total ADS Standard University License Bundles, W1450M Systemvue Media Systems Vue University License

Bundles. Access to all design tools available in the department.

Applied Photonics Lab :- Ansys Lumerical software, Opti-system software, Opti-FDTD software (open source), COMSOL Multi-Physics software, DELL workstations, and Access to all design tools available in the department.

Computer Vision and Deep Learning Lab:-

Network Management Lab:- Foundry N/w's FastIron Edge X424 Switches.

R&D Lab (Research Lab for Ph. D. Students): Workstations, Access to all design tools available in the department.

Stochastic Modeling Imaging and Learning (SMILE) Lab:- Workstations, Access to all design tools available in the department

DEPARTMENT OF INFORMATION TECHNOLOGY

Digital Design Lab-I:- DIGITAL IC TRAINER Model -UDT 4004-20, DIGITAL IC TESTER MME-DIT 2040-1.

Digital Design Lab - II:-DIGITAL IC TRAINER Model - ML 555T-20, DIGITAL IC TESTER MME-DIT 2040-1.

Research Lab-1:- Desktops: HP Elite Desk 800 G8 Tower-1, Dell Optiplex 5090-7, HP Prodesk 600G5 MT-7, Dell Optiplex 5050 -1, Cameras: Hikvision 2 MP-2.

Research Lab-2:- HP Elite Desk 800 G8 Tower-1, Dell Optiplex 5090-1, HP Prodesk 600G5 MT-7, Dell Optiplex 9020 MT - 1, Cameras: Hikvision 2 MP-2.

Research Lab-3:- Dell Optiplex 5090-3

Post Graduate Lab -I:- Desktops: HP Prodesk 600G5 MT-36, Cameras: HIKVISION make 4MP Dome IP Camera-2.

Post Graduate Lab - II:- Desktops: HP Prodesk 600G5 MT-29, Dell Optiplex 5090-7, Cameras: HIKVISION make 4 MP Dome IP Camera -2.

Project Laboratory:- Desktops: Dell Optiplex 5050- 39, HP Prodesk 600G5 MT-1, Cameras: Dlink DCS4602 VE (Vigilance Full HD Outdoor Vandal Proof POE) Dome Camera-2.

Undergraduate Lab-I: - Desktops: Dell Optiplex 5050 - 29, HP Prodesk 600G5 MT-29, Dell Optiplex 9020 MT core i7-2, Dell Optiplex 5090-10, HP Elite Desk 800 G1-2, Cameras: HIKVISION make 4 MP Dome IP Camera -3, Dlink DCS4602 EV Full HD-1, MIC Systems: KQ-SRS-1112 Infrared Sound Field Reinforcement System-1.

Undergraduate Lab -II:-Desktop: HP Elite Desk 800 G8 Tower-51, Cameras: Dlink DCS4602 VE (Vigilance Full HD Outdoor Vandal Proof POE) Dome Camera-2.

Network Switch Room:- Dell Optiplex 5050-3, Servers : NVIDIA DGS Station -1, TYRONE CAMARERO DS 400TG-1, Dell Power Edge R730XD 2U Rack server -2, Dell Power Edge R540-1, NETGEAR READY NAS RN316/6BAY 4TB Surveillance HDD, Hikvision 16 CH 2 SATA NVR-1.

NITK RDL IoT & Data Analytics Lab:- RDL & IoT Kit-30, Memsic Classroom Kit-1, Memsic WSN Professional Kit-1, PCI DIOT I/O Interface Kits-20

DEPARTMENT OF MECHANICAL ENGINEERING

Centre for System Design: NI PXI-5404 100 MHz Frequency Generator, NI PXI-8430/4 4 Port RS232 Serial Interface, NI PXI-2567 64-Channel External Relay Driver Module with external power, YMC Single Axis low-frequency Accelerometer, YMC Triaxial low-frequency Accelerometer, YMC Single Axis IEPE Accelerometers (low sensitivity 10mV/g), YMC Single Axis IEPE Accelerometers (higher sensitivity 100 mV/g sensitivity), YMC Triaxial

IEPE Accelerometers, NI lab view software, Altire Software.

Advanced Dynamics Lab: Experimental Modal Analysis, Forced Vibration Analysis, Tuned Impulse Hammer, Minishaker with controller, Modal Analysis Software, Vibration Analyzer, Rotor test setup.

Wind Tunnel Laboratory: Subsonic Wind Tunnel, Force Balance.

Advanced Manufacturing Laboratory: 3D Printing, Fused Deposition Modeling based 3-D Printer, Material Extrusion, Single Screw Extruder, Wire EDM, Universal Testing Machine, Optical Microscope, Microhardness Testing Machine, Muffle Furnace, Double Head Rolling Machine, Vickers Hardness Tester, Vacuum Arc Melting furnace, Microwave Furnace.

Additive Manufacturing Laboratory: High Performance Workstation.

Corrosion Lab: Corrosion equipment.

Smart Structures Laboratory: Free and Forced Vibration setup with controller, Impact Hammer, Tri-axial Accelerometer, Electrodynamic Shaker, Analyzer, Closed Loop Controller, Force Sensor, Impedance Head.

Refrigeration and Air-conditioning Research Laboratory: Micro Heat Pipe test rig, Vapour Pressure determination test rig, Thermoelectric Refrigeration test rig, Condenser Pressure Variation VCR test rig, Vortex Tube Refrigeration test rig, Air Engine test rig, Weather Simulation Chamber & Window Air Conditioner test rig, Two Stage VCR test rig with Intercooler.

Turbomachinery Laboratory: Low Speed Compressor Cascade test facility, Low Speed Turbine Cascade test facility, Centrifugal Blower test rig.

Polymer Composites Lab: VARTM facility, RMFH-3 Muffle furnace, Annual Report 2022-23

Incubator (RIM-18DFSS), 3.5MLH plus Magnetic Stirrer with hot plate, Computerized Universal Testing Machine.

Advanced Fluid Mechanics Lab: Bio 3D Printer, Desiccant Analysis test rig, Boundary Layer Measurement test rig.

Tribology Laboratory: Metallurgical Sample Saw, High Temperature Tubular furnace, Ball Mill, Polishing Machine, Double Disc Polishing Machine, Microscope, Pin on Disc Tribometer, Nano Indenter with AFM attachment, Microwave Heat Treatment setup, Tumbler Ball Milling setup, Micro Oven Heat Treatment setup, Weighing Machine, Cryogenic Tank, Optical Microscope

Advanced Heat Transfer Lab: Indoor Solar Simulator.

Aerospace Research Laboratory: Rotor test setup.

Mechanism Design Lab: Portable Reconfigurable Input-Output Device.

Manufacturing Technology Lab: Ultrasonicator, Optical Microscope with Image Analyzer.

CAD/ CAM Lab: Xeon E5 Based server, Xeon based Workstations.

List of Software in CAD/CAM Laboratory:

1. Pro Engineer CREO	50 Users
2. AutoCAD	50 Users
3. Ansys15.0	25 Users
4. AnsysV10.0	10 Users
5. MSCAdams	50 Users
6. MSCatran	50 Users
7. MSCastran	50 Users
8. MSCMarc	50 Users
9. MSCytran	50 Users
10. CatiaP3	10 Users
11. CATIANovia	05 Users
12. CATIADelmi	05 Users
13. CATIAPLMExpress	05 Users
14. LMS AMESim (Multi-domain system Simulation)	05 Users
15. Unigraphics with Advanced Machining Module	05 Users

- 16. DEFORM (Design Environment for FORMing) 01 User
- 17. Autodesk MoldFlow 25 Users
- 18. SIM Pack (MBD Software) 25 Users
- 19. MasterCAM 02 Users
- 20. HyperWorks 05 Users
- 21. RobotKit 02 Nos.
- 22. ANSYS research license (1 No)
- 23. ANSYS Academic
- 24. ADAMS Motion Bundle
- 25. I-DEAS Artisan
- 26. Coupling Software
- 27. Minitab
- 28. PTC CREO ELEMENTS/PRO
- 29. PROCAST

Surface Engineering Laboratory: Ball Mill, Inverted Biological Microscope, Automatic Polishing Machine.

Materials Characterization

Laboratory: Vacuum Arc Melting Furnace, Image Analyzer, Universal Testing Machine, Wire Electro Discharge Machine, Vickers Hardness Tester, Double-headed Rolling Machine, High Temperature Microwave Furnace.

Vibration and Condition Monitoring

Laboratory: Electromagnetic Shaker (100kgf, 50kgf, 25kgf), Horizontal Slip Table, VTS Electro-dynamic Shaker (25lbs), Gauss meter, Electromagnets (1.5 Tesla), Impact Hammer, Single and Tri-axial Accelerometers, Data Acquisition System (NI, HBM), Microphone and SLM, MicroEpsilon Laser displacement pickups, ADAMS, NASTRAN, PATRON, MARC, DITRON, ANSYS, Devitron, Labview. Accelerometer (1+1)

Robotics Laboratory: Lego Robotic Kit, Firebird, Basic Electronic Components, DC Motors, Connecting Pins, Wires, LEDs Berg Strip, and Bread Board, Quadcopter kit, Wall Following Robot.

Metrology Laboratory:

A. Linear Measurements

- 1. Vernier Caliper
- 2. Vernier Depth Gauge
- 3. Vernier Height Gauge
- 4. Digital Height gauge

B. Micrometer

- 4. External Micrometer
- 5. Internal Micrometer
 - A. Jaw Type Inside Micrometer
 - B. Caliper Type Inside Micrometer
- 6. Depth Micrometer
- 7. Bench Micrometer
- 8. Digital Micrometer
- 9. Telescopic Gauge

C. Measurement Using Slip Gauge

- 10. Calibration of Micrometer, Vernier Caliper.
- 11. Calibration of Height Gauge, Snapgauge, Ring Gauge and Plug Gauge.
- 12. Measurement of mean distance between surface and spacing between holes.
- 13. Measurement of Dovetail Angle and checking the taper angle of Taper Plug Gauge.
- 14. Checking an Angle Plate.
- 15. Study on Limit and Position Gauges.

D. Linear and Angle Measurement

- 16. Combination set.

E. Angle Measurement

- 17. Universal Bevel Protractor
- 18. Sine Bar

F. Flatness and Straightness Measurement

- 19. Clinometer

G. Screw Thread Measurement

- 20. Screw Pitch Gauge
- 21. Screw Thread Micrometer
- 22. Effective diameter measurement using Two Wire and Three Wire method.

H. Gear Tooth Measurement

- 23. Vernier Gear Tooth Caliper
- 24. Tooth Span Micrometer

I. Study on Opto-Mechanical Instruments

- 25. Tool Makers Microscope
- 26. Measurement Using Comparator

J. Surface Roughness Measurement

- 27. Surface Roughness Meter (SJ 301), Surface roughness tester.

Microsystems Laboratory: MEMS Sensors Scanning Tunneling Microscope, Self-Build kit, Atomic Force Microscope, COMSOL and IntelliSuite (Courtesy: NMDC), SUGAR Toolbox and MATLAB (Institute Network)

Heat Transfer Laboratory: Free Convection Heat Transfer, Heat Transfer through Composite walls, Water Cooling Tower, Shell and Tube Heat Exchanger, Measurement of Thermal Conductivity of metal rod, Measurement of Thermal Conductivity of Solids, Computerized Vapour Compression Refrigeration test rig, Peristaltic Pump model, Air Conditioning test rig, Heat Pipe demonstrator, Heat Transfer through Extended Surfaces, Measurement of Emissivity of Metal Surfaces, Heat Transfer through Lagged Pipe, Heat Transfer through Forced Convection, Computerized Air Conditioning test rig, Boiling Heat Transfer apparatus, Film and Dropwise Condensation, Ice Plant Tutor, Parallel Flow Heat exchanger, Plate Heat exchanger, Heat Pump setup, Fluidized Bed System, Refrigerator, Natural Convection, Critical Heat Flux Apparatus, Humidifier-Dehumidifier

Machine Dynamics and Vibration Laboratory: Kinematics of Epicyclic Gear, Kinematics of Cam Mechanism, Kinematics of Gear Train, Kinematics of Slider Crank Mechanism, Spring Mass System, Transmissibility Apparatus, Free Vibration of beam, Experimental Modal Analysis.

CNC, Pneumatic and Electro Pneumatic Laboratory: Trainer Lathe, Trainer Milling Machine, Electro Pneumatic Trainer Kit with Cylinders and Control valves.

IC Engine Research Laboratory: MMM Vertical 4- Stroke Diesel Engine, Textool 2- Stroke Vertical Diesel Engine, Textool 4- Stroke Vertical Diesel Engine, Valve and Port Timing

Diagrams, (a) Compression Ratio of given IC Engines, (b) Morse Test, Computerized multi-cylinder MPFI Gasoline engine, Computerized Single cylinder DI Diesel Engine, Exhaust Gas Analyzer, Hydrogen fuelled SI Engine test rig, CRDI Diesel Engine test rig, Kirloskar Diesel Engine test rig, Five gas analyzer.

Fuels Laboratory: Boys Gas Calorimeter set (Calorimeter + gas flow meter (0-1000ml), Redwood Viscometer No.1, Saybolt Viscometer, TAR Viscometer (Redwood viscometer No.2, Instech Calorimeter, Flash point tester (close-up), Barometer with room temperature no.597, Digital Weighing Machine (0-10grams), Saybolt Viscometer (old), Bomb Calorimeter, Cleveland Flash & Fire Point Apparatus, Weighing machine (0-2 kg), Flash and Fire point Tester.

Theory of Machines Laboratory: Spring Mass System, Whirling Shaft Apparatus, Motorised Gyroscope Apparatus, Digital Weighing Machine (0-50kgs), Physical Balance, Dead Weight Tester (0-35kg), Digital Dead Weight Tester (0-60kg), Digital Dead Weight Tester (0-250kg), Planimeter set, Thermo-Hygrograph H-10/100%, Computerised Emission test set up, Single stage spur gear, Single stage spur gear with intermediate, Two stage spur gear, Three stage spur gear, Three speed and reverse gear, Worm gear, Bevel gear, Rack and quadrant gear drive, Reversing gear, Epicyclic gear (sun & planet), Cycloidal motion, Internal rolling gear drive, Internal gear and pinion drive spur gear.

Automotive Electronics Laboratory: IRIS CAR (Lab Car) with Breakout box, ECU, Injector Box, Wire harness, Communication Module, DC Power Supply, Function Generator, Oscilloscope, Cut Section Models.

Stress Analysis Laboratory

Polariscope, Strain measurement setup, Strain Indicator and Recorder.

- **Fracture and Fatigue Laboratory**

Fatigue setup

- **Applied Solid Mechanics:**

Workstation with GPU

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- **Solidification Simulation**

Laboratory: Quick Cast casting simulation software.

Solar Energy Laboratory: Solar Air Heater, Pyranometer and Pyrheliometer.

- **Vehicle Dynamics Laboratory:**

Damper Testing Machine, Quarter Car Suspension Test Rig.

DEPARTMENT OF MINING ENGINEERING:-

Rock Mechanics Laboratory :- Rock cutting machine, Compression testing machine, Schmidt hammer, Slake durability index apparatus, point load strength index apparatus, P-wave velocity apparatus, Los Angeles machine, Other rock testing facilities.

Drilling Laboratory: Jack hammer drilling set-up, Air compressor, Modified lathe machine for rock cutting, horizontal and vertical coring machines.

- **Rock Blasting Laboratory:**

Minimates, Minimate plus, High speed video camera, VOD monitor, Laser profile, WIPFRAG software.

- **Mine Environmental Engineering**

Laboratory: Water pollution monitoring kit, Respirable dust sampler, Manometer, Crossing point temperature, Digital Methanometer, CO detector, Psychomotor, Sound level meter, Gas testing set up, Exhaust gas analyzer, Multi gas detector; High Volume sampler, Vibration Analyzer

Mineral Processing Laboratory : Jaw Crusher, Roller Crusher, Rod Mill, Ball Mill, Bond' Work Index Setup, Electro Magnetic Sieve Shaker, Riffle Sampler, Jigging Machine, Wilfly's Table, Automatic Mineral Separator, Spiral Classifier, Density Separator Hydro Cyclone, Davis Tube Tester, Electro Magnetic Drum Separator-Wet, Electro Magnetic Drum Separator- Dry, Froth Floatation Cell, Sampling / Crushing / Grinding - Integrated Unit, Turbo Mixer, Micro Mill, Vacuum Filtration Unit, Disc Mill, Pot Mill, Double Deck Vibratory Screen Model, Infrared Drier, Spiral Concentrate, Sieve Shaker

Mine Surveying Laboratory: Prismatic Compass, Surveyor Compass, Vernier Theodolite, Micro-Optic Theodolite, Dumpy level, Auto level, Digital level, Total station, Handheld GPS, DGPS

- **Mine Planning and Design**

Laboratory:- Surpac, Minex, Sirovision, Jk Sim blast softwares, roscience softwares

- **Mine Pollution Laboratory:-**

Water quality analyzer, High volume air sampler, Respirable dust sampler, Sound level meter, Opacity meter, Point sampler, Beta attenuation meter, Weather monitoring station

DEPARTMENT OF METALLURGICAL & MATERIALS ENGINEERING

Extractive Metallurgy Lab: Crushers, Ball mill, Floatation cells, C&S analyzer, Sieve analyzer

Testing of Materials Lab: UTM, Instron, Wear testing machine, Hardness testers, NDT, Fatigue testing machine

Physical Metallurgy Lab: Metallography, Microhardness, Image Analyser, Dilatometer

Ceramics & Polymer Lab: Ceramics & Polymer Lab

Heat treatment Lab: Heat treatment furnaces, Thermal cycle furnaces

Metal Finishing Lab: Plating facilities

Foundry lab: Induction furnace, Permeability meter

Scanning Electron Microscope Lab: Scanning Electron Microscope with EDAX

Casting Research Lab: Data logger, Hot stage microscope, Contact Angle Analyser, Image analyzer, Instron tensile tester, Quenchometer, Stereo microscope, 2D Surface Profiler, Solid Cast Software, Ultrasonicator, Ultrasound velocity meter, Thermal property analyser, DAGE bond tester

Powder Metallurgy & Nano technology Lab: Thermolyne High Temperature Furnace, Density Measurement Kit, Incubators – Ecogain veries, Hot Air Oven.

Transmission Electron Microscope Lab: Transmission electron microscope, GATAN ion milling unit.

Metal Processing Lab: Rolling mill, Precision cutting machines, 250 ton Hydraulic press

Corrosion Lab: Potentiostat and Impedance analyser

Coating lab: PVD facility, electron beam deposition set up. DC sputtering setup

FTIR Lab: FTIR Spectrometer, Four probe resistivity measurement system, USB Oscilloscope

XRD Lab: X-ray Diffractometer

Ceramic & Thin Film Lab: UV Ozone Cleaner, Ultrasonic Atomizer, Scratch Tester, Spi Coater, Probe Sonicator, Vacuum Oven, Screen Printer, Stretching Machine with Compressor, Four Probe & Two Probe, Glass Cutter, Fume Hood

Ceramic Processing Lab: Muffle furnace-1000°C, Tubular furnace-1000°C, Tubular furnace-1300°C, Vacuum furnace-1400 °C, Vacuum oven, Density measurement apparatus

Thin films and coating Lab: Screen-printing equipment, Spin coating, Dip coating, Ultrasonic atomizer, Sheet resistance measurement facility, Thin-film reflectometer

DEPARTMENT OF PHYSICS

Name of Laboratory	Major Equipment/Facilities
Name of Laboratory	Major Equipment/Facilities
UG Laboratory	Experimental Kits (7 expt.s of 5 sets each)
PG Laboratory I	<ul style="list-style-type: none"> Experimental Kits (8 expt.s of 2 sets each)
PG Laboratory II	<ul style="list-style-type: none"> Experimental Kits (8 expt.s) Vacuum Coating Unit (2 no.s)

Research Laboratories:

M.Sc. Project Laboratory	<ul style="list-style-type: none"> Keithley Source Meter DC – RF Sputtering Unit Spray Pyrolysis Unit Vacuum coating unit
Optoelectronics Laboratory	<ul style="list-style-type: none"> Optics Inc SD2000 spectrometer (UV vis spectra) Lux meter (Lutron) UVC Ozone Cleaning Unit Thermal evaporator Clean air flow bench OLED measurement system Keithley Sourcemeter (model 2400). Jobin Yvon spectrometer with a CCD based detector or a silicon photodiode (SM1PD2A Mounted UV Enhanced Silicon Photodiode, 200-1100 nm Cathode Grounded) Optical power meter (Ophir Optronics, model NOVA II with PD300-UVdetector) Keithley 6485 Picoammeter Tektronix DMM 4040

<p>Crystal Growth Laboratory & Nano materials Laboratory</p>	<p>6-1/2 Digit Precision Multimeter</p> <ul style="list-style-type: none"> • Agilent 34972A LXI Data Acquisition/ Switch unit • Multioutput DC power supply model LQ6324 • Agilent E4980A Precision LCR meter 20 Hz to 2 MHz • Tektronix TDS 2002B Two channel Digital Storage Oscilloscope 60 MHz 1GS/s • DH-3 UV-Vis-NIR Calibrated Light Source (Ocean Optics) • RF Probe Station • ISO BRUKER Precision Cutting Machine • Q-switched Nd-YAG laser; Model GCR -170 from Spectra – Physics, USA. • Solution growth system for crystal growth • High temperature furnace • Magnetron sputtering system • Thin film coating unit • Fume Head • Vacuum deposition system-Thermal, DC, RF coating system 	<p>Computational Physics Laboratory</p> <p>Nonlinear dynamics and Biophysics</p> <p>Low Dimensional Physics Lab</p> <p>Cosmology Group</p>	<ul style="list-style-type: none"> SP150) (2 Nos) • Mbraun Glove Box • Neware battery analyzer • Kiethly 2 probe and 4 probe measurement systems • Ocean Optics UV-Vis spectrometer • DC Spectrum Analyzer • Muffle Furnace • Weighing Balance • Battery Crimper set up • Sputtering Unit • Spin Coater • Spray Pyrolysis unit • Vacuum Oven • Hot air oven • Photoluminescence Spectrometer • XRD • Dell server (power edge), • Software: VASP, Mathematica, Gaussian and Maple Dell server power edge <p>Sputtering, Impedance analyser, SMU, dc probe station, etc.</p> <p>Computers</p> <p>Printers</p>
<p>Material Processing Laboratory</p>	<ul style="list-style-type: none"> • CLEMEX Microhardness Tester • Physical vapour deposition • Polishing Machine • Muffle furnace (Max Temp 1000°C) • Low speed Diamond saw cutting Blade • Abbe refractometer • Analytical balance and Density kit • High temperature furnace • P H Meter • U V Visible spectrometer • Incubator • Ultra sonicator • Computer Interfaced Microhardness Tester • Density kit 		
<p>Materials Research Laboratory</p>	<ul style="list-style-type: none"> • Electrochemical Workstation (Bio-Logic 		

DEPARTMENT OF WATER RESOURCES AND OCEAN ENGINEERING

Hydraulics Laboratory:

Flow Measuring Units
Pumps , Water meters
Calibration Devices
Turbines
Hydraulic Machines
Pressure Gauges
Valves
Tilting flume
Pipe bursting unit
Ultrasound flow meter
Pressure Gauge Tester

Strength of Materials Laboratory:

Universal Testing Machine U.T.M 5 T, 40 T, 100 T, 200 T (Electronic)
Hardness Testing M/c
Torsion Testing M/c

Hardness Testing M/c
Fatigue Testing M/c
Impact Testing M/c

Marine – Geotechnical Laboratory:

Consolidation Apparatus
Direct Shear Apparatus
Photo Elastic Bench
Corrosion Measurement Voltage system
Optical Microscope

Wave Mechanics Laboratory:

Regular Wave Flume [50 X 0.71 X 1.1 m] – 3 No.s
Digital Storage Oscilloscope with software
Wave probe with software

Hydraulic Measurement Laboratory:

Ultrasonic Testing Kit
Electronic Balance
Granular Matrix Soil Moisture Sensors
Digital Soil Moisture and Temperature Recorder
Tipping bucket rain gauge
Basic Hydrology Unit

Remote Sensing & GIS Laboratory:

Computer systems: 20 No.s
Printer, scanner
Stereoscopes
Ground truth Radiometer
Digital Planimeters
Aerial & Satellite Imagery
ARCPAD GPS, Garmen GPS
DGPS
Total station
Softwares : ERDAS- Imagine, ARCGIS, ENVI 5.4
Open-Source GIS
R software

Computer Laboratory:

Computer systems: 10 Nos
Ground water Modelling Software (GMS),
Water Management Software (WMS);
Aqua Chem software
SWAT CUP
MATLAB
Scanner, Laser printer

Computational Hydrodynamics Laboratory

Computer systems: 10 Nos
Open-Source REEF 3D
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MATLAB
MIKE 21 software
SACS software

Advanced Structural Mechanics Lab
Fretting Wear Testing Machine

Structural Dynamics Lab

Shake Table
Building models
Accelerometers
LVDT
Ship/sloshing tanks
Load cells

Experimental Stress Analysis Lab

Strain Rosette
Stress gauge
Measurement of Shear number
Temperature Compensation
Rectangular delta

Unmanned System Research Laboratory

3D Modelling with Aerial Imaging
Octocopter with multispectral Imaging
Open-source Simulation for Design
Underwater Remotely Operated Vehicle
Marine Surface Vehicle for inspection
Thermal and RGB Inspection Unit
Open-Source Fluid Structure Interaction Setup.

SCHOOL OF HUMANITIES, SOCIAL SCIENCES AND MANAGEMENT

Computer laboratory:- SPSS, Palisade Decision Tools Suite, CMIE Prowess Database, CRISIL Research Reports

Itell Language Laboratory:- Software from Logitech Solutions Itell catering 500+1 user

New Computer Lab: One Server with 30 Desktop Computers

11.5 WORKSHOPS/MAJOR EQUIPMENTS IN THE DEPARTMENTS

DEPARTMENT OF WATER RESOURCES AND OCEAN ENGINEERING :-

Lathe, Shearing machine, Drilling machine, Grinding machine

DEPARTMENT OF CIVIL ENGINEERING

Departmental Mini Workshop:-

Lathe, shearing machine, drilling machine, Grinding machine
Departmental mini-workshop:- Lathe, shearing machine, drilling machine, Grinding machine.

DEPARTMENT OF MECHANICAL ENGINEERING

Machine Shop - I: Center Lathe, Heavy duty Center Lathe, Geared head Center Lathe, Shaping machine, Universal Milling Machine, Heavy duty pillar type drilling machine, Light duty pillar type drilling machine, Pedestal grinding machine, Capstan Lathe.

Machine Shop - II: Surface Grinding Machine, Cylindrical Grinding Machine, Capstan Lathe, Horizontal Milling Machine with Vertical attachment, Broaching Machine, Light Duty Shaper, Heavy Duty Shaper, Slotting Machine, Planner, Cutter Grinding Machine, Heavy Cylindrical Grinding Machine, CNC Milling Centre, CNC Turning Centre, Heavy Duty Shearing Machine, Hydraulic Press, Heavy Duty Radial Drilling Machine, Hydraulic Radial Drilling Machine, Universal Milling Machine, Centre Lathe, Cutting Machine, Hydraulic Compressor, High speed drilling machine, Shearing Machine.

Carpentry Shop: Wood turning lathe, Circular saw, Carpentry bench vice and table.

Fitting Shop: Bench vice with table, Surface plate, Anvil, Power Tool, Drilling set and accessories, Saber saw, Jig saw, Hot air gun, Tappers, Nibbler, Shearing machine, Grinding machine, Circular saw, Impact wrench, Battery operated drill, Blower, Eccentric

sander, Router machine, Wood-planner, Jig saw, Hammer drilling, Core cutter drilling machine

Sheet Metal Shop: Soldering table, Bench vice, Shearing machine.

Welding Laboratory: Metal inert gas welding, Resistance spot welding, Tungsten inert gas welding.

Foundry Laboratory: Sand sieving machine, Aluminum melting furnace.

DEPARTMENT OF MINING ENGINEERING

Skill Development Workshop on 'Blasting for Mines/Quarries/Infrastructure Projects', during 1-2 August, 2022.

Two days DST-SERB sponsored workshop on "Industrial Safety and Health", during 19-20 October, 2022.

MAJOR EQUIPMENTS IN THE DEPARTMENTS

DEPARTMENT OF CHEMICAL ENGINEERING

Gas Chromatograph
Refrigerated Centrifuge
Quartz Immersion well Reactor
Electro Spinning equipment
Bench Top Fermentor
Particle Size Analyser
Freeze Dryer
Gel Documentation
Thermogravimetric Analyser
HPLC
LC –MS
ICP –OES
FPLC
Fermenter
Real time Polymerize chain reaction machine
biosafety cabinet level II

Energy and Catalysis Materials Laboratory

Solid Oxide Fuel/Electrolysis button cell Test Station.
CH Instrument
Gas Analyzers
Electrospinning Unit
Dilatometer
Reducing atmosphere setup
DC four probe Keithley 2450 source meter

DEPARTMENT OF CHEMISTRY

Single crystal XRD, UV-Vis absorption and fluorescence emission spectrophotometers, Solar Simulator with I-V measurement system for solar cells, FTIR spectrometer, Thermogravimetric analyzer, Contact angle analyzer, Surpass Electrokinetic analyzer, Potentiostat/ galvanostat,

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

HP Desktop Computer Systems - Core I7, 16GB RAM, 1TB Hard disk
HP Elite Desk 705 G1 TWR
Dell OptiPlex 5000-05
Dell Inspiron 3250 Mini
IBM E Server with accessories
Dell High End Server T610
Dell power Edge Server R420
Dell power Edge Server R720
Dell power edge server T630
Dell Server PE 730XD
Dell Server (R740)
C-Boston Sys- 5038K-j-KNL
Development Workstation
Dell R7 power edge R7404 rack server
Dell High End Workstation (DT Precision 5820)
Dell Precision 5820 Workstation
Lenovo workstation(P700)
Lenovo think station S30 workstation with 24" LCD monitor
Lenovo Think center S-20 & D 20 workstation

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

1. Mixed Domain Oscilloscope with Accessories, 01 Number, 11 Lakh.
2. HP Probook 450 G8 Notebook, 1 Number, 0.83 Lakh.
3. HP ProDesk 600G6 Desktop Computers, 1 TB SSD, 16 GB RAM, 10 numbers, Rs. 7.54 Lakh.
4. Work Station 2 X Intel xeon Silver 4100 Processor, 1 TB SSD, 32 Bit RAM, 1 Number, 2 Lakh.
5. Torque transducer & Universal torque transducer Interface, 1 Number, 2.6 Lakh.
6. Fluke Advanced Power Quality & Energy Analyzer, 1 Number, 5.5 Lakh.
7. HP Probook 440G8 Laptop, 1 Number, 0.82 Lakh.
8. 3 phase IGST Inverter Module, 4 Number, 2.72 Lakh.
9. Digital Multimeter 6.5-digit Tektronix, 1 Number, 1.26 Lakh.
10. DAC Module & D10 Module, 1 Number, 0.63 Lakh.
11. 1 phase and 3 phase Auto transformer, 6 Number, 1.07 Lakh.
12. PQ Monitor Equipment, 1 Number, 5.49 Lakhs.
13. Real Time Control Box, 1 Number, 11.29 Lakhs.
14. Intelligent Power module based Inverter Card, 4 Numbers, 1.96 Lakh.
15. Power Analyzer cw500, 1 Number, 3.52 Lakh.
16. Hardware in loop simulator, 1 Number, 3.13 Lakh.
17. 7.5 KVA 3-Ph 3 winding dry type transformers with multiple taps, 1 Number 0.52 Lakh.
18. IT6526C with SAS 1000L 3000W DC Power Supply 750V/15A, 2U with Solar Array Simulator Software, 1 Number, 5.20 Lakh.
19. Real time control prototyping systems 1 Number, 11.01 Lakh.
20. Fluke Solar Irradiance Meter with temp probe, 2 Numbers, 0.80 Lakh.

21. AC HV Test Source 0-25 kV 50 mA, 1 Number, 0.70 Lakh.
22. MSOX2004A- MSOX2004A Oscilloscope, Mixed Signal 4+8-channel 70 MHz, 1 Number, 2.37 Lakh.
23. Programmable Load Bank with Battery Emulator (IT6006B-800-25 800V/25A/6kW regenerative power system), 1 Number, 7.50 Lakh.
24. Rework Station FR701-19 Soldering and Desoldering Station, 1 Number 1.33 Lakh.
25. Pyranometer LP PYRA03 & Data Logger HD33LMT.4, 1 Number, 2.51 Lakh.
26. HP ProDesk 600G6 MT Desktop Computers, 1 TB SSD, 16 GB RAM, 30 numbers, Rs. 19.31 Lakh.

MECHANICAL ENGINEERING:

- Vacuum Arc Melting Furnace, Image Analyzer, Universal Testing Machine, Wire Electro Discharge Machine, Vickers Hardness Tester, Double headed Rolling Machine
- Electromagnetic shaker (100kgf, 50kgf, 25kgf), Horizontal slip table, VTS electro-dynamic shaker (25lbs), Gauss meter, Electro magnets (1.5 Tesla), Impact hammer, Single and tri-axial accelerometers, Data acquisition system (NI, HBM), Microphone and SLM, Micro-Epsilon Laser displacement pickups, ADAMS, NASTRAN, PATRON, MARC, DITRON, ANSYS, Devitron, LabVIEW.
- Lego Robotic Kit, Firebird, Basic Electronic Components, DC Motors, Connecting Pins, Wires, LEDs Berg Strip, and Bread Board, Quadcopter kit, Wall Following Robot.
- Micro heat pipe test rig, Vapour pressure determination test rig, Weather simulation chamber & Window air conditioner test rig, Thermoelectric refrigeration test rig, 2 Stage VCR test rig with intercooler, Condenser pressure variation VCR test rig, Vortex tube refrigeration test rig, Air engine test rig.
- MEMS Sensors, Scanning Tunneling Microscope, Self-build Kit, Atomic Force Microscope, COMSOL and

- IntelliSuite (Courtesy : NMDC), Sugar Toolbox and MATLAB (Institute Network)
- Free convection heat transfer, Heat transfer through composite walls, Water cooling tower, Shell and tube heat exchanger, Measurement of thermal conductivity of metal rod, Measurement of thermal conductivity of solids, Computerized vapour compression refrigeration test rig, Peristaltic pump model, Air conditioning test rig, Vapor compression refrigeration test rig, Heat pipe demonstrator, Heat transfer through extended surfaces, Measurement of emissivity of metal surfaces, Heat transfer through lagged pipe, Heat transfer through Forced convection, Computerized Air conditioning test rig, Boiling heat transfer apparatus, Film and Drop wise condensation, Ice plant tutor, Parallel flow heat exchanger, Plate Heat exchanger, Heat pump setup, Fluidized Bed system, Refrigerator, Natural convection, Critical Heat flux apparatus
 - Kinematics of Epicyclic Gear, Kinematics of Cam Mechanism, Kinematics of Gear Train, Kinematics of Slider Crank Mechanism, Spring Mass System, Transmissibility Apparatus, Free Vibration of beam, Experimental Modal Analysis
 - Trainer Lathe, Trainer Milling Machine, Electro Pneumatic Trainer Kit with Cylinders and Control valves
 - MMM Vertical 4- Stroke Diesel Engine, Textool 2- Stroke Vertical Diesel Engine, Textool 4- Stroke Vertical Diesel Engine, Valve and Port Timing Diagrams, Compression Ratio of given IC Engines (b) Morse Test, Computerized multi-cylinder MPFI Gasoline engine, Computerized Single cylinder DI Diesel Engine, Exhaust Gas Analyzer, Hydrogen fuelled SI Engine test rig, CRDI Diesel Engine test rig, Kirloskar Diesel Engine test rig
 - Boys gas Calorimeter set (Calorimeter+ gas flow meter (0-1000ml), Saybolt Viscometer, Redwood viscometer, TAR Viscometer (Redwood viscometer, Instech Calorimeter, Flash point tester

(Close-up), Barometer with room, temperature no.597, Digital weighing machine (0-10grams), Saybolt Viscometer(old), Bomb Calorimeter, Cleveland Flash & fire point apparatus, Weighing machine (0-2 kg)

- Spring mass system, Whirling shaft apparatus, Motorised gyroscope apparatus, Digital weighing machine (0-50kgs), Physical balance, Dead weight tester(0-35kg), Digital dead weight tester(0-60kg), Digital dead weight tester(0-250kg), Planimeter set, Thermo-Hygrograph H-10/100%, Computerised Emission test set up, Single stage spur gear, Single stage spur gear with intermediate, Two stage spur gear, Three stage spur gear, Three speed and reverse gear, Worm gear, Bevel gear, Rack and quadrant gear drive, Reversing gear, epicyclic gear (sun & planet), Cycloidal motion, Internal rolling gear drive, Internal gear and pinion drive spur gear
- IRIS CAR (Lab Car), with Breakout box, ECU, Injector Box, Wire harness, Communication Module, DC Power Supply, Function Generator, Oscilloscope, Cut Section Models
- Center Lathe, Heavy duty Center Lathe, Geared head Center Lathe, Shaping machine, Universal Milling Machine, Heavy duty pillar type drilling machine, Light duty pillar type drilling machine, Pedestal grinding machine, Capstan Lathe
- Surface Grinding Machine, Cylindrical Grinding Machine, Capstan Lathe, Horizontal Milling Machine with Vertical attachment, Broaching Machine, Light Duty Shaper, Heavy Duty Shaper, Slotting Machine, Planner, Cutter, Grinding Machine, Heavy Cylindrical Grinding Machine, CNC Milling Centre, CNC Turning Centre, Heavy Duty Shearing Machine, Hydraulic Press, Heavy Duty Radial Drilling Machine, Hydraulic Radial Drilling Machine, Universal Milling Machine, Centre Lathe, Hydraulic Compressor.
- Wood turning lathe, Circular saw, Carpentry bench vice and table.
- Bench vice with table, Surface plate, Anvil, Power Tool, Drilling set and

accessories, Saber saw, Jig saw, Hot air gun, Tappers, Nibbler, Shearing machine, Grinding machine, Circular saw, Impact wrench, Battery operated drill, Blower, Eccentric sander, Router machine, Wood planner, Jig saw, Hammer drilling, Core cutter drilling machine.

- Soldering table, Bench vice, Shearing machine.
- Subsonic wind tunnel.
- Experimental Modal Analysis, Tuned Impulse Hammer, Modal Analysis Software, Forced Vibration Analysis, Minishaker with controller
- Moulding facility.
- Pin on Disc Tribometer, Metallurgical Sample Saw, High Temperature Tubular furnace, Ball mill, Disc Polishing Machine, Microscope, sigma Z blade mixer.
- Free and forced vibration setup with controller, Impact hammer, Tri-axial accelerometer, Electrodynamics shaker, Analyzer, closed loop controller, force sensor, impedance head.
- Low speed compressor cascade test facility, Low speed turbine cascade test facility, Centrifugal blower test rig.
- Desiccant analysis test rig.
- 3-D Printing, Material Extrusion, Fused Deposition Modeling based 3-D Printer, Single Screw Extruder.

DEPARTMENT OF MINING ENGINEERING

1. Muscle Oxygen Monitoring System
2. Micromate
3. Air Compressor

11.6 HOSPITAL, POST OFFICE, SHOPPING CENTRE

Hospital: One Health Care Center with the services of regular doctors and visiting expert doctors is available. Required medicines are also made available in the Health Care Centre.

Post Office: Post Office is available within the Campus.

Banks: Two banks (SBI and Canara Bank) are functioning within the Campus. 2 ATMs (2 of SBI and 2 of Canara bank) are available at different locations within the campus.

Shopping Centers: Two Shopping Complexes are available within the campus accommodating about 15 shopping rooms which includes Saloon, Beauty Parlors, Printing and Photocopy, Vegetable outlet, Bakery, Tailoring, Cloth Shop, Milk parlors, food outlets etc.

11.7 PHYSICAL EDUCATION

Physical education & Facilities: Full-fledged Gymnasium facility, sports grounds for out-door games, Sports complex for in-door games are available within the campus.

Indoor Facilities

New Sports Complex

- Multi Gym: State of the art infrastructure multi gym spread in 5000sqft carpet area highly equipped with cardio equipment and all modern equipment.
 - Indoor Kabaddi Court of 5000sqft with 2 Nos. of kabaddi mat
 - Multi- Purpose Hall of 5000 sq.ft used for Kabaddi, chess, carom, TT and other recreational games.
 - Yoga hall of 5000sq.ft with capacity of 250 members
 - Badminton Court - 5000sq.ft of International standard 3 badminton wooden court
 - TT / indoor Volleyball Court- 8 no's TT table, Volleyball court with vinyl mat flooring of 5000sq.ft.
 - Billiard Hall with 2 billiard table of 2000 sq.ft.
1. Old Sports Complex (spread over an area of approx. 15000 sq.ft)
 - Indoor Badminton - 3 badminton court with concrete floor.
 - 4 TT Table.

2. Old Multi Gym near Mega Hostel Tower for boys spread in 6000 sqft area.

I. Outdoor Facilities

1. 400 m International standard Athletic track -1
2. Cricket ground with Turf -1
One more cricket ground is under construction.
3. Football field -2
4. Handball - 1
5. Kho - Kho Court - 2
6. Hockey field - 1
7. Outdoor Volleyball Court with flood lit - 3
8. Outdoor Throw ball Court with flood lit - 2
9. Outdoor Basketball Court with flood lit - 3
10. Tennis Court - 4 nos
11. Swimming pool - International standard swimming pool (50m) {presently it is under maintenance}

Outdoor Sports

- Athletics.
- Swimming
- Football
- Volleyball
- Handball
- Hockey
- Kho-Kho
- Kabaddi
- Cricket
- Basketball
- Lawn Tennis

Indoor Sports

Modern 3 storied Indoor Sports Complex with state of the art facilities which includes:

- Kabaddi
- Modern Fitness Centre (Multi-Gym, Cardio station, Treadmill etc.)
- Yoga & Meditation
- Carom and Chess
- Billiards and Snooker (2 Tables)
- Badminton Court
- Table Tennis, Indoor Volleyball Court

Multi Gym near Mega Hostel Tower for boys.
Independent Basketball court at the Girls Hostel premises with floodlit.

11.8 STAFF QUARTERS

Staff quarters: 245 numbers of Faculty Quarters and 176 numbers of Non-faculty staff quarters are available in the Campus.

12. STUDENT ACTIVITIES

STUDENTS' UNION

An election to the Students' Union was held on 8.4.2022. The following students were elected as Office Bearers for Institute Students Union for the Academic Year 2022-2023.

1. President
Mr. Kushagra Katiyar
2. Vice President
Ms. Sravani Reddy
3. General Secretary
Ms. Punit Raj
4. Joint Secretary
Mr. Sandeep Kashyap

13. RESEARCH, DEVELOPMENT & CONSULTANCY PROJECTS

13.1 R & D PROJECTS (ONGOING & SANCTIONED)

DEPARTMENT CHEMICAL ENGINEERING

Development of Electrospun Ceria-Selective Extraction and purification of Commercially Valuable Pigment melanin from Cephalopod ink and its industrial effluent, sponsored by Science and Engineering Research Board (SERB), Department of Science and Technology, Govt. of India. Principal investigator: Dr. I. Regupathi; Co-PI: Dr. Prasanna BD at a cost of 49.78 Lakhs (March 2019 to March 2023)

Algal Biorefinery using Spirulina Model to Integrate Wastewater Utilization and Bio-fuel Production, sponsored by SERB-TARE Scheme, Department of Science and Technology, Govt. of India. Principal investigator:: Dr. Dr. Venkatesh Kamath, NMA-MIT, Nitte; Mentor: Dr. I. Regupathi, at a cost of 18.3 Lakhs (Nov 2020 to Nov 2023)

DST Joint Research Grant under Water Technology Initiative (WTI) sanctioned to Prof. Vidya Shetty K for collaborative Research Project with IIT Bombay, Project Title: "Integrated Photocatalytic and Membrane Bioreactor Process for Effective Removal of Emerging Contaminants and Disinfection", Total funding: 72.32 lakhs NITK (Rs.22.8 lakhs) ; IITB (Rs.49.5 lakhs) ,Duration: Three years (Sanctioned in January 2021 and Started from 2nd March 2021)

Design and Development of Affinity Based Sensors for the detection of radiological compounds in point of CBRM emergencies using ZnO NPs functionalized by Amidoxine and Mugenic acid" (LSRB/81/48222/LSRB-361/SH&DD/2020) Principal

investigator: Prof. Raj Mohan B Chemical Engg.

DEPARTMENT OF CIVIL ENGINEERING

Socio-Economic and Environmental Trade-offs in Managing the Land River Interface. Sponsored by the Department of Biotechnology, Govt. of India under TaSE. Principal Investigator: Dr. Adani Azhoni (2019 - 2022)

Development of Countermeasures to Mitigate Earthquake-induced Damage of RM Breakwater. Principal Investigator: Dr. Babloo Chaudhary (2020-2022)

Small Scale and Sustainable Household Wastewater Recycling S3HWR, Principal Investigator: Dr. Arun Kumar Thalla (2018-2022)

Strength, serviceability and hazard assessment of Global Vipassana Pagoda considering as-built information and in-situ material properties. Sponsored by Global Vipassana Foundation Trust, Mumbai. Principal Investigator: Dr. Pavan G S (2021 - 2024)

Development of an innovative marine bacteria-based cement-electrolyte battery for cathodic protection of reinforced concrete as a low-power operator. Sponsored by DST – SERB, New Delhi. Principal Investigator: Dr. T Palanisamy. (2020 - 2023)

Development of Trip Generation Manual for Indian Cities. Sponsored by CSIR-CRRI. Principal Investigator: Dr. Mithun Mohan. (2021 - 2023)

Random verification of Hazardous and Other Wastes. Sponsored by the Central Pollution Control Board. Principal Investigator: Dr. Adani Azhoni (2021-2022)

Interaction of various environmental factors on the fracturing behaviour

and damage mechanism in rocks. Sponsored by DST-SERB under Startup Research Grant. Principal Investigator: Dr. Vinoth Srinivasan. (2021-2023)

New resilient breakwater for the safety of port and Harbour against Tsunami. Sponsored by the Ministry of Ports, Shipping and Waterways. Principal Investigator: Dr. Babloo Chaudhary (2022-2025)

Development of Microbial Biosurfactant for the remediation of selected NSAIDs. Sponsored by DST – SERB, New Delhi. Principal Investigator: Dr. C. P. Devatha (2022-2025)

Coastal reservoirs as a sustainable strategy for Water Security. SPARC Govt of India, Co-PI: Dr Sreevalsa Kolathayar (2019-22)

Impounding of River flood waters along Dakshina Kannada Coast: A sustainable strategy for water resource development. Sponsored by SERB under IMPRINT-2. Co-PI: Dr. Sreevalsa Kolathayar (2019-22)

Development of AI-based Prediction System Coupled with Ecological Mitigation Technologies for Landslide Prone Areas. Sponsored by DST TDP, Co-PI: Dr. Sreevalsa Kolathayar (2022-25)

Computation of Site-Specific Earthquake Parameters and Dynamic Analysis of Bhandardara Masonry Dam. Sponsored by Water Resources Department, Govt. of Maharashtra, PI: Dr. Sreevalsa Kolathayar (2022-24)

Influence of perforation in cold-formed steel compression member design. Sponsored by Craftsman Automation Limited, Coimbatore (CSR fund). PI: Dr. J Vijaya Vengadesh Kumar (2022-24)

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Information Security Education and awareness Phase-II-sponsored by DIT MCIT, PI: Dr. Alwyn Roshan Pais Co-
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PI: Dr. P. Santhi Thilagam, at the cost of 2.7 crore(Approx.), 2015-2023(October)

Speaker Recognition System for Kannada Language in Emotional Environment Sponsored by DST, PI: Dr. Shashidhar G Koolagudi at the cost of 37 Lakhs, 2019-2024

Restricted Proper Edge Colorings of Graphs sponsored by Mathematical Research Impact Centric Support (MATRICS), SERB, DSTPI: Dr. Manu Basavaraju, at the cost of 6.6 Lakhs, 2020-2023

Development of an Artificial Intelligence based System for Comprehensive Cerebral Arterial Stroke Imaging and Prognostication sponsored by DBT, PI: Dr. Jeny Rajan at the cost of 18 Lakhs, 2021-2023

Freelance Platform built on Block chain in any Educational Institute in India sponsored by NIK-KREC Endowment Fund, PI: Dr. Sourav Kanti Addya, Co. PI: Dr. Mohit P Tahiliani at the cost of 17.70 Lakhs, 2022-2023(06 months)

Establishment and Pay Roll Module sponsored by CSD, PI: Dr. Sourav Kanti Addya, CO-PI: Dr. Biju R Mohan, Dr. Anand Kumar M, Dr. Basavaraj Talawar at the cost of 39.72 Lakhs, 2022-2024

Logical Correctness for Batteryless Internet of Things., SERB, Bharat Sarkar, PI: Dr. Biswajit R. Bhowmik, at the cost of 20.01 Lakhs, 2022-2024

Automatic Early Detection of Lung Cancer from LDCT Images based in Deep Neural Networks sponsored by SERB, PI: Dr. Annappa B., Co.PI: Dr. Jeny Rajan, at the cost of 29.55Lakhs, 2023-2026

DEPARTMENT OF CHEMISTRY

Design and Development of Non-Enzymatic Biosensors for Dengue Virus (DENV) Sponsored by

International Multilateral Regional Cooperation Division (AISTDF) SERB, Department of Science and Technology. Principal Investigator: Prof. Badekai Ramachandra Bhat, Department of Chemistry, International collaborators are from Philippines Prof. Gil Nonato C. Santos (Co-PI) and Drunei Darussalam Minhaz Uddin Ahmed (Co-PI) at the cost of 48.29 lakhs. (11.06.2020 to 30.03.2023).

Development of low cost Haemodialysis cartridge supported by VGST Govt. of Karnataka at a cost of Rs 60 Lakhs March 2023. PI: Prof. Arun Isloor

Design and development of new lubricity improvers for ultra-low sulfur diesel sponsored by MRPL, India. Principal Investigator: Dr. Udaya Kumar D, Chemistry at the cost of Rs.12.88492 lakhs. (Period 16/09/2019 to 30/04/2022).

Design and Development of Moisture Resistant, Dopant-free Hole-transporting Materials for Perovskite Solar Cells sponsored by DST, India under ASEAN-India collaborative R&D scheme. Principal Investigator: Dr. Udaya Kumar D, Chemistry at the cost of Rs. 33.52 Lakhs. (Period 11/08/2021 to 10/08/2023).

Synthesis of Carbo- and Heterocycle Based Novel Hybrid Polycycles and their Applications sponsored by SERB, DST India under CORE Research Grant. Principal Investigator: Dr. Beneesh P.B, Chemistry at the cost of 34.9 Lakhs. (Period November 2021 to November 2024).

Novel catalytic conversion of chitin biomass to furanics and levulinates via 5-(acetoxy methyl) furfural for a shell biorefinery, research grant awarded by Department of Science and Technology (DST-SERB), India. Principal investigator: Dr. Saikat Dutta; Department of Chemistry at the cost of 23.00 L (December 2022- November 2025, 3 years).

Food Waste to hydrogen using Aqueous Phase Reforming sponsored by Maire Tecnimont S.p.A. Milan, Italy through Indian Subsidiary Tecnimont Private Limited, Mumbai, through Maire Tecnimont for research in Waste Management and Circular Economy NITK Surathkal-under NITK-KREC Endowment Fund. Principal investigator: Dr. Saikat Dutta; Chemistry at the cost of Rs. 6.8 L. (November 2021, 1 year)

Prawn shell-derived natural protein-based highly efficient UV protection coating for drug products, research grant awarded by Department of Science and Technology (DST-SERB), India. Co-principal investigator: Dr. Saikat Dutta; Department of Chemistry at the cost of 35.22 L (March 2022-Fabruary 2025, 3 years).

Multiscale Modelling of Membrane Active pH-Dependent Delivery Peptides sponsored by DST, India. Principal Investigator: Dr. Debashree Chakraborty, Chemistry at the cost of Rs. 18 lakhs. (Period 2022 to 2025).

Synthesis of azulene-porphyrin conjugates and their exploration as anti-Kasha-active fluorophores sponsored by DST-SERB (under Core-Research Grant Scheme). Principal investigator: Dr. Vijayendra S. Shetti; Chemistry, at the cost of Rs. 29.64764 lakhs. (Period: 30/11/2021 to 29/11/2024)

Olefin-Linked fluorescence enhanced Covalent organic framework by DST-SERB Principal investigator: Dr. Lakshmi Vellanki; Chemistry at the cost of Rs. Twenty six lakh seventy eight thousand. (Period 10/12/2021 to 09/12/2022)

DEPARTMENT ELECTRONICS AND COMMUNICATION ENGINEERING

"Design and Fabrication of Lab-on-Chip Hybrid Plasmonic Slot Waveguide based Nanograting Gas Sensor" sponsored by CSIR, Govt. of India,

Principal Investigator: Dr. Mandeep Singh; E&C Engg. (Co-PI: Dr. Umesh Kumar Tiwari, Principal Scientist, Micro and Nano Optics Centre, CSIR-Chandigarh), at the cost of Rs. 26.25 lakhs, (2023-2026).

"Development of low phase noise optoelectronic oscillator with phase compensation approach for radar application" sponsored by DRDO, Govt. of India, Principal Investigator: Dr. Mandeep Singh; E&C Engg., (Co-PI: Prof. M. Kulkarni; Co-PI at IIT (ISM) Dhanbad: Prof. Sanjeev Kumar Raghuvanshi;) at the cost of Rs. 30.046 lakhs, (2022-2025).

"Speech technologies in Indian languages" sponsored by MeitY, Govt. of India, Principal Investigator: Dr. Deepu Vijayaseenan; E&C Engg. (A Consortium project with IITM, IISc, IIT Goa and other HIEs) at the cost of Rs. 90.00 lakhs (NITK grant), (2022-2025).

"Design and Development of Automated Software Tools for Early Forest Fire Detection and Burn Severity Analysis from Multi-sensor Satellite Imagery Data" sponsored by IIRS(ISRO), Principal Investigator: Dr. Shyam Lal, Dr. Ragavendra B.S. and Dr. Aparna P.; E&C Engg., at the cost of Rs. 37.9 lakhs, (2022-2025).

"Nanophotonic porous-silicon based nanostructures for ultra-fast methanol sensing at room temperature" sponsored by SERB-DST Govt. of India, Principal Investigator: Dr. Mandeep Singh; E&C Engg., at the cost of Rs 35.58 lakhs, (2022-2025).

"Design, Development of Harmonically Tuned GaN HEMT Power Amplifier Over Broadband" sponsored by ISRO Govt of India, Principal Investigator: Dr. Sandeep Kumar; E&C Engg., at the cost of Rs. 14.16 lakhs, (2022-2024).

"Programmable photonic microwave signal generation using on-chip spectral shaper for satellite communication" sponsored by SAC-
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ISRO, Ahmedabad, Principal Investigator: Dr. Mandeep Singh; E&C Engg., at the cost of Rs. 22.51 lakhs, (2022-2024).

"Design and Development of Deep Learning based Automated Colon Cancer Detection System from H&E-stained CRC Histopathology Images" sponsored by Google Inc, USA, Principal Investigator: Dr. Shyam Lal; E&C Engg., at the cost of Rs.3.74 lakhs, (2022-2023).

"Metamaterial-Based Novel Antenna Technologies Reconfigurable Intelligent Reflective Surfaces for 6G Wireless Communications" sponsored by SERB International Research Experience (SIRE), Principal Investigator : Dr. K Krishnamoorthy; E&C Engg., at the cost of Rs. 19.22 lakhs, (2022-2023).

"Engineering novel label free multi-layer plasmonic nano-biosensor for DNA hybridization" sponsored by Department of Biotechnology (DBT), Ministry of Science and Technology, Govt. of India, Principal Investigator: Dr. Mandeep Singh; E&C Engg., at the cost of Rs. 57.49 lakhs, (2021 to 2026).

"An affordable therapeutic solution for rehabilitation of cerebral palsy children with crouch gait" sponsored by SERB - DST, Govt of India Principal Investigator: Dr. Krishnan, Dr. Deepu Vijayaseenan, Prof. Sumam David and Dr. Ranjith, jointly with KMC Mangalore at the cost of Rs. 59.75 lakhs, (2021-2024).

"Design and Development of Nanoscale Integrated System Along with Conformal Antenna as Capsule Prototype for Wireless Capsule Endoscopy" sponsored by DST under the Programme of BDTD, DST, Govt. of India, Principal Investigator: Dr. Sandeep Kumar; E&C Engg., at the cost of Rs. 74.00 lakhs, (2021-2024).

"Investigation of photonic generation of microwave arbitrary waveform for sensing applications" sponsored by

Manipal Academy of Higher Education, MIT – Manipal, Principal Investigator: Dr. Mandeep Singh; E&C Engg., at the cost of Rs. 6.00 lakhs, (2019-2022).

"Algorithm to Reduce Measurement Errors Due to Sea Surface Multipath and Sea Clutter-Funding" sponsored by Electronics and Radar Development Establishment(LRDE), Bangalore Principal Investigator: Dr. P Srihari; E&C Engg., at the cost of Rs. 9.44 lakhs, (2021-2022).

"Design and Development of Ultra-low power CMOS IC for Wireless Neural Monitoring System" sponsored by International Division, DST, Govt of India. Principal Investigator: Dr. Sandeep Kumar; E&C Engg., Jointly with Prof. Hanjung Song, Centre of Nano-Manufacturing, Inje University, Busan, South Korea. at the cost of Rs. 1 Crore 20 Lakh Rupees (India Budget: 40 Lakh and South Korea: 80.20 Lakh) (December 2020 to December 2023).

"Design and Development of GaN HEMT Based LNA for L5 and S-Band IRNSS Receiver" sponsored by SERB-DST, Govt. of India. Principal Investigator: Dr. Sandeep Kumar; E&C Engg., at the cost of Rs. 29.00 lakhs, (October 2020 to October 2023).

"Development of design essentials for Ga2O3 based FinFET for SOC in automotive applications" sponsored by SERB-DST, Govt. of India. Principal Investigator: Dr. Nikhil K. S.; E&C Engg., at the cost of Rs. 26.24 Lakhs, (October 2020 to October 2022).

"Development of Highly Conductive Ultrathin VS2 Crystals for High-Performance Flexible Supercapacitors" sponsored by SERB-DST, Govt. of India. Principal Investigator: Dr. Sushil Kumar Pandey; E&C Engg., at the cost of Rs.27.86 lakhs, (October 2020 to October 2023).

"Design and Development of Automated Kidney Cancer Detection System from H&E Stained Kidney Histopathological Images" sponsored by SERB-DST, Govt. of India. Principal Investigator: Dr. P. Srihari; E&C Engg., at the cost of Rs. 5.3 Lakhs, (2011 to continuing).

Investigator: Dr. Shyam Lal; E&C Engg, at the cost of Rs. 27.96 lakhs, (2019-2022).

SPARC Project: "Exploring Applications of Radiomics in Brain Tumor Assessment and Treatment" sponsored by MHRD, Principal Investigator: Prof. Sumam David; E&C Engg., (Indian Co-PI - Dr Deepu Vijayaseenan, Dr Girish Menon (KMC Manipal); International PI – Dr Mandava Pitchaiah, Dr Paul Litvak) jointly with Baylor College of Medicine, Houston, Texas at the cost of Rs 38.63 lakhs. (13th May 2019 to 13th May 2023).

IMPRINT-2 project, "Development of cost-effective Radiofrequency ablation system and magnetic hyperthermia equipment for thermal therapies of cancerous tumours" sponsored by MHRD, Principal Investigator: Dr. Ajay Kumar Yadav, Dr. PU Saxena, KMC Attavar, Manipal.; Dr. B. Satish Rao, MAHE; Dr. U. Shripathi Acharya, Dr. Laxminidhi T. at the cost of Rs. 48.94 lakhs, (2019-2022).

"Intel Embedded Initiative" sponsored by Intel Corporation. Principal Investigator: Prof. Sumam David S; E&C Engg., at the cost of Rs. 5.3 Lakhs, (2011 to continuing).

"Study and simulation of track detect before schemes for radar Role", sponsored by DRDO (RCI), Principal Investigator: Dr. P. Srihari; E&C Engg., at the cost of Rs. 6.49 Lakhs, (2020-22).

"Study of Optimal Pulse Compression Radar waveforms suitable for suppression of Sea and Ground Clutter" commissioned by Research Center Imarat (unit of DRDO) Principal Investigator: Dr. P. Srihari; E&C Engg., at the cost of Rs. 9.775 Lakhs.

DEPARTMENT ELECTRICAL AND ELECTRONICS ENGINEERING

Bio Signal Processing System for the development of human-machine

interaction sponsored by Ministry of Electronics & Information Technology, Meity, Government of India, PI: Dr Krishnan CMC, Rs. 25 Lakhs, 2019-2024.

Smart Electric Vehicle Supply Equipment with improve Reconfigurability, Economic, Availability and Performance (REAP), DST-SERB Core Research Grant, PI: Dr. B Dastagiri Reddy, Co PI: Prof. B V Perumal, Dr. Y Suresh, Dr. Vignesh V, Dr. Arun (Mech.), Rs. 60 Lakhs, 2021-2024.

An affordable therapeutic solution for rehabilitation of cerebral palsy children with crouch gait, DST-SERB Core Research Grant, PI: Dr. Krishnan C. M. C. (Dept. of E&E) Co PIs: Dr. Deepu Vijayasenan (Dept of E&C), Dr. Ranjith M (Dept. ME), Prof. Sumam David (Dept of E&C), Dr. Sheron Figarado (School of Electrical Sciences, IIT Goa), Prof. Unnikrishnan B (Department of Community Medicine, KMC Hospital Mangalore), at the cost of Rs. 60 Lakhs, 08/12/2021 to 08/11/2024.

Development of Integrated Health Monitoring Tools for Solar PV inverters, PI: Dr. Md. Waseem Ahmad, Rs. 20.57 Lakh, 2021-2023.

Design and Development of highly efficient and high voltage gain DC-DC converter for grid connected PV System, Sponsored by Ind Arka Energy Pvt. Ltd., Bangalore, PI: Dr. Vignesh Kumar V. Co-PI: Prof. B. Venkatesaperumal, Rs. 8.07 Lakhs, 2022-2024.

Extraction of Maximum Power Output from PV array using static reconfiguration scheme under non uniform irradiation conditions Sponsored by Vision Group of Science and Technology (VGST). PI: Dr. A. Karthikeyan Co-PI: Dr. Dattatraya N Gaonkar, Rs. 2.79 Lakhs, 2022.

Design and Development of Multi Input/Multi Output Power Converter Sponsored by Indian Space Research *Annual Report 2022-23*

Organization (ISRO), PI: Dr. A. Karthikeyan SAC Co-PI(s)/ SAC Mentor(s): Mrs. Trapti Katiyar, Scientist/Engineer-SG, Shri Amit Kumar, Scientist/Engineer-SE, Space Applications Centre, ISRO, Ahmadabad, Rs. 26.13 Lakh, 2022 - 2024.

Laboratory scale demonstration of a Kite based wind power system Sponsored by Science and Engineering Research Board (SERB), PI: Dr. A. Karthikeyan Co-PI: Dr. Yashwanth Kashyap, Dr. K. Manjunatha Sharma and Dr. Debabrata Karmakar, Rs. 51.05 Lakh, 2022 - 2025.

Design and Development of a Novel Universal Motor Drive cum Charging System with Advanced features sponsored by Core research Grant(CRG) exponential Technologies Scheme, PI: Dr. Prajof P. Co-PI: Dr. B. Dastagiri Reddy, Rs. 38.50 Lakh, 2022-2025.

Design & Development of portable electrical in situ coconut inflorescence sap concentrator for the production of coconut sugar sponsored by Promoting Academic Research Conversion to Enterprises (PACE) Scheme, PI: Dr. B. Venkatesaperumal, Rs. 51.14 Lakh, 2022.

Semi-active damoing using controllable orifice for four wheeler automobile sponsored by Science and Engineering Research Board (SERB), PI: Dr. Hemantha Kumar, Co-PI: Dr. Debashisha Jena, Dr, Ranjeet Kumar Sahu, at the cost of Rs. 28.18 Lakhs, 01/01/2022 to 01/01/2025.

Design and Development of Partial Power Processing Converter for Efficient Utilization of Solar PV System Sponsored by VGST Karnataka, PI: Dr. Md. Waseem Ahmad, Rs. 3 Lakh, March 2023.

Integrated Charger Inverter for Electric Vehicles Sponsored by Hella India Automotive Pvt. Ltd., Pune, PI: Dr. Prajof P., Dr. Dastagiri Reddy,

Rs.14.16 Lakhs, June 2022.

Investigations on Inertial Migration Dynamics of Aerosol Particles Sponsored by DST-SERB, PI: Dr. Ranjith M, Co-PI: Dr. Krishnan C.M.C., Rs. 24.03 Lakhs, 02.03.2023 to 01.02.2026.

Sophisticated Optimised DC-DC Converter for Charging Electric Vehicles Using Reliable GAN devices and Planar Magnetics Sponsored by Science and Engineering Research Board (SERB), Department of Science & Technology, Bharat Sarkar (GoI), PI: Dr. R. Kalpana, Rs. 30Lakhs, 2023-2026.

Solar PV based electric vehicle charge with V2G and G2V capability for net-zero emission e-mobility Sponsored by Centres of Innovative Science, Engineering and Education (CISEE), PI: Dr. B. Venkatesaperumal, Co-PI: Dr. V. Vigneshkumar, Rs. 30 Lakhs, 2023-2025.

DEPARTMENT OF INFORMATION TECHNOLOGY

ONGOING:

SERB POWER Grant for "Artificial intelligence-based modeling and assessment of Saltwater intrusion phenomenon". PI: Dr. Shrutilipi Bhattacharjee Co-PI: Dr. Sowmya Kamath S. Amount: Rs. 30 lakhs, Grantee: DST SERB, Govt. of India, Duration: 2022-25

COMPLETED:

Microsoft AI for Earth Grant for "Spatial Data Analytics for Environmental Modeling". PI: Dr. Sowmya Kamath S. Grantee: Microsoft Amount: US \$15,000, Duration: 2022-23.

DEPARTMENT MATHEMATICAL AND COMPUTATIONAL SCIENCES

Fractional regularization methods for solving inverse and ill-posed problems and their applications, National Board of Higher Mathematics (NBHM), No. 020111/17/2020 NBHM (R.P)/ R\& D II/8073, Ongoing, Principal Investigator: Prof. Santhosh George, Rs. 4,61,500.

A retinex inspired framework for intensity homogenization contrast upgradation and restoration of satellite and area images, Core Research Grant by SERB, Department of Science and Technology, Govt. of India, CRG/2020/000476., Ongoing, Principal Investigator: Prof. Santhosh George, Rs. 2299264\-

A study on non-linear ill-posed equations under weak conditions with emphasis on Parameter Identification Problem and Applications to Imaging, Core Research Grant by SERB, Department of Science and Technology, Govt. of India, No. CRG/2021/004776, Ongoing, Principal Investigator: Prof. Santhosh George, Rs.2123264\-

A Study of Frames for Operators in Hilbert Spaces, SERC, DST, Government of India, Co-Investigator: Dr. Sam Johnson P, MACS Department, 18.10.2022 to 17.10.2025.

DEPARTMENT MECHANICAL ENGINEERING

An Affordable Therapeutic Solution for Rehabilitation of Cerebral Palsy Children with Crouch Gait, PI: Dr. KRISHNAN C M C & Co-PI: Dr. RANJITH M, SERB, 59.75 lakhs, August 2021-2024.

Shock Response Studies on 3D Printed High Performance Fibre Reinforced Thermoplastic Composites and Sandwich Panel, PI: Dr. P. Jeyaraj & Co-PI: Dr. M R Doddamani, CARS-

DRDO, 49.94 lakhs, August 2022-2024.

Investigation of Laser Scan Strategy on Tensile and Microstructural Characteristics of Inconel 718 Fabricated by DMLS Process Cost-Effective Enhanced Insulating Foams for Cold Storage Application, PI: Dr. Mrityunjay Doddamani, ISHRAE, 30.62 lakhs, 2020-2023.

Laser-based Additive Manufacturing of Ni-based Superalloy Components: Advancing Repair and Enhancement Technologies Using LMD Technique - A Simulation and Experimental Validation, PI: Dr. Srikanth Bontha, ISRO, 26.4 lakhs, 2021-2023.

Development of Cost Effective Radiofrequency Ablation System and Magnetic Hyperthermia Equipment for Thermal Therapies of Cancerous Tumors, Dr. Ajay Kumar Yadav, Prof. Laxminidhi T, Prof. Sripathi U Acharya, Prof. B. S Rao (MAHE), Prof. P. U Saxena (KMC), SERB, 48.94 lakhs, 8/03/ 2019- 07/03/2022.

An Experimental and Theoretical Investigation on Narrow Thermal Hysteresis of Cu-Al-Be based SMA Actuator for Vibration Isolation, Prof. S.M. Murigendrappa & Dr. S Kattimani, SERB, 16 lakhs, 2022.

Investigation on Radiolucent Composite Sandwich Materials for Biomedical Imaging Systems under Hygrothermal Environment, Dr. S Kattimani, DST- ASEAN -India collaboration, 41 lakhs, 2020-2022.

An Investigation into the effects of Induced Helicity in the carotid bifurcated arteries on patient specific models, Dr. Anish S and Dr. Mrityunjay Doddamani, SERB, 16.15 lakhs, 26/2/2020 to 25/2/2023.

Improvement in the properties of Thermally Sprayed Hydroxyapatite Bio-Ceramic Coating reinforced with Nanostructured materials, Dr

Sudhakar C Jambagi, SERB, 38.4 lakhs, 18/3/2019 to 17/3/2022.

Ultrafine Grain refinement through Low Plasticity Burnishing on WAAM Mg alloy for Aerospace and Automotive Applications, Dr. A.S.S. BALAN, SYST-SEED, 16.09 lakhs, June 2020 to June 2023.

Experimental technique to induce Surface Grain Refinement through Laser Shock Peening on ECAP processed Mg. Alloy, Dr. H Shivananda Nayaka, SERB, 41.02 lakhs, May 2019 to May 2022.

Design and Testing of Robust, High Efficient, Low Polluting LPG Porous Burners for Household Applications., Dr. Parthasarathy P and Dr. Arun M, DST-SYST, 29.34 lakhs, 2020-2023.

Cost-Effective Enhanced Insulating Foams for Cold Storage Application, Dr. Mrityunjay Doddamani, ISHRAE, 30.62 lakhs, 2020-2023.

Development of Brushless DC (BLDC) Motors for an Automotive Power Window Application, PI: Dr. K V Gangadharan &Co-PI: Mr. Srinivas. M/s Aditya Auto, Dept. of Heavy Industries, 375 lakhs, 2020-2022.

Origins of Yielding in Polymer Electrolyte Membranes, KK Poornesh, SERB, 50 lakhs, 2019-2022.

Interface Characteristics of Membrane Electrode Assemblies, KK Poornesh, DST, 35 lakhs, 2018-2022.

Analytical and Numerical Investigations of Mixed Convection through Wire Mesh Porous Structure filled in a Channel, Dr. N. Gnanasekaran, DST-SERB, 21 lakhs, 2019-2022.

Particle Migration and Margination in Bidispersed Fluid Flow through Constricted Channels, DST-SERB, PI: Dr. Arun M & Co-PI: Dr. Jagadeeshbabu, 29.6 lakhs, 2021-2024.

Design, analysis and demonstration of the Porous Injector concept for throttling of Liquid Rocket Engine, ISRO, Dr. Parthasarathy P, 25 lakhs, 2021-2022.

Evaluation of macroscopic properties of ideal Porous Media for their use in Solar Reactors and Low Emission Combustors with help of experiments and CFD simulations, DST-SERB, Dr. Parthasarathy P, 15 lakhs, 2021-2023.

Additive Manufacturing of large size Metal Components with Wire & Powder Hybrid Direct Energy Deposition (WP-DED) Process, DST-SERB (Exponential Technologies), PI: Prof. Surya Kumar, IIT Hyderabad and Co-PI: Dr. Srikanth Bontha, 76.88 lakhs, 2021-2023.

Development of Biodegradable Microperforated Panel with nonuniform cross section through 3D Printing for Sound Absorption Application, CRG-DST, PI: Dr. P Jeyaraj and Co-PI: Dr. Mrityunjay Doddamani, 36 lakhs, January 2021-2024.

Investigation on Radiolucent Composite Sandwich Materials for Biomedical Imaging Systems under Hygrothermal Environment, AISTDF-SERB, PI: Dr. S. Kattimani, Co-PIs: Dr. N.T.Trung, Vietnam & Dr S. Mehdi, Malaysia, 37.08 lakhs, 2020-2022.

Additive manufacturing of novel polymers and composites at industrial scale, NSF, PI: Dr. Nikhil Gupta, New York University, NY, USA, Co-PIs: Dr. Mrityunjay Doddamani, Dr. P. Jeyaraj & Dr. Anadan Srinivasan.

Explore – Experiential Learning Reengineered, IITM Alumni Association (IITMAA), PI: Prof. Gangadharan K V, Co-PIs: Dr. Sheena (SOM) & Dr. Pruthviraj U (WROE), 24 lakhs, 2020-2024.

E Mobility, NITK+NITK Alumni, PI: Prof. Gangadharan K V and Co-PI: Dr. Pruthviraj U (WROE), 15 lakhs, 2020-2023.

Fight Against CoVID19 – Face Shield, ONGC, NMPT, OMPL, MRPL, Stratasys, PI: Prof. Gangadharan K V and Co-PI: Dr. Pruthviraj U (WROE), 44 lakhs, 2020-2022.

Design and development of Supercritical Carbon dioxide based Naturally Circulated Solar Thermal Collector, SERB, New Delhi, PI: Dr. Ajay Kumar Yadav, Co-PI: Dr. Ramesh M R, 23.81 lakhs, 2022-25.

Semi-active damping using controllable orifice for four wheeler Automobile, SERB, New Delhi, PI: Dr. Hemantha Kumar, CO-PI: Dr. Debashisha Jena and Dr. Ranjeet Kumar Sahu, 28.18 lakhs, 2022-25.

Investigations on Inertial Migration Dynamics of Aerosol Particles, PI: Dr. Ranjith M & Co-PI: Dr. Krishnan C M C, SERB, 25.2 lakhs, 2023-2026.

Synthesis of Intelligent Nanostructured Materials via a Plasma Source based Digital Nano-manufacturing Method and their Characterization, PI: Dr. Ranjeet Kumar Sahu, Co-PI: Dr. Hemantha Kumar & Dr. Debashisha Jena, SERB, 30.27 lakhs, 2023-2026.

Enhance Lubricant Performance in an Electrical Environment to overcome Electrical Bearing Failures in EV, PI: Dr. P S Suvin, Co-PI: Dr. Nikhil & Dr. Arun D, SERB, 13.5 lakhs, 2023-2026.

Design and Development of Hybrid-FRP Based Composites for Low-Cost and sustainable Mobile Shelter Houses, PI: Dr. Saurabh Chandraker & Co-PI: Dr. Ranjeet Sahu, SYST, 48.35 lakhs, 2023-2025.

Performance Evaluation of HVAF Sprayed NiAl Intermetallic based Composite Coatings for Aerospace Repair and Manufacturing Applications, PI: Dr. M R Ramesh & Co-PI: Dr. Sharnappa Joladarashi, SERB, 27 lakhs, 2023-2026.

Laser Directed Energy Deposition of Functionally Graded Cu-SS316L structures for Power Generation applications, PI: Dr. Srikanth Bontha & Co-PI: Dr. A S S Balan, SERB, 31.45 lakhs, 2023-2026.

Ionic and Physical Property Modulation in Solid-State Ion-Exchange Polymers, PI: Dr. Poornesh Kumar Koorata, SERB, 50 lakhs, 2023-2026.

Design of Concentrated Solar Receiver Tube using Inverse Thermo-elastic Analysis for Improved Efficiency and safe operation of Solar Power Plants, PI: Dr. Somasundaram & Co-PI: Dr. N. Gnanasekaran, SERB, 28 lakhs, 2023-2026.

Development of Ternary Mixture based Solar Absorption Refrigeration System, PI: Dr. A. Sathyabhama, VGST Karnataka, 15 lakhs, 2023-2025.

Technology Development and Engineering Performance Evaluation of Jute Geocells for Slope Stabilization and Pavement Applications, PI: Dr. Sreevalsa Kolathayar, Dept. of Civil Engg. NITK, Co-Pi: Dr. Somsekshara Rao Dept. of Mech. Engg. NITK, National Jute Board, Government of India, 47.98 lakhs, 2023-2026.

DEPARTMENT OF MINING ENGINEERING

Underground Mine Real Time Air Quality Monitoring and Assessment at Surface Control Room based on LoRa Sensors, IoT and Machine Learning Techniques, Sponsored by Vision Group on Science and Technology, Govt. of Karnataka, 2023-2025. (Sanction order no. KSTePS/VGST/K-FIST L1/GRD No.1047/2021-22/427 dated 15/02/2023: Rs. 15.00 lakhs), (PI: Dr. Sandi Kumar Reddy & CI: Dr. M. Aruna)

Scientific Study for Pit Stability of Subbarayanahalli Iron Ore Mine & Thimmappanagudi Iron Ore Mine,

Sponsored by M/s. Karnataka State Minerals Corporation Limited (A Govt. of Karnataka Undertaking), 2023-2025. (ongoing) (Sanction order no. KSMCL/Prod/NITK/Correspondence/2022-23/3046 dated 07/02/2023: Rs. 9.98 lakhs) (PI: Dr. Sandi Kumar Reddy & CI: Dr. M. Aruna)

Definition of delay sequencing in the blast designs using advance analytical techniques for optimization of blast fragmentation and improving mine economics in non-coal mines (2022-2024) (F. No: Met4-14/18/2022 Dt:06-07-2022 Rs. 42 lakhs jointly with CIMFR-Nagpur & Anna University-Chennai, Funded by: Ministry of Mines- Govt of India) .

DEPARTMENT OF METALLURGICAL & MATERIALS ENGINEERING

“Development of Cost Effective Magnet o-Rheological (MR) Fluid Damper in Two wheelers and Four Wheelers Automobile to Improve Ride Comfort and Stability”, sponsored by IMPRINT, Dr. Hemanth Kumar (PI) – Mech. Dept. and Dr. M. Rizwanur Rahman (Co-PI)

“Development of structural polymer composites from natural fiber/particulate reinforced materials”, sponsored by VGST, Govt. of Karnataka, Principal Investigator: Dr. Ravishankar K. S., Dept. of Met & Matls. Engg. at the cost of Rs.20 lakhs (Period: 2018)

“Synthesis of Silver Nanoparticles at laboratory scale and further scaling up to pilot scale at HZL”, sponsored by Hindusthan Zinc Limited Principal Investigator:Dr. M. Rizwanur Rahman, Dept. of Met & Matls. Engg. at the cost of Rs. 9.96 lakhs (2018).

“Development of Metallic nanoparticles-enhanced phase change Materials for thermal energy storage”, sponsored by VGST, Principal Investigator:Dr. M. Rizwanur Rahman,

Dept. of Met & Matls. Engg. at the cost of Rs.5 lakhs (2019).

“Development of Antimicrobial Active Surfaces for Health Care Applications”, sponsored by VGST, Govt. of Karnataka, Principal Investigator: Prof. Udaya Bhat K., Dept. of Met & Matls. Engg. at the cost of Rs.60 lakhs (2018-2021)

“Mitigating Dendrite Growth Using Engineered Electrolyte Layers for the Development of High Energy Density, Long Cycle Life Lithium Batteries”, sponsored by DST, Principal Investigator: Prof. S. Anandhan, Dept. of Met & Matls. Engg., at the cost of Rs.64.43 lakhs (Period: 2019-22).

"To Study the Effect of Interfacial Heat Flux during Waam on the Micro-Structural, Distortion and Mechanical Properties of Aluminium Alloy", sponsored by Science & Engineering Research Board (SERB), Mentor: Prof. K. Narayan Prabhu, Dept. of Met & Matls. Engg., at the cost of Rs.19,05,000/- (Duration: January 2021- December 2023).

“Prawn shell-derived natural protein – based highly efficient UV protection coating for drug products” sponsored by Science & Engineering Research Board (SERB), Principal Investigator: Dr. Saumen Mandal, Dept. of Met & Matls. Engg., at the cost of Rs.35,21,650/- (Duration:2022-2025).

“Surface Engineering of Biomedical Implants for the Prevention of MDR Infection” sponsored by DST-BRICS, Chief Investigator: Dr. Selvakumar Murugesan, Co-Investigator: Prof. Xu Liqun from Southwest University, P.R. China and B) Prof. Valentim A R Barao from University of Campinas, Brazil, Sanctioned Amount: Rs. 34,67,200/-, Duration: 2023-2026.

“Fabrication of 2-D Layered Nanosheets Strengthened Multifunctional Coatings for Bone Tissue Regeneration”, sponsored by

DST- Indo-Belarus (Bilateral Grant), Chief Investigator: Dr. Selvakumar Murugesan, Co-Investigator: Prof. Vasilenko Irina Vladimirovna from Belarusian State University, Belarus, Sanctioned Amount: Rs. 13,50,000/-, Duration: 2023-2026.

DEPARTMENT OF PHYSICS

Development and characterization of Advanced Solar cells (ongoing), Investigation of primordial origin of anomalies in cosmic microwave background, (ongoing, 2021 - 2023)

SCHOOL OF HUMANITIES, SOCIAL SCIENCES AND MANAGEMENT

Dr. Sheena

Research Project titled, “EXPLORE – EXPERIENTIAL LEARNING ONLINE REENGINEERING” sanctioned by PALS (Alumni Association of IIT Madras) on Experiential Learning through Virtual Labs by granting a financial assistance of Rs.24,00,000/- for a period of four years (2020-2024)

Dr. Pradyot Ranjan Jena and Dr.Ritanjali Majhi

From July 2021 till present- Impact of Soil Health Card Scheme on Productivity and Income of the Farmers: A Randomized Control Trials Experiment in Eastern India- (Responsibility) Principal Investigator, Funding agency- Asian Development Bank Institute (ADBI), Japan

From May 2019 till present- Adaptation of Climate Smart Agriculture Practices: Challenges and Opportunity for Indian Smallholder Farmers (Responsibility) Principal Investigator- SPARC Project- Ministry of HRD, Govt. of India

Dr.Pradyot Ranjan Jena

From April 2019 to July 2022- Moving towards Climate Resilient Agriculture: Understanding the Factors Influencing Adoption in India and Japan(Responsibility) Project leader from India- ICSSR-JSPS, a Indo-Japan joint research project

DEPARTMENT OF WATER RESOURCES AND OCEAN ENGINEERING

Design, analysis of development of hybrid offshore floating breakwater, Dr. D. Karmakar (PI) and Dr. Manu (Co-PI), Ministry of Ports, Shipping and Waterways, New Delhi, India, Rs 49.21 Lacs, 2021-2023

13.2 PROPOSED PLAN FOR RESEARCH

DEPARTMENT OF CHEMICAL ENGINEERING

New Labs/Equipment:-

SOEC Test Station

Target for sponsored R&D projects:-

SERB, DST Projects.

New areas of Research:-

Electrolysis/ Fuel Cells, CO Oxidation reactions, SOECs.

Institutions/organizations for future collaborations:-

IIT Hyderabad, NIT Warangal and MIT Manipal.

DEPARTMENT OF CHEMISTRY

PROPOSED PLAN OF RESERCH (IN NEXT YEARS)

Further research work in the field of Thermoelectrics, Photocatalysis, Supercapacitors, Nanofluids and Materials for energy and environmental applications, Fabrication of Hollow Fiber membranes for separation fluid & gas applications, Biomimetic organic reactions, Electroorganic Synthesis, C-

Annual Report 2022-23

H Functionalization Reactions, Multi component Reactions, Green hydrogen production, waste to fuel and hydrogen synthesis.

Institutions/organizations for future collaborations:-

Universatas Muhamadiaha
Palembang-Indonesia

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

New Labs/Equipment

Target for sponsored R&D projects

1. Voice Enabled EHR System with Automated Medicine Dispensing Robots and Scheduling System (Dr. Annappa)
2. TARE scheme of SERB, DST , GOI (Dr. Annappa)
3. ISRO Respond 2021 (Dr. Annappa)
4. Smart Clinical Decision Support System for Identification of Novel features from cancer Genomic Big Data Sets from Birmingham University, UK under VAJRA scheme of SERB. (Dr. Annappa)
5. Design and Prototype development of low power, wireless, intelligent digital Stethoscope under biomedical device and technology development of DST.(Dr. Annappa)
6. Development of Adrenaline auto-injector for patients with anaphylaxis under DST –BDTD (Dr. Shashidhar G. Koolagudi)
7. Character classification of Kannada inscription (Dr. Shashidhar G. Koolagudi)
8. Realization of Deterministic Network over Heterogeneous Communication Technologies and Develop Reliable Protocols for Internet of Things [REAP-IoT] (Dr. Mohit P. Tahiliani)
9. Park Smart: A Real-time parking solution for accidental cities under SERB (Dr. Sourav Kanti Addya)
10. Development of Searchable Encryption System for Secure Storage and Retrieval of Encrypted Documents from Cloud Server, SERB (Prof. P. Santhi Thilagam and Dr. Alwyn R. Pais)

New areas of Research:

Institutions/organizations for future collaborations

MoU: 01

1. Dr. Jeny Rajan, CSE Department, NITK-Surathkal and Dr. Santhosh Kannath, Additional Professor, Department of Imaging Sciences and Intervention Radiology, Sree Chitra Tirunal Institute for Medical Science & Technology, collaborated on a project titled "Development of Radiomics and Artificial Intelligence Augmented Imaging Biomarkers and Computer Aided Tool for Prediction of Stroke Evolution".

Future collaborations:

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

New Labs/Equipment:-

Four new laboratory facilities have been created viz-a-viz Wireless and Communication Networks Lab, Signal Processing and Machine Learning Lab, Microwave and Optical Communication Lab, and IC Design Lab.

Ultrathin Semiconductor Deposition Lab has been setup in April 2022.

10 Licences RFIC and MMIC nano manufacturing process design kit (PDK) Exemplar Library has been provided through Modelithics University Program for one year.

Target for Sponsored R&D projects:-

Projects from research organizations such as ISRO, DRDO and LRDE.

New Areas of Research:-

Bio-Mechancis

Institutions/organizations for future collaborations:-

Any institution/organization having impetus about realizing Make in India initiatives.

DEPARTMENT OF MATHEMATICAL & COMPUTATIONAL SCIENCES

Proposed Plan of Research (In Next years):

1. Applications of Frames in Numerical Methods;
2. Hyers-Ulam Stability for Unbounded Operators
3. Generalization of Domination as applicable to Networks, Machine Learning etc.
4. Large Graphs with emphasis on modelling Social networks, And other applications
5. Study of some problems related to Generalized Integrals.
6. Presently working on domination in graphs and its applications. It's planned to explore other variants of domination, both from theoretic and application perspective. Further, it's planned to extend the ongoing work on frame graphs and application of graphs to brain network analysis.
7. Iterative root problems in Baire one functions.
8. Numerical and machine learning algorithms for classical and fractional differential equations.
9. Mathematics of Data Science, Machine Learning etc.
10. Dominating Broadcast Labeling of Graphs, Algebraic Graph Theory and Spectral Graph Theory etc...
11. Security of IoT Network using Blockchain.

New Labs/Equipment: Nil

Target for sponsored R&D Projects:

1. To write projects for applications of Large graphs in Social network Analysis.
2. In the process of applying for R&D projects

Institutions/organizations for future Collaborations:

Collaborative work on Banach lattices, University of Alberta, Canada (Prof. Vladimir Troitsky).

DEPARTMENT OF MECHANICAL ENGINEERING

New Labs/Equipment: -

Smoke Meter
Digital Height Gauge
M112 Steel Gauge Block
Tool and Cutter Grinder
Shaping Machine
Loading Frame 5 TON
Load Cell 500 N, 1000 N, 5000 N
Stress Freezing Oven
Hydraulic Jacks 500 N, 1000 N, 5000
Static and Dynamic Balancing
Strain Gauge Data Logger and Display
E-Vehicle Test Rig
Boundary Layer Measurement Test Rig
Automatic Coating Machine
Solidification Simulation Laboratory.
Centre for Modeling and Simulation.

Target for Sponsored R&D Projects:

Biomedical Engineering
Biomachining
4D printing

New areas of Research:

Wire Arc Additive Manufacturing and 4D printing
Alternative fuels for automobiles
Energy Harvesting and Thermo
Magnetic materials
Nanotribology and sustainable lubricants
Metal Casting and Metal Forming
Computational Methods and Thermal Energy Storage
Computational modelling of microfluidic systems
Assistive Technology
Additive Friction Stir Deposition
Low speed aerodynamics
Computational Vibro-Acoustics
Solar thermal and biomass energy conversion and utilization

Smart Composite Structures
4D Printing of Polymers, Cyber security in Additive Manufacturing, Machine Learning
Battery Thermal Management

DEPARTMENT OF MINING ENGINEERING

Proposed Plan of Research (in next year)

Application of IoT, AI and Machine Learning in mining industry.

New Labs/Equipment:

Mine Health and Safety Laboratory:

Personal dust monitors, High volume sampler, Human vibration analyzer, Multigas detectors, Personal noise monitors, Frequency analyzer cum vibration analyzer, Ground vibration analyzers, Muscle Oxygen Meter

Target for sponsored R&D Projects:

1. Development of embedded control system, IoT and Machine learning based Microwave assisted hydrogen reduction for beneficiation of low grade iron ores - submitted to SERB, DST, New Delhi (2023)
2. "Identification, Evaluation and Prediction of Slope Stability for Landslide Prone Regions in Kodagu District, Karnataka" - Submitted to National Disaster Management Authority, New Delhi
3. "An Epidemiological Investigation of the Effect of Coal Dust on Coal Miners' Pneumoconiosis"- Submitted to IMPRESS, ICSSR, New Delhi
4. "Mapping and Modelling of Surface Coal Mine Fire Using Remote Sensing and GIS"-Submitted to ISRO.
5. "Role of Safety Leading Indicators and Individual Characteristics of Workers on Occupational Injuries in Coal Mines-A Machine Learning Approach"- Submitted to Scheme for Promotion of Academic and Research Collaboration (SPARC), MoE, Government of India (Collaborated

research work with Curtin university Australia).

6. Development of India Specific Scientific Framework for Slope Stability Risk Assessment and Management in Opencast Mines.
7. Development of a Classification System for the Slope Stability Assessment of Opencast Mines in Southern India.
8. Investigation on the utilization of Gold Mine Tailings M/s. The Hutti Gold Mine Company Limited.

New Areas of Research:

- Occupational Ergonomics
- Safety Data Analytics

Institutions/ organizations for future collaborations:

- Peoples Friendship University of Russia, Moscow
- Curtin University, Australia

DEPARTMENT OF METALLURGICAL & MATERIALS ENGINEERING

New Labs/Equipment:

1. Surface Engineering Laboratory
2. Facility for assessment of health of quenchant
3. High performance workstation
4. Intel Fortran compilers
5. Functional Biomaterials
6. Floating one Crystal Growth and Characterization Lab
7. High temperature corrosion degradation

Target for Sponsored R&D projects:

1. To get at least one sponsored R&D project per year
2. DST Start up grant
3. BARC Young scientist start-up grant
4. Healthcare
5. DST- Core Grant (Applied)
6. ISRO/DRDO,

Dept. of Atomic energy

New Areas of Research:

1. Surface Engg.
2. Smart Materials
3. Data base on liquid Quenchants
4. Wetting/ dewetting of liquids
5. Hydrodynamic stability
6. Shape Memory Alloys
7. Tissue Engineering
8. Strongly correlated system, Multiferroic single crystal
9. Coating for very temperature application
10. Intergranular Stress corrosion cracking (IG-SCC) at high temperature and pressure of materials

Institutions/organizations for future collaborations

1. Indira Gandhi Centre for atomic Research, Kalpakkam
2. Indian Institute of Science, Bangalore
3. National Aeronautics Ltd., Bangalore
4. Hindustan Aeronautics Ltd., Bangalore
5. Jindal South West, Vijayanagar
6. International Federation of Heat Treatment and Surface Engineering (IFHTSE), UK
7. Kennametal Ltd., Bangalore
8. Thermet Solutions (P) Ltd., Bangalore
9. Tata Institute of Fundamental Research, Hyderabad
10. IIT Hyderabad
11. University of Bayreuth, Germany
- George Mason University, USA
- Purdue University, USA
12. Physics Department, Jamia Millia University
13. DIAT, IIT Bombay
14. BARC, IGCAR

TECHNICAL PAPERS PUBLISHED IN REFEREED JOURNALS**Table: List of publications during the period under report**

Sl. No.	Department	International Journal	National Journal	International Conference	National Conference
1	Chemical Engineering	45	1	7	0
2	Civil Engineering	26	1	9	3
3	Computer Science and Engineering	38	0	57	0
4	Chemistry	27	0	5	3
5	Electrical & Electronics Engineering	35	0	29	0
6	Department of Electronics & Communication Engineering	64	0	26	1
7	Information Technology	27	0	59	0
8	Mathematical and Computational Sciences	60	0	7	0
9	Mechanical Engineering	193	0	4	0
10	Mining Engineering	15	3	18	3
11	Department of Metallurgical & Materials Engineering	17	1	13	3
12	School Of Humanities, Social Sciences And Management	28	2	18	3
13	Physics	29	0	9	3
14	Department of Water Resources and Ocean Engineering	26	3	14	0
	Total	630	11	275	19

INTERNATIONAL JOURNAL :-

DEPARTMENT OF CHEMICAL ENGINEERING

1. Soumya Koippully Manikandan, Dimitrios A. Giannakoudakis, Jovana R Prekodravac, Vaishakh Nair and Juan Carlos Colmenares, Role of Catalyst Supports in Biocatalysis, Journal of Chemical Technology and Biotechnology, 2022, doi.org/10.1002/jctb.7177
2. Soumya Koippully Manikandan and Vaishakh Nair, Pseudomonas stutzeri Immobilized Sawdust Biochar for Nickel Ion Removal, Catalysts, 2022, 12, 1495, doi.org/10.3390/catal12121495.
3. Soumya Koippully Manikandan, Pratyasha Pallavi, Shetty K. B. Sujatha, Debalina Bhattacharjee, Dimitrios A. Giannakoudakis, Ioannis A. Katsoyiannis and Vaishakh Nair, Effective usage of biochar and microorganism for removal of heavy metal ions and pesticides, Molecules, 2023, doi.org/10.3390/molecules28020719
4. Amit Kumar Singh, Dimitrios A. Giannakoudakis, Michael Arkas, Konstantinos S. Triantafyllidis and Vaishakh Nair, Composites of Lignin-based Biochar with BiOCl for photocatalytic water treatment: RSM studies for process optimization, Nanomaterials, 2023, doi.org/10.3390/nano13040735.
5. Soumya Koippully Manikandan and Vaishakh Nair, Dual-role of coconut shell biochar as a soil enhancer and catalyst support in bioremediation, Biomass Conversion and Biorefinery, 2023, doi.org/10.1007/s13399-023-04079-y.
6. Anuradha, Soumya Koippully Manikandan and Vaishakh Nair, Application of box-behnken design in optimization of the Okra (*Abelmoschus esculentus* L.) plant growth in loamy sand soil, Journal of Soil Science and Plant Nutrition, 2023, doi.org/10.1007/s42729-023-01219-1
7. Shwetha Karanth; Regupathi Iyyaswami; Biosurfactant Based Reverse Micellar Extraction of Lactoperoxidase from Whey: Exploitation of Rhamnolipid Characteristics for Back Extraction, Journal of Separation Science and Technology, DOI: <https://doi.org/10.1080/01496395.2023.2189056>, March 2023
8. Shwetha Karanth; Regupathi Iyyaswami (2022) Lactoperoxidase partitioning from whey using the reverse micelles of non-ionic/ionic mixed surfactants: Improvement of back extraction, J Food Process Preserv, DOI: <https://doi.org/10.1111/jfpp.17212>, Sep 2022.
9. SennaMukhi; MS Rukmini; Poornima Ajay Manjrekar, Regupathi Iyyaswami, H Sindhu (2022); Assessment of heavy metals in food and drug packaging materials; F1000Research, 11:648 DOI: 10.12688/f1000research.121473.1, June 2022
10. Sunaina S. Patil, Hari Prasad Dasari "An investigation on copper-loaded ceria-praseodymium catalysts for soot oxidation activity and its kinetics Brazilian Journal of Chemical Engineering, March 2023 (In Press) <https://doi.org/10.1007/s43153-023-00312-3>
11. Shourya, A., Dasari, H.P. Manganese doped Ceria ($Ce_{1-x}Mn_xO_{2-δ}$ ($x=0-0.3$)) catalysts synthesized by EDTA-Citrate method for soot oxidation activity. Chem. Pap. 76, 7095-7110 (2022). <https://doi.org/10.1007/s11696-022-02386-8>
12. Srijith, Lakhanlal, Ashmita Das, Hari Prasad Dasari, M.B. Saidutta "Electrical conductivity studies on LAMOX based electrolyte materials for solid oxide fuel cells Ceramics International, 48, (19), Part B, 1 October 2022, 29229-29237 <https://doi.org/10.1016/j.ceramint.2022.05.198>
13. Harsha Thaira, Ritu Raval, Keyur Raval, "Adsorptive Bioprocess Improves Yield of Melanin from

- Pseudomonas stutzeri*”, Journal of visualized experiments: JoVE, DOI: 10.3791/63339,
14. Dhakshanya Predheepan, Akshatha Daddangadi, Shubhashree Uppangala, Sindhura Lakshmi Koulmane Laxminarayana, Keyur Raval, Guruprasad Kalthur, Borut Kovačič, Satish Kumar Adiga, “Experimentally induced hyperglycemia in prepubertal phase impairs oocyte quality and functionality in adult mice”, *Endocrinology*, <https://doi.org/10.1210/endo/c121>, Volume 163, Issue 9
 15. Arun Kumar Subramani, Ritu Raval, Subramaniam Sundareshan, Rashmi Sivasengh, Keyur Raval, “A marine chitinase from *Bacillus aryabhatai* with antifungal activity and broad specificity toward crystalline chitin degradation”, *Preparative Biochemistry & Biotechnology*, <https://doi.org/10.1080/10826068.2022.2033994>, Volume 52, 2022 - Issue 10
 16. Vishnupriya Govindaraj, Arun Kumar Subramani, Ramya Gopalakrishnan, Se-Kwon Kim, Ritu Raval, Keyur Raval, “Bioethanol: A New Synergy between Marine Chitinases from *Bacillus haynesii* and Ethanol Production by *Mucor circinelloides*”, *Fermentation*, <https://doi.org/10.3390/fermentation9010040>, VOL 9, 2022
 17. Chutikarn Kapcum, Kannika Pasada, Pearly Kantiwong, Buraporn Sroysang, Jiratchaya Phiwtawee, Manop Suphantharika, Prasanna D. Belur, Esperanza Maribel G. Agoo, Jose Isagani Belen Janairo & Rungtiwa Wongsagonsup.(2022). Effects of different cooking methods on chemical compositions, in vitro starch digestibility and antioxidant activity of taro (*Colocasia esculenta*) corms, *International Journal of Food Science and Technology*, 57, 5144–5154. DOI:10.1111/ijfs.15823.
 18. M.D. Dunn, P.D. Belur and A.P. Malan (2022). Development of cost-effective media for the in vitro liquid culture of entomopathogenic nematodes, *Nematology*, 0, 1-13. DOI: 10.1163/15685411-bja10166
 19. Nishanthini Thangavelu, Priyanka Hugar and Prasanna D. Belur (2022) Production, purification and characterization of extracellular tannase from a newly isolated yeast, *Geotrichum cucujoidarum*, *Journal of Pure and Applied Microbiology*. 16(4), 2557-2567. DOI: 10.22207/JPAM.16.4.22
 20. Vaisali Chandrasekar, Selva Sudha Arunachalam, Haritha Hari, Apurva Shinkar, Prasanna D. Belur, Regupathi Iyyaswami.(2022). Probing the synergistic effects of rutin and rutin ester on the oxidative stability of sardine oil, *Journal of Food Science and Technology*. 59, 4198–4209. DOI: 10.1007/s13197-022-05473-6
 21. Sumit Kumar Mishra, Prasanna D. Belur, Regupathi Iyyaswami (2022). Comparison of efficacy of various natural and synthetic antioxidants in stabilizing the fish oil, *Journal of Food Processing and Preservation*, 46 (11), 1-7. DOI: 10.1111/jfpp.16970
 22. Kulkarni, R.M., Shetty, K.Vidya & Srinikethan, G (2022). Biosorption study on Ni(II) and Cd(II) removal in a packed bed column using brewery sludge pellets. *Biomass Conv. Bioref.* (2022). <https://doi.org/10.1007/s13399-022-03623-6>
 23. Mavinkattimath, R.G., Vidya Shetty Kodialbail, & Srinikethan, G. Continuous fixed-bed adsorption of reactive azo dye on activated red mud for wastewater treatment-Evaluation of column dynamics and design parameters. *Environ Sci Pollut Res* (2023). <https://doi.org/10.1007/s11356-023-26210-2>
 24. Shankamma Kalikeri, Vidya Shetty Kodialbail (2023), Visible light active Bismuth ferrite embedded TiO₂ nanocomposite structures for dye mineralization by photocatalysis - A strategy to harness solar energy for remediation of water contaminated with mixture of dyes, *Surfaces and Interfaces*, 36, 102492. <https://doi.org/10.1016/j.surfin.2022.102492>

25. Deepthi Susanna, Raj Mohan Balakrishnan.*, Jagadeesh Babu Ponnann Ettiappan (2022) "Comprehensive insight into the extract optimization, phytochemical profiling, and biological evaluation of the medicinal plant *Nothapodytes foetida*" *Biocatalysis and Agricultural Biotechnology* DOI: 10.1016/j.bcab.2022.102365
26. Tarekegn, Mekonnen, Balakrishnan Raj Mohan, Hussien Ahmed, Hiruy Andualem Maanyam, Hema. (2022) "Nano-Clay and Iron Impregnated Clay Nanocomposite for Cu²⁺ and Pb²⁺ Ions Removal from Aqueous Solutions." *Air, Soil and Water Research*. 15. 1-18. 10.1177/11786221221094037.
27. Woldeamanuel, Alemayehu & Tarekegn, Mekonnen & Balakrishnan, Raj Mohan. (2022). "Production and Application of Organic Waste Compost for Urban Agriculture in Emerging Cities." 16. 39-47.
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29. Ashraf Ali, B. & Bhasme, M. (2022) "Computational Investigation of Hydrodynamics, Flow Regimes and Bubble Size Distribution in an Airlift Reactor". *Chemical Engineering Communications*, DOI: 10.1080/00986445.2022.2075740
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31. Dadi V Suriapparao, B. Rajasekhar Reddy, Chinta Sankar Rao, Lakshman Rao Jeeru and Tanneru Hemanth Kumar, *Prosopis juliflora* valorization via microwave-assisted pyrolysis: Optimization of reaction parameters using machine learning analysis, *Journal of Analytical and Applied Pyrolysis*, 169, 105811, (2023), doi:<https://doi.org/10.1016/j.jaap.2022.105811>
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35. Dadi V. Suriapparao, Veluru Sridevi, Potnuri Ramesh, Chinta Sankar Rao, M. Tukarambai, Dinesh Kamireddi, Ribhu Gautam, Swapnil A. Dharaskar, Kocherlakota Pritam, Synthesis of sustainable chemicals from waste tea powder and Polystyrene via Microwave-Assisted in-situ catalytic Co-Pyrolysis: Analysis of pyrolysis using experimental and modeling approaches, *Bioresource Technology*, 362, 127813, 2022, <https://doi.org/10.1016/j.biortech.2022.127813>

36. Avinash Terapalli, Dinesh Kamireddi, Veluru Sridevi, M. Tukarambai, Dadi V. Suriapparao, Chinta Sankar Rao, Ribhu Gautam, Prerak R. Modi, Microwave-assisted in-situ catalytic pyrolysis of polystyrene: Analysis of product formation and energy consumption using machine learning approach, *Process Safety and Environmental Protection*, 166, 57 - 67, 2022, <https://doi.org/10.1016/j.psep.2022.08.016>
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38. Veluru Sridevi, Dadi V. Suriapparao, M. Tukarambai, Avinash Terapalli, Potnuri Ramesh, Chinta Sankar Rao, Ribhu Gautam, J.V. Moorthy, C. Suresh Kumar, Understanding of synergy in non-isothermal microwave-assisted in-situ catalytic co-pyrolysis of rice husk and polystyrene waste mixtures, *Bioresource Technology*, 360, 127589, 2022, <https://doi.org/10.1016/j.biortech.2022.127589>
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1. Anupriya James, Manojbabu A, John D Rodney, Sindhur U Joshi, and N.K Udayashanakar, $LaFe_{1-x}Co_xO_3$ (X=0, 0.01): a photo-Fenton catalyst for the degradation of organic pollutants under visible light irradiation, ICFME, IIT Indore, December 14-16, 2022
2. Sindhur Joshi and N. K. Udayashankar , Observation of Electrical Threshold Switching behavior and thermal crystallization in bulk $Se_{86-x}Te_{14}Sn_x$ chalcogenide glasses, International Conference on Functional Material and Applied Physics, 14-15th October, 2022, Online.
3. Nishita Pawar and N.K.Udayashankar , A novel technique for large-scale production of Porous Anodic Alumina(PAA) membrane, International conference on Recent Advancement in Materail and its
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applications (ICRAMSA'23), 11th and 12th January 2023, Mannar Thirumali Naiker College, Madurai, Tamilnadu

4. Rashmi I, H.D. Shashikala, Influence of BaO addition on density and refractive Index of $50P_2O_5-xB_2O_3-(50-x)BaO$ glass, ICAGGC 2022, CGCRI Kolkata, August 23-25
5. Vasundhara Raghuvanshi, H.D. Shashikala Density and Refractive index variation of CaF_2 added borosilicate glass, ICAGGC 2022, CGCRI Kolkata, August 23-25
6. Akshay prakash hegde, Dr.H.S. Nagaraja, Lakshmi sagar, Mukesh P, Aravind kumar , Porous $Fe@S-gC_3N_4$ for durable hydrogen evolution electrocatalyst, Recent advancement in material science ans it's applications, 11th and 12th January 2023
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8. Deepak Vaid, Devadharsini Suresh, Coherent States and Particle Scattering in Loop Quantum Gravity, Loops '22, ENS de Lyon, Lyon, France, Jul 18 - Jul 22, 2022
9. Deepak Vaid , Lorentz Invariance, Scattering Amplitudes and Subsystem Codes, Current Challenges in Black Hole Physics and Cosmology, Yukawa Institute for Theoretical Physics (YITP), Kyoto University, Jun 20 - Jul 1, 2022 (Online)

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 4. Datta, K. and Jena, P. R. (2022). A Systematic Review on Climate Adaptation and Mitigation through Green Climate Fund (GCF), International Conference on Shaping the Future of Management Education for Sustainable Emerging Economies, IIT Roorkee
 5. Prof. Shashikantha Koudur Joseph, Sunu Rose and Shashikantha Koudur. “Colonial Past and Cataclysmic Future: Queer Environments of the Anthropocene”, 19th Triennial ACLALS Conference – Ruptured Commons, Toronto, Canada, 11-15 July 2022 Dr. S. Pavan Kumar
 6. Saraf, H. S., & Kumar, S. P. (2023). Engineering education for sustainable development: Bibliometric analysis. *Journal of Engineering Education Transformations*, Tenth International Conference on Transformations in Engineering Education (ICTIEE 2023) organized by IUCEE, held during 5th – 8th January 2023.
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 9. T.M, Rofin., Raju, Sarin., Kumar, S. Pavan., MN, Islam (2022). A Game Theory Analytics for Intelligent Technology Developments for Robust Supply Chain Management. International conference on Industrial engineering and Operations management organized by IEOM International, held during 7th – 10th March 2022.
 10. **Bhat, Savita**, “Determinants of CSR investments on Technology Incubators in India”, 15th Annual International Conference of Knowledge Forum, New Delhi, India, December 16-17, 2022.
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 13. S.Prabhu,R.Majhi, Determinants of Consumers’ Behavioural Intention Towards Formal Recycling of Obsolete Mobile Phones: An Evidence from Karnataka State, India, 2nd Pritam Singh Memorial (PRISM) Conference, Indian Institute of Management Nagpur, November 17-19, 2022.
 14. Prathvi Thumbe, Narasimha, Pradyot Ranjan Jena and Ritanjali Majhi(2022), Presented paper on Factors of Digital Transformation in Indian Maritime Sector Post Covid-19 Era. 20th AIMS International Conference on Management, Indian Institute of Management Kozhikode

- (IIMK) & Association of Indian Management Scholars International, Houston, USA, December 28-31, 2022,
- Prathvi Thumbe, Narasimha, Pradyot Ranjan Jena and Ritanjali Majhi (2023), Presented paper on Measuring the impact of Indian major seaports on environment & effectiveness of remediation towards port environmental pollution at ICBDS – 2023 (International Conference on Business, Digitalization, and Sustainability, UPES Dehradun Uttarakhand, India. February 2-4, 2023.
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 - Prathvi Thumbe, Narasimha, Pradyot Ranjan Jena and Ritanjali Majhi(2023),Presented paper on Intermodal service supply chain and logistics performance of major seaports in India, International Conference: Emerging Trends in Operations and Analytics (ICETOA_2023), TAPMI Manipal. March 17-19, 2023.
 - Sadhvi G,R.Majhi,” Is the pandemic the Sole Factor Driving India’s Diminishing Health Indicators – A case of Childhood Anaemia?” 2nd National Conclave on Public Health Nutrition: Measuring progress towards achieving Sustainable Development Goals (PHN 2022) , NIT Rourkela, December 16th and 17th, 2022.
 - Yadav, P.P., Shetty, A., Raghavendra, B.S. and Narasimhadhan, A.V., 2022, July. Gradient Correlation Incorporated Similarity Measures in Matching Spectral Signatures. In *IGARSS 2022-2022 IEEE Annual Report 2022-23 International Geoscience and Remote Sensing Symposium* (pp. 3199-3202). IEEE.
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 - Deepa C, Amba Shetty, Narasimhadhan AV, “Semi-supervised framework for automated mineral mapping using Generative Adversarial Networks”, American Geophysical Union (AGU) Fall meeting, Dec 12-16, 2022, Chicago, USA.
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 - Krishnaraj, A., and Honnasiddaiah, R. (2022). “Remote sensing and machine learning based framework for the assessment of spatio - temporal water quality in the Middle Ganga Basin.” *Environmental Science and Pollution Research*, (0123456789).
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10. Sahaj K. V., and T. Nasar “Effect of porous baffles on sloshing dynamics placed at 1/3 and 21/3 locations in a sway excited rectangular tank, 8th Asian conference on mechanics of functional materials and structures (ACMFMS 2022), 11th to 14th December 2022, IIT Guwahati, Assam, India.
11. Shaik Salma, Aishwarya V, B M Dodamani, “ANALYSIS OF SAR TEMPORAL BACKSCATTERING VARIATION FOR DIFFERENT CROPS USING SENTINEL-1A DATA”, Application of Smart Technologies for Achieving Sustainable Agriculture, Proceedings of the 13TH International Conference on Application of Information Technology in Agriculture Asia-pacific Region, Nov 24-26, 2022.
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13. Yashas K., K. Varija, Accuracy Assessment of Land Cover Classification and Change Detection using Remote Sensing and GIS." Conference: International conference on Civil Engineering Trends and Challenges for Sustainability (CTCS-2021), Nitte, Karkala Taluk, Udupi - 574110, Karnataka, India. July 2022.
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DEPARTMENT OF CIVIL ENGINEERING

1. Rishab Kumar and Mithun Mohan. “Impact of Leading Vehicles of the Queue on Saturation Flow at Signalized Intersections”. 4th National Conference on Recent Advances in Traffic Engineering (RATE 2022) at SVNIT Surat, 4-5 November 2022.
2. Mahima S Rao and Sridhar, G, (2022). Comparative Study of Analytical and Numerical Modelling of Bearing Pressure of Shallow. Indian Geotechnical Conference- Kochi.
3. Annapurna Basayya Balulmath, Sridhar, G, and Saranya P (2022). A Critical Review on Potential Use of Waste Foundry Sand in Geotechnical and Pavement Applications. Indian Geotechnical Conference- Kochi.

DEPARTMENT OF CHEMISTRY

1. Kalinga H Nayak, Rasmi Bhaskaran P, and Beneesh P.B. (2023). “Aerobic oxidative benzylation of olefins through Biomimetic approach.” Oral presentation, National Conference on Recent Advances in Chemical Sciences (NCRACS-2023) held at Department of Studies and Research in Organic Chemistry Tumkur University, Tumakuru on 28th March 2023.
2. Kalinga H Nayak, Rasmi Bhaskaran P, and Beneesh P.B. (2023). “Dehydrogenative C-O Bond formation via Biomimetic aerobic oxidation approach.” Oral presentation, National Conference Frontier in Chemical Sciences (FCS-2023) held at the University of Calicut, Calicut on 01-03th February 2023.
3. Mariswamy K. Sreelekha, Rasmi Bhaskaran P, and Beneesh P.B. (2022). “Synthesis of 1,3,5-/1,3,4-trisubstituted Pyrazoles from Activated olefins and Aza-enamines via [3+2] Annulation Reactions”. Oral

presentation, National Seminar on Neoteric Advances in Chemical Sciences-NACS 2022 held at University of Kerala, Kariavattom Campus, Thiruvananthapuram on 15 & 16th December 2022

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

1. Aboobacker, S., Verma, A., Vijayasenan, D., (...), Suresh, P.K., Sreeram, S., "Semantic Segmentation on Low Resolution Cytology Images of Pleural and Peritoneal Effusion", 2022 National Conference on Communications, NCC, pp. 82-87, May 2022.

DEPARTMENT OF MINING ENGINEERING

1. Ram Chandar, K., and Madhusudhana, K., 2022. Slope Stability Analysis of An Iron Ore Mine, Proc. Of National Mining Conclave-2022, held at IISc- Bangalore, 12-13 Aug. 2022.
2. Ram Chandar, K., Umesh, M,S, and Gyaneswar, K., 2022. Protection of Structures from Blasting Operations of a Limestone Mine Vis- A Vis Assessment of Blast Performance. Proc. of National Mining Conclave-2022, held at IISc- Bangalore, 12-13 Aug. 2022.
3. Ram Chandar, K. 2022. Mine Planning Vs Slope Stability Analysis. Proc. National Seminar on Technological Developments in Coal Mining Industry for a Sustained Growth, MEAI- Singareni Chapter, Kothagudem, 19th Nov. 2022.

DEPARTMENT OF METALLURGICAL & MATERIALS ENGINEERING

1. Kunal Bhalchandra Bhole, Fredy James J, S.B. Arya "CMAS Hot Corrosion behaviour of Al₂O₃ + Sm₂SrAl₂O₇ composite thermal barrier coatings" at 1st National Thermal Spray Conference (NTSC), Jodhpur, India, 18-19, February 2023.

2. Harsha G. Patil, Selvakumar Murugesan, S. Anandhan, Archana Rajendran, Dr. Nibedita Lenka. Poster presentation on "Strontium Doped Hydroxyapatite Nanorods for Bone Tissue Engineering Applications" at National Conference on New Developments in Polymeric Materials, March 2 to 3, 2023, Thiruvananthapuram.
3. Govind S. Ekbote, Mohammed Khalifa, S. Anandhan, "Enhanced Piezoelectric and Triboelectric Performance of Mica Nanosheet Infused Electrospun PVDF Nanofiber -Based Energy Harvestors" National Conference on New Development in Polymeric Materials, SPSI Thiruvananthapuram Chapter, 2023 Thiruvananthapuram, Kerala, India.

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1. Presented paper on Sustainable Finance A New Perspective: A Systematic Review For Future Research at SFME International Conference 2022, jointly organized by the Department of Management Studies IIT Roorkee and Arizona State University, USA, from 20th November to 22nd November 2022.
2. Presented paper on ESG investment and Sustainability Reporting: A Systematic review for future research at INDAM 2023, organized by SBM-NMIMS Mumbai from 6th January to 8th January 2023.
3. Dhishna P co-presented a paper with Supthitha Pal entitled "Eco-crisis Echoed in Chantal Bilodeau's Sila" in the National Conference on Ecological Compositions: Indigenous Responses from India and Canada organized by the Institute of English and UGC Area Study Centre for Canadian Studies, University of Kerala, Thiruvananthapuram held on 09-10 February, 2023.

DEPARTMENT OF PHYSICS

1. Anupriya James, Manojbabu A, John D Rodney, Sindhur U Joshi, and N.K Udayashanakar , Morphology-dependent Photo-Fenton Catalytic Activities of LaFeO_3 Perovskite Nanostructures, EMEE, IIT Roorkee, March 04-05, 2023.

2. Sindhur Joshi, John D Rodney, Anupriya James and N.K Udayashanakar , Electrode-dependent tunable memory and

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3. Nishita Pawar and N.K.Udayashankar, Hydrothermal synthesis and characterization of zinc stannate spinel nanostructures, EMEE, IIT Roorkee, March 04-05, 2023

14. TECHNICAL EVENTS

DEPARTMENT OF CHEMICAL ENGINEERING

BOOK CHAPTERS:-

1. Poddar, M.K., Prabhakar, P., Mahalingam, H. (2022). "Operational Parameters in Dye Decolorization via Sonochemical and Sonoenzymatic Treatment Processes." In: Muthu, S.S., Khadir, A. (eds) *Advanced Oxidation Processes in Dye-Containing Wastewater. Sustainable Textiles: Production, Processing, Manufacturing & Chemistry*. Springer, Singapore. https://doi.org/10.1007/978-981-19-0882-8_9
2. Das, S., Mahalingam, H. (2022). "Multiphase Reactors in Photocatalytic Treatment of Dye Wastewaters: Design and Scale-Up Considerations." In: Muthu, S.S., Khadir, A. (eds) *Advanced Oxidation Processes in Dye-Containing Wastewater. Sustainable Textiles: Production, Processing, Manufacturing & Chemistry*. Springer, Singapore. https://doi.org/10.1007/978-981-19-0987-0_10
3. Ioannis Anastopoulos, Georgios Giannopoulos, Azharul Islam, Joshua O. Ighalo, Felicitas U. Iwuchukwu, Ioannis Pashalidis, Dimirios Kalderis, Dimitrios A. Giannakoudakis, Vaishakh Nair and Eder C. Lima, Potential environmental applications of *Hellianthus annuum* (sunflower) residue - based adsorbents for dye removal in (waste)waters, *Biomass-Derived Materials for Environmental Applications*, 2022, Elsevier, 307-318.
4. Jovana Prekodravac, Dimitrios A Giannakoudakis, Juan Carlos Colmenares, Vaishakh Nair, Bojana Vasiljević, Dejan Kević, Black titania: Turning the surface chemistry toward visible-light absorption, (photo) remediation of hazardous organics and H₂ production, *Novel Materials for Environmental Remediation Applications*, 2023, Elsevier, 361-398.
5. R Rao, K Kamath, R Priyanka, I Shajahan, HP Dasari "Synthesis of Praseodymium-Doped Ceria-Based Electrolyte Material by Hydrothermal Method Energy and Exergy for Sustainable and Clean Environment, *Green Energy and Technology book series*, Volume 1, 433-441
DOI: 10.1007/978-981-16-8278-0_28
6. Vishnupriya Govindaraj, Keyur Raval, Ritu Raval, "Immunomodulatory Effects of Chitooligosaccharides" in, *Chitooligosaccharides: Prevention and Control of Diseases*, DOI: 10.1007/978-3-030-92806-3_7, Springer International Publishing, 2022, pp 99-119, ISBN: 978-3-030-92806-3
7. Kulal Deekshitha, Shetty K. Vidya (2022) "Insights into Pathways of biodegradation of Endocrine Disrupting Chemicals by Microbes" in *bookOmics for Environmental Engineering and Microbiology Systems*. Editors : Vineet Kumar, Vinod Kumar Garg, Sunil Kumar, Jayanta Kumar Biswas. CRC Press, Boca Raton. eBook ISBN9781003247883
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PATENTS

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POSTERS PRESENTED:-

1. Soumya Koippully Manikandan and Vaishakh Nair, "Optimization and mechanistic study of cadmium removal using novel *Pseudomonas* immobilized sawdust biochar," International Conference on Biotechnology for Sustainable Bioresources and Bioeconomy (BSBB-2022), December 07–11, 2022, Department of Biosciences and Bioengineering, IIT Guwahati, India.
2. Krishna Sreekumar, Soumya Koippully Manikandan and Vaishakh Nair, "A novel approach on Low density polythene degradation using microbes immobilised on biochar", International conference on Biotechnology, Sustainable Bioresources and Bioeconomy (BSBB-2022), December 7 - 11, 2022, Department of Bioscience and Biotech engineering, IIT Guwahati.
3. Abhayasimha K C and Vaishakh Nair, "Machine learning aided photocatalytic dye degradation using biochar based photocatalyst", CHEMCON 2022, "Sustainability in Chemical Processes through Digitalization, Artificial Intelligence and Green Chemistry", December 27-30, 2022, Harcourt
4. Pranathi Samineni, Shourya Atmuri, Sunaina S Patil, Hari Prasad Dasari "Coating and characterization of Brewer's yeast template-based synthesis of Ceria/Cordierite". International Conference on Biotechnology, Sustainable Bioresources and Bioeconomy-2022, IIT Guwahati, Dec 7, 2022 -Dec 11, 2022.
5. Pranathi Samineni, Sunaina S Patil, Shourya Atmuri, Hari Prasad Dasari "Soot PM 2.5 oxidation kinetics over CeO synthesized using *Saccharomyces Cerevisiae*" International Conference on Biotechnology, Sustainable Bioresources and Bioeconomy-2022, IIT Guwahati, Dec 7, 2022 -Dec 11, 2022.

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1. Bellary A. and Suresha S. N. (2022). "Influence of Coarse Aggregate Size and Type on the Design Thickness of Rigid Pavements for Indian Conditions". In: Pasindu H.R., Bandara S., Mampearachchi W.K., Fwa T.F. (eds) *Road and Airfield Pavement Technology*. Lecture Notes in Civil Engineering, vol 193. Springer, Cham. DOI: 10.1007/978-3-030-87379-0_31
2. Chethan, B. A. and Ravi Shankar, A. U. "Areca Fiber Reinforced Alkali-Activated Black Cotton Soil Using Class F Fly Ash and Limestone Powder for Pavement". In: Pasindu, H.R., Bandara, S., Mampearachchi, W.K., Fwa, T. F. (eds) *Road and Airfield Pavement Technology*. Lecture Notes in Civil Engineering, vol 193. Springer, Cham. DOI: 10.1007/978-3-030-87379-0_24
3. Chethan, B. A. and Ravi Shankar, A. U. "Laboratory Investigations on Lateritic Soil Stabilized with RBI Grade 81, Coconut Fiber and Aggregates". In: Pasindu, H.R., Bandara, S., Mampearachchi, W.K., Fwa, T. F. (eds) *Road and Airfield Pavement Technology*. Lecture Notes in Civil Engineering, vol 193. Springer, Cham. DOI: 10.1007/978-3-030-87379-0_34
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5. Reshma, P. R. and Sridhar, G. "Numerical Modelling of Mechanically Stabilized Earth Walls for Slope Protection". In: Adhikari, B.R., Kolathayar, S. (eds) *Geohazard Mitigation. Lecture Notes in Civil Engineering*, 2022, vol 192. Springer, Singapore. DOI: 10.1007/978-981-16-6140-2_21
6. Kolathayar, S., Priyatham, K., Karan Kumar, V., Rohith, V. R., & Nikil, S. (2022). "Understanding Disaster Preparedness Level in the South Indian City of Chennai". In: *A System Engineering Approach to Disaster Resilience*, pp. 101-108, Springer, Singapore.
7. Vasavi, G.S., Mourougane, R., Pavan, G.S. "Strength and Durability Properties of Alkali-Activated Fly Ash Earth Bricks". In: Pal, I., Kolathayar, S. (eds) *Sustainable Cities and Resilience. Lecture Notes in Civil Engineering*, 2022, vol 183. Springer, Singapore. DOI: 10.1007/978-981-16-5543-2_12
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10. Nayak, S., Preetham, H.K., Prakash, S.D. (2022). "Assessment of the Geotechnical Properties of Red Earth Stabilized Using Quarry Dust and Cement" *Lecture Notes in Civil Engineering*, vol 154, pp. 57-64
11. Preetham, H.K., Nayak, S., Jagapur, P. (2022). "Improvement in the Properties of Red Soil Using Granulated Blast Furnace Slag", *Lecture Notes in Civil Engineering*, vol 154, pp. 65-72
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16. Rahman P.A., Reddy G.R., Venkataramana K. (2022). "Dynamic Behaviour of Bridge Pier Due to Direct Vehicle Collision". In: Fonseca de Oliveira Correia, J.A., Choudhury, S., Dutta, S. (eds) *Advances in Structural Mechanics and Applications. ASMA 2021. Structural Integrity*, vol 19. Springer, Cham. pp. 142-166. DOI: 10.1007/978-3-030-98335-2_10
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1. Kolathayar S, Pal I, SC Chian and Mondal, A (eds). Civil Engineering for Disaster Risk Reduction. Springer, 2022. ISBN 978-981-16-5311-7. 2022
2. Sitharam, T.G., Jakka, Ravi and Kolathayar, Sreevalsa (eds.) Latest Developments in Geotechnical Earthquake Engineering and Soil Dynamics. Springer, 2022. ISBN: 978-981-16-1467-5
3. Sitharam, T. G., Kolathayar, S., Jakka, R. S., and Matsagar, V. (eds.) Theory and Practice in Earthquake Engineering and Technology. Springer, 2022. ISBN: 978-981-19-2323-4.
4. Sitharam T. G, Jakka R. S. and Kolathayar S. Advances in Earthquake Geotechnics, Springer Tracts in Civil Engineering. Springer, 2022. ISBN: 978-981-19-3329-5.
5. Hazarika, H., Stuart Haigh, K., Kanaya, H., Chaudhary, Babloo, Kochi, Y., Murai, M., Wahyudi, S. and *Annual Report 2022-23*

Fujishiro T. (eds). Sustainable Geo-Technologies for Climate Change Adaptation. Springer Singapore, 2022. ISBN: 978-981-19-4074-3.

PATENTS

1. Palanisamy, T., “Microbialcerat composite”, *Indian Patent Office*, Patent No: 399619, June 21, 2022.

WORKSHOPS

1. Dr T Palanisamy and Dr Prashanth. M. H. “Non-Destructive Testing & Repair Material Characterization (NRMC-22)”, a DST - SERB, New Delhi funded two-day workshop, November 3-4, 2022.

DEPARTMENT OF CHEMISTRY

BOOKS PUBLISHED:-

Joshi, Girdhar; Kumar, Sanjay; Dutta, Saikat, “Organic synthesis (Reaction mechanisms and reagents),” MedTech Science Press, 2023. ISBN-13: 978-9393168139

Book Chapters

1. A.M. Vijesh, A. M. Isloor, “A Review on Health Care Applications of Biopolymers - Biodegradable Materials and Their Applications - Wiley Online Library.” accessed April. 03, 2023-Accepted.
2. K. C. Pallavi and A. M. Isloor, “Biodegradable and Biocompatible Polymeric Materials for Dentistry Applications - Biodegradable Materials and Their Applications - Wiley Online Library.” accessed Apr. 03, 2023-Accepted.
3. K. C. Pallavi and A. M. Isloor, “Biopolymeric Nanofibrous Materials for Environmental Remediation,” *Biodegrad. Mater. Their Appl.*, pp. 687–714, September 2022-Accepted.
4. P. Satishkumar, A. M. Isloor, and R. Farnood, “Continuous Production of Clean Hydrogen from Wastewater by Microbial Usage,” *Mater. Hydrog. Prod.*

Convers. Storage, pp. 277–318, Feb. 2023-Accepted.

5. Dutta, Saikat*; Bhat, Navya Subray; Anchan, Harshitha N, “Nanocatalysis for Renewable Aromatics,” Heterogeneous Nanocatalysis for Energy and Environmental Sustainability, vol 1, pp 61-90. DOI: 10.1002/9781119772057.ch2.

PATENTS

1. Dutta, Saikat; Bhat, Navya Subray; Mal, Sib Sankar; Onkarappa, Sharath B., “Efficient production of furanics and levulinic acid from carbohydrates in aqueous hydrochloric acid using quaternary ammonium salt as surfactant,” Indian Patent, Patent number: 403776, 2022 (Granted).

2. Dutta, Saikat; Bhat, Navya Subray; Tarafder, kartick, Vinod, Nivedha, “Transesterification of isohexides under solvent-free conditions,” Indian Patent, Publication number: 202241069622, 2022 (Published).

3. Provisional Patent Application No.: 202341011781, Dated : February 21, 2023. Title.: “COMPOUNDS AS ANTICANCER AGENT AND A PROCESS FOR PREPARATION THEREOF”
Inventors: Arun M. Isloor, Satyanarayana D.S and Debashree Chakraborty

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

PATENTS: Granted: 01

Shashidhar G Koolagudi, Pavan Kumar K Y, Naveen K S, “Use of Diacritical Marks for Speech Synthesis”, Application number: 201641005231, Filing date: 15-Feb-2016 **Date of Grant: 30-Aug-2022.**

CONFERENCES: 01

1. 7th International Conference on “Recent Advances and Innovations in Engineering-ICRAIE 2022” held during 1-3 December, 2022. Co-ordinator, Dr. Annappa B. and Dr. Sourav Kanti Addya.

WORKSHOPS:-

1. Cloud Computing Webinar Series held during 31st October – 4th November 2022 (Virtual Mode). Co-ordinator: Dr. Annappa B. & Dr. Sourav Kanti Addya
2. Workshop on “IPv6 Deployment” held during: 20th-23rd March, 2023. Co-Ordinator: Dr. Mohit P Tahiliani

EXPERT / TECHNICAL TALK:

Expert Lecture on “Student Interaction: Entrepreneurship in Finance and Trading” By Sri. Rajib, Ranjan Borah, Co-Founder and CEO, iRageCapital and Visiting faculty, IIM Ahmedabad on 17th October, 2022.

Expert Lecture on “Network Performance and Diagnostics Metrics” by Nalini Elkins, CEO, Inside Prodcuts, Inc., USA on 17th March 2023.

FOREIGN VISITORS TO DEPARTMENT: NIL

VISIT TO ABROAD (Faculty):

- Dr. Mohit P. Tahiliani, CSE Department, NITK-Surathkal
- a. Visited Lexington, Kentucky, USA during 30th Oct- 2nd November 2022, to present a paper
 - b. Attended the IETF 115 meeting in London, UK during 5th -11th November 2022
 - c. Visited Thessaloniki, Greece during 2nd – 4th November 2022 to deliver a talk on “High-Precision, Predictable, and Low-Latency Networking Workshop (HiPNet 2022)
 - d. Attended IETF 116 meeting in Yokohama, Japan during 24th – 27th March 2023.

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

PATENTS PUBLISHED

Vipin Sharma, Sandeep Kumar, Krishna Pandey, Rachit Patel and Sapna Katiyar, "Assistance device for Visually and Hearing Impaired Person" Patent Application No. 202211039377 A, published in July 2022.

STTPS (SHORT TERM TRAINING PROGRAMMES)/SCHOOLS

Two weeks online practical training program on "Machine Learning and Deep Learning for Remote Sensing Applications (MLDLRSA2022) Sponsored by National Remote Sensing Centre (NRSC), Hyderabad by Dr. Shyam La, 21st April – 5th May 2022.

CONFERENCES

2nd International Conference (Virtual Mode through Google Meet) on "Computational Electronics for Wireless Communication (ICCWC-2022)" Sponsored by Springer by Dr. Sandeep Kumar, Dr. Prabu K., Dr. Aloknath De, Corporate Vice President of Samsung Electronics & Chief Technology Officer of Samsung R&D Institute India-Bangalore (Chief-Guest), Dr. Anupam Sharma, Outstanding Scientist & Associate Director, Directorate of Special Projects (DSP) DRDO, Ministry of Defence, Hyderabad (Guest of Honour), June 09-10, 2022.

7th IEEE International Conference on "Recent Advances and Innovations in Engineering", Jointly organized by CSE, ECE, IT, & EEE Dept., December 01-03, 2022.

WORKSHOPS

Workshop on "Applications of Radiomics for Healthcare", jointly with Baylor College of Medicine, Houston, Texas, as part of the Fulbright Specialist Program and SPARC project and Dept. of ECE, NITK Surathkal by Dr. Sumam David, Dr. Deepu Vijayasanen and Prof. Pitchaiah Mandava Professor, Neurology Baylor

College of Medicine, US, April 9-29, 2022.

FACULTY DEVELOPMENT PROGRAM

A 3-Day Faculty Development Program on " SoC Design Methodology using Intel FPGAs", sponsored by Intel® LEAD Program by Dr. Sumam David S. Dr. Ramesh Kini M., December 01-03, 2022.

STUDENT INTERNSHIP PROGRAM

Online one month "NITK - IEEE Photonics Student Internship Program-2022" by Dr. Mandeep Singh, Dr. Muralidhar Kulkarni, Prof. T. Srinivas (IISc, Bangalore) - Chief Guest (Inauguration), and Dr. Niranjana U C (Director of Research & Training, Manipal Dot Net Pvt. Ltd) - Chief Guest (Valedictory), June 01-30, 2022.

FOREIGN VISITORS TO DEPARTMENT

Dr. Pitchaiah Mandava Professor, Dept of Neurology, Baylor College of Medicine, Houston, Texas, visited during April 9-29, 2022.

VISIT TO ABROAD (Faculty):-

Dr. Sumam David S., Department of E&C Engg, visited ABET's headquarters in Baltimore, USA to serve as a Program Evaluator for ABET on behalf of IEEE for ABET accreditation, 30th October - 3rd November 2022.

Dr. Krishnamoorthy K., Department of E&C Engg, visited Department of Electrical and Computer Engineering San Diego State University, USA to take up the SERB International Research Fellowship, 25th August 2022 - 28th February 2023

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

BOOK CHAPTERS: -

1. Vikas Singh, Tukaram Moger and Debashisha Jena, “Probabilistic Steady-State Analysis of Power Systems Integrated with Renewable Generations”, Book chapter in Renewable Energy Integration to Grid, DOI: 10.1201/9781003271857-9, 199-238, 2022.

2. Dr. Md Waseem Ahmad, “Performance Analysis of PV Module Using Pyramid Surface Texturing Approach”, Book Chapter in Intelligent Data Analytics for Power and Energy Systems, DOI: 10.1007/978-981-16-6081-8_24, 2022.

3. Dr. Prajof P., “Economic Feasibility Studies of Simple and Discounted Payback Periods for 1 MWp Ground Mounted Solar PV Plant at Tirupati Airport”, Book Chapter in Smart Grids and Micro-Grids: Technology Evolution ISBN: 978-1-119-76059-7, 2022.

4. Vikas Singh, Tukaram Moger, Debashisha Jena, “Probabilistic Load Flow Study Considering Fuzzy Logic Based Contingency Sequencing for Network Outages”, Book Chapter in Sustainable Energy and Technological Advancements, 2023

BOOKS PUBLISHED: -

1. Hasmat Malik, Md Waseem Ahmad and D.P. Kothari, Intelligent Data Analytics for Power and Energy Systems, 2022, ISBN: 978-981-16-6083-2.

2. Prajof Prabhakaran, S. Mohan Krishna, J. L. Febin Daya, Umashankar Subramaniam, and P. V. Brijesh, Smart Grids and Micro-Grids: Technology Evolution, 2022, ISBN: 978-1-119-76059-7.

PATENTS

1. Dr. Debashisha Jena, Mr. Gautham T N, Mr. Reddiprasad Reddivari, “Scalable Single-Stage Single-Phase Differential Flipped Gamma Semi Magnetically coupled Impedance
Annual Report 2022-23

Source Inverter”, Patent Application No.:202041047968, May 06,2022.

2. A. Arya, N. Agarwal, Md Waseem Ahmad, and S. Anand,” Method for Monitoring the health of Aluminum Electrolytic Capacitor”, Patent Application No.: 399559, June 20, 2022.

3. Dr. Prajof Prabhakaran and Dr. B. Dastagiri Reddy “Method, System, and Apparatus for Universal Motor Drive Cum Charging of an Electric Vehicle”, Patent Application No.: 202241004255, Nov 2,2022.

4. Dr. Prajof Prabhakaran, Vivek Kumar and Dr. B. Dastagiri Reddy,” An Integrated Charger-Cum-Motor-Drive Power Converter with Dual Energy Storage System”, Patent Application No.: 202241046349, August 26,2022.

5. M. Rama Narayana Reddy, Dr. B. Dastagiri Reddy, Dr. Prajof P., and Dr. Dharavath Kishan,” Multiport High Gain Power Converter with Active Power Decoupling and its Operating Method Thereof”, Patent Application No.: 202241062462, Nov 2, 2022.

6. Subhradip Mondal, Pritam Kumar Gayen, Dr. Dattatraya Narayan Gaonkar,” Method for Detecting Hybrid Islanding Based on Lissajous Patterns for Microgrids”, Patent Application No.: 202241018909, March 30,2022.

7. Biji Varghese K.V. Dr. Dattatraya Narayan Gaonkar, “Method and System for Energy Trading in Networked Microgrids Using Matching Theory”, Patent Application No.: 202241027416, May 12,2022.

8. Dr. Tukaram Moger, Mr. Sagar Dipesh Dahanuwala, Mr. Prathamesh Gachhi, Mrs. Teena Johnson, Mr. Abhinandan M Pathak, Mr. Shantanu Arya, “Method and System for Major Event Detection in a Power System”, Patent Application No.:202241012056, Sept 29,2022.

9. Saravana Prakash P, Monika Goyal,
196

Sandeep N, Arun Kumar Verma, R Kalpana and Udaykumar R Yaragatti, "A Single Stage Bridgeless PFC Converter for Charging an Electric Vehicle", Patent Application No.: 202211049135, 29th August 2022.

November.

WORKSHOPS

1. One-week High End Workshop Sponsored by DST-SERB on "Power Electronic Systems and Its Real Time Control Implementation using DSP based Microcontroller", organized by Dr. Pajof P from 12th-18th September 2022.

2. One-week High End Workshop Sponsored by DST-SERB on "Microcontroller for the Implementation of Power Electronic Converters in Renewable Energy Systems", organized by Dr. Ravi Raushan and Dr. Waseem Ahmad B., Dr. Dastagiri Reddy, Dr. Prajof P., and Dr. Dharavath Kishan from 14th-21st December 2022.

3. One-week High End Workshop Sponsored by DST-SERB on "DSP TMS 320F Microcontroller for Power Electronic Converter Systems", organized by Dr. Dharavath Kishan and Dr. Prajof P., Dr. Nagendrappa H., Dr. Ravi Raushan, Dr. B. Dastagiri Reddy from 5th-12th December 2022.

FACULTY PROGRAMME

1. "Applications of Power Electronics Technology for Electric Vehicle Systems" by Prof B. Venkatesa Perumal & Dr. V. Vignesh Kumar with AICTE Training & Learning(ATAL) Academy from 19th-30th September 2022.

FOREIGN VISITORS TO DEPARTMENT

1. Dr. Ashoka K. S. Bhat, Emeritus Professor, Dept. of ECE, University of Victoria, Canada, visited on 3rd Annual Report 2022-23

DEPARTMENT OF INFORMATION TECHNOLOGY

BOOK CHAPTERS:-

1. Ghosh, S.K., Rashmi, M., Mohan, B.R., Guddeti, R.M.R. (2022), "Skeleton-Based Human Action Recognition Using Motion and Orientation of Joints", In: Gupta, D., Sambyo, K., Prasad, M., Agarwal, S. (eds) Advanced Machine Intelligence and Signal Processing. Vol 858, pp. 75-86, Springer, Singapore. First Online 26 June 2022, DOI: https://doi.org/10.1007/978-981-19-0840-8_6 (https://link.springer.com/chapter/10.1007/978-981-19-0840-8_6)
2. Karthik K and Sowmya Kamath S, "Ensemble Deep Neural Models for Automated Abnormality Classification in Diagnostic Images", In Digital Transformation in Healthcare in Post-COVID-19 Times, Elsevier Books, ISBN: 9780323985772. 2023.
3. Siddhanth Pillay and Sowmya Kamath, "Predicting Medical Procedures from Diagnostic Sequences using Neural Machine Translation", In Smart Computational Intelligence in Biomedical and Health Informatics, CRC Press, Taylor & Francis Group, 2022, ISBN 9780367624125
4. Karthik K and Sowmya Kamath S, "Automated View Orientation Classification for X-ray images using Deep Neural Networks", In Smart Computational Intelligence in Biomedical and Health Informatics, CRC Press, Taylor & Francis Group, 2022, ISBN 9780367624125
5. Shrutilipi Bhattacharjee, Johannes Madl, Jia Chen and Varad Kshirsagar, "Spatio-temporal Modeling", Encyclopedia of Mathematical Geosciences, Encyclopedia of Earth

Sciences Series, Springer, Cham, (published online-first), 2022

6. Shrutilipi Bhattacharjee, Johannes Madl, Jia Chen and Varad Kshirsagar, "Spatio-temporal Analysis", Encyclopedia of Mathematical Geosciences, Encyclopedia of Earth Sciences Series, Springer, Cham, (published online-first), 2022
7. Kumar, N., Ahmed, R., Venkatesh, B.H., **Anand Kumar, M.** (2023). An Effective Diabetic Retinopathy Detection Using Hybrid Convolutional Neural Network Models. In: Kumar, B.V., Sivakumar, P., Surendiran, B., Ding, J. (eds) Smart Computer Vision. EAI/Springer Innovations in Communication and Computing. Springer, Cham.

BOOKS EDITED

1. Dr. Bhawana Rudra, Dr. Anshul Verma, Dr. Shekhar Verma and Dr. Bhanu Shesta Futuristic Research trends and Applications of Internet of Things" Taylor & Francis, CRC-Press 9th August 2022.

PATENTS:

A Method, System And Apparatus For Generating Patient Knowledgebase For Clinical Decision Support Applications – Status: Under Examination (Appln No. 202041056808)-Dr. Sowmya Kamath S.

REVIEWS:

Dr. Anand Kumar M

ACM Transactions on Asian and Low-Resource Language Information Processing
Computer Speech; Language Computers Electrical Engineering
Engineering Applications of Artificial Intelligence
LRE
Future Generation Computer Systems
Pattern Recognition

Conferences:

General Chair for the Conference - SPELLL 2022 - 1st International Annual Report 2022-23

Conference on Speech and Language Technologies for Low-resource Languages Organized at SSN COLLEGE OF ENGINEERING, CHENNAI, INDIA during 23 - 25 November, 2022 - Dr. Anand Kumar M

Workshops:

1. 7-Day Sponsored Workshop on "Advanced Topics in Network Security and Cryptography" from 30 May 2022 to 5th June 2022 organized by Dr. Bhawana Rudra
2. 5 Day R-10 IEEE Sponsored Workshop on "Frontiers in computing" from June 20th, 2022 to June 24th, 2022 organized by Dr. Bhawana Rudra
3. Dr. Anand Kumar M organized the Second Workshop on Speech and Language Technologies for Dravidian Languages @ ACL 2021 (CORE A CONFERENCE) at 60th Annual Meeting of the Association for Computational Linguistics, Dublin during 22nd to 27th May 2022.
4. Dr. Anand Kumar M organized a Shared Task on Machine Translation in Dravidian languages-ACL2022. at DravidianTech- 60th Annual Meeting of the Association for Computational Linguistics, Dublin during 22nd to 27th May 2022.
5. Dr. Anand Kumar M organized an online talk on "Online Workshop on "Innovations with Intel oneAPI" by Intel on OCT 31st, 2022.

DEPARTMENT OF MATHEMATICAL & COMPUTATIONAL SCIENCES

Books Published (Refer to the format to enter the data):

1. Argyros, C.I., Regmi, S., Argyros, I.K., George, S, Contemporary Algorithms: Theory and Applications. Volume I, pp. 1-429, 2022, ISBN: 978-1-68507-994-9.
2. Argyros, C.I., Regmi, S., Argyros, I.K., George, S, Contemporary Algorithms: Theory and Applications. Volume II, pp. 1-429, 2022, ISBN: 979-8-88697-109-5.

Reviews (Refer to the format to enter the data):

1. Reviewed the manuscript TCC-2022-01-0013 titled "A Publicly Verifiable Outsourcing Matrix Computation Scheme based on Smart Contracts" for IEEE Transactions on Cloud Computing, Feb. 2023.
 2. Dr. R Madhusudhan reviewed the manuscript- Naveen Chandra Gowda and Sunilkumar S Manvi, "Efficient Multi-level and Two-way Authentication Scheme for Fog Computing Environment using Symmetric Cryptographic", Journal of Network and Computer Applications, ELSEVIER.
 3. Dr. R Madhusudhan reviewed the manuscript-Zheng, Zhiwen and Yu, Nan and Zhang, Jingyang and Dai, Haipeng and Wang, Qingshan and Wang, Qi, "Wi-ID: WiFi-Based Identification System Using Rock-Paper-Scissors Hand Gestures", Wireless Personal Communications, SPRINGER.
 4. Dr. R Madhusudhan reviewed the manuscript Mohammad Masdari, "Anonymous Authentication in Wireless Body Area Networks: Classification, Survey, and Future Trends", Ad Hoc Networks, ELSEVIER.
2. Workshop on "Inverse Problems and Applications", March 6 to 8, 2023, Sponsored by SERB. These workshops were organized by Prof. Santhosh George and P. Jidesh.

DEPARTMENT OF MINING ENGINEERING

Books Published/written during the year:

Book: Mine Waste Utilization
Authors: Ram Chandar Karra, Gayana BC. Shubhananda Rao P
Publisher: Springer

Patents:

1. **TITLE:** Hydro-squeeze pressure filtering for the efficient beneficiation of coal material (NITK Surathkal); **INVENTORS:** Mr. Harish Hanumanthappa, Dr. Harsha Vardhan, Dr. Govinda Raj Mandela, Mr. Bharath Kumar Shanmugam, Mr. Mudhunuru Varma Raju and Mr. Harish Kumar N S; **Patent number:** **396632**; Application No: 202141026712; Date of Grant: 11-05-2022; GRANTED: <https://patentscope.wipo.int/search/en/detail.jsf?docId=I N334769750& cid=P21-L31E9N-19185-1>

Conference:

1. Publication Chair, 2023 IEEE International Conference on Recent Advances and Innovations in Engineering, Organized by the IEEE student branch of NITK, during Dec 1-3, 2022.

Seminars:

1. Organized expert lecture on "Tactile Internet: Architecture, Use Cases and Research Challenges" by Dr A Paventhan, Director (R&D), ERNET India on May 22, 2022.

Workshops:

1. One day Workshop on "National Mathematics Day - 2022", This workshop was attended by 45 College Teachers and 35 Research Scholars, 22nd Dec 2022. This workshop was organized by Sam Johnson P, MACS Department, NITK.

Seminars (National & International):

1. A webinar conducted on 'Mine waste utilization and management' by Dr Anjani Kumar, Ex-Principal scientist, CSIR-CIMFR, Dhanbad on 9th March 2022 (President-Dr M Aruna; Convenor-Dr. Sandi Kumar Reddy)

Workshops:

1. Skill Development Workshop on 'Blasting for Mines/Quarries/Infrastructure Projects', during 1-2 August, 2022.

2. Two days DST-SERB sponsored workshop on "Industrial Safety and Health", during 19-20 October, 2022.

Foreign Visitors to the Department :

1. Dr. Bharath Kumar Belle, Adjunct Associate Professor, School of Mechanical and Mining Engineering, The University of Queensland, Australia visited the Department 19-12-2022.

DEPARTMENT OF METALLURGICAL & MATERIALS ENGINEERING

1. A Cooling System For Post-Heat Treatment Cooling Of Cold-Worked Steels To Produce Dual Phase Steels [Application No. 367/KOL/2012, 30 March 2012; Granted Patent No.398607; 6 Jun 2022; Govt of India; Inventor: Kumkum Banerjee; Patentee: Tata Steel Limited].
2. A Cold-Rolled Continuously Annealed Weldable Dual Phase Steel With Tensile Strength Of 650-800 Mpa And A Process Of Manufacturing Such A Steel Grade [Application No. 956/KOL/2013, 16 Aug 2013; Granted Patent No.400692; 1 Jul 2022; Govt of India; Inventor: Kumkum Banerjee; Patentee: Tata Steel Limited]
3. A Process For Manufacturing Of X-70 Linepipe Steel Via Thin Slab Casting And Direct Rolling Route [Application No. 776/KOL/2015, 17 Jul 2015; Granted Patent No.416431, 2 Jan 2023; Govt of India; Inventor: Kumkum Banerjee; Patentee: Tata Steel Limited]

Posters Presented:

1. Lakkimsetti Lakshmi Praveen, Ashritha Salian, Saumen Mandal, "Precise estimation of Lattice parameter and Optical bandgap of

Cobalt Oxide synthesized via Hydrothermal and Solution Combustion process: A comparative study towards Gas-sensing application", International school and conference on Evolution of Electronic Structure Theory and Experimental Realization, SRM IST KTR & IIT Madras, Chennai, IN, January 9-12, 2023.

2. Ashritha Salian, Akshay Prasad K, Saumen Mandal, "Examination of phase stabilization, microstructural, and optical properties of aqueous combustion processed high entropy fluorite oxide ($Ce_{0.2}La_{0.2}Pr_{0.2}Sm_{0.2}Y_{0.2}O$)", 7th International Conference on Nanoscience and Nanotechnology – ICONN 2023, SRM IST KTR, Chennai, IN, March 27-29, 2023.
3. Sameer Sunil Karle, Robbi Vivek Vardhan, Lakkimsetti Lakshmi Praveen and Saumen Mandal, "Effectiveness of spray-pyrolyzed hydrophobic WO_3 coating on stainless steel against blue-green algae growth", First International Conference on Advanced Materials, Manufacturing and Industrial Engineering (AMMIE 2023), School of Mechanical Engineering (SMEC) Vellore Institute of Technology, Chennai, March 23- 24, 2023.
4. Perabathula Satish, Lakkimsetti Lakshmi Praveen, Komalakrushna Hadagalli, Saumen Mandal, "Effect of temperature on solid state reaction of prawn shell derived phase-pure β -tricalcium phosphate", 4th International Conference on Processing and Characterization of Materials, NIT Rourkela, December, 9 – 11, 2022.

Visit to Abroad (Faculty):

1. Dr. Saumen Mandal attended and presented Poster & Oral presentation on "Solution combustion derived metal & metal oxides for thin film transistors and gas sensing applications" in "12th Indo-German Frontiers of Engineering Symposium (INDOGFOE)", Bremen, Germany from September 29 to October 2,

2022 jointly organized by the Department of Science and Technology (DST), India and the Alexander von Humboldt Foundation, Germany.

DEPARTMENT OF MECHANICAL ENGINEERING

BOOK CHAPTERS:

P.S. Suvin and Ranjeet Kumar Sahu, "Sequential Laser and Electrical Discharge Machining" in Electric Discharge Hybrid-Machining Processes: Fundamentals and Applications, DOI: 10.1201/978100202301-11, CRC Press, Taylor & Francis, 2022, pp 225-238, ISBN No. 9781003202301.

POSTERS PRESENTED:

Vedant Umang Patel, Karan Panchal, Shreeranjita Kowshik, Sudhanva Nadigera, D. Arumuga Perumal, "Lattice Boltzmann Simulation of flow within Staggered Lid Driven Cavities of Varying Geometry", ME@75: Research Frontiers Conference, IISc Bangalore, June 29-July 01, 2022.

STTPS (SHORT TERM TRAINING PROGRAMMES)/SCHOOLS

- 3 days' SPARC sponsored On-Line Lecture Series on Microsystem and Microfluidics from 24th Feb 2023 to 26th Feb 2023. Course Instructor: Prof. Muthukumaran Packirasmy of Concordia University. Course Coordinator: Dr Sujatha C (IIT Madras) and Dr Hemantha Kumar (NITK Surathkal).
- 3 Days short term course on Random vibration (SPARC sponsored) from 6th March 2023 to 8th March 2023. Course Instructor Prof. Ramin Sedghati, Concordia University. Course Coordinator: Dr. Hemantha Kumar.

CONFERENCES:-

International Conference on Robotics, Control, Automation and Artificial Intelligence (RCAAI 2022). 24-26 November 2022 | Virtual Mode. Organized by Department of Mechatronics, Manipal Institute of Technology, Manipal Academy of Higher Education (MAHE), Manipal, India in collaboration with Department of Mechanical Engineering, National Institute of Technology Karnataka, Surathkal, India. Organizing Secretary :Dr. Ankur Jaiswal, MIT, Manipal; Dr. Arun Kumar Shettigar, NITK, Surathkal; Dr. K Abhimanyu K Patro, MIT, Manipal; Dr. Umesh Kumar Sahu, MIT, Manipal.

SEMINARS:

NITK (Mechanical Department) under SPARC project conducted 5 Days lecture series on Magnetorheological Fluid (MRF) from 8th Sept 2022 to 12th Sept 2022. Coordinator:Dr. Hemanth Kumar.

NITK (Mechanical Department) conducted a seminar on "Musical Acoustics" on 1st Dec 2022. Seminar was presented by Prof. Chandramouli P. from IIT Madras.

WORKSHOPS:

NITK hosted Six days Friction Stir Welding Workshop for Naval Academy, Ezhimala from 1st Aug 2022 to 6th Aug 2022 for 4 Candidates.

DST-SERB sponsored Scientific Social Responsibility 5 days' Workshop (On-Line) on "Advances in Mechanical Engineering for Biomedical Applications" from 11 July 2022 to 15 July 2022.. Coordinators: Dr. Anish S, Dr. Mrityunjay Doddamani, Dr. Ranjith M, Dr. P S Suvin.

One Day Laboratory Exposition on Non-Traditional Machining and Machines for III year polytechnic students of Karnataka Government Polytechnic, Mangalore students on 7th Nov 2022.

5 day Laboratory training, IC Engines, Heat Transfer, Metrology for NIT Goa mechanical engineering students. 27 Nov., 01 Dec., 2022. Coordinator Dr G N Kumar.

FOREIGN VISITORS TO DEPARTMENT:-

Dr. Nguyen Thoi Trung, Director of Institute for Computational Science, Ton Duc Thng University visited NITK on 23 June 2022.

Dr. Ramin Sedaghatti of Concordia university visited NITK for 3 Days.

Mrs. Gessica PAPAROZZI Coordinator Internationale ECAM LaSalle, 40 montée St Barthélemy, 69 321 Lyon Cedex 05 · France, visited Mech Dept to discuss on to continue student exchange programme and to collaborate with NITK Surathkal.

VISIT TO ABROAD (FACULTY):-

- Dr. Subhaschandra Kattimani, Associate Professor visited Vietnam to carry out ASEAN - India Collaborative research project from 17 May to 31 May 2022.
- Dr. Subhaschandra Kattimani, Associate Professor Visited Universiti Teknologi Malaysia, 81310 Johor Bahru, Malaysia to carry out Collaborative Research project titled Investigation on Radiolucent Composite Sandwich materials for Biomedical imaging System under Hygrothermal Environment. ASEAN - India (S&T) Collaborative Research project work from 2 August to 15 August 2022 .
- Dr. Subhaschandra Kattimani, Associate Professor Principal Investigator SERB ASEAN -India Collaborative Joint Project visited Ton Duc Thang University, Vietnam to carry out ASEAN - India Collaborative research project Investigation on Radiolucent

Composite Sandwich materials for Biomedical imaging System under Hygrothermal Environment; from 22 Dec 2022 to 4 January 2023.

DEPARTMENT OF PHYSICS

Foreign Visitors to Department

Professor. Thomas A Jung, Professor and Group leader Molecular Nanoscience, Paul Scherrer Institut, Swtzerland, Invited Talk and Scientific discussion and collaborations, 28th October 2022

Indian Visitors to Department

1. Professor Nirmalya Ballav, Professor and HOD Chemistyr, IISER-Pune, Invited Talk and Scientific discussion and collaborations, 28th October 2022
2. Dr. Aravind S, Assistant Professor, Physics Dept. IIT Thirupathi, Expert Lecture, 3th - 14th December 2022
3. Dr. Abiram Soori, Assistant Professor, Physics Dept. University of Hyderabad, Academic interaction with Dr. V. Sreenath, 22 June 2022.
4. Dr. Sujatha Ramakrishnan, Postdoctoral Researcher, Universidad Autonoma de Madrid, Research Interaction with Dr. V. Sreenath, 24th - 25th October 2022.
5. Dr. Rathul Nath Raveendran, Research Associate, Indian Association for the Cultivation of Science, Kolkata, Research Interaction with Dr. V. Sreenath, 7th - 10th February 2023

SCHOOL OF HUMANITIES , SOCIAL SCIENCES AND MANAGEMENT

Book Chapters:-

1. ESG investment and Sustainability Reporting: A Systematic review for future research accepted for publication (Springer conference proceeding (Scopus Indexed))

2. Sahoo, P., Saraf, P. K., & Uchil, R. (2022). Privacy and Security Concerns During the COVID-19 Pandemic: A Mixed-Method Study. In *Handbook of Research on Technical, Privacy, and Security Challenges in a Modern World* (pp. 205-222). IGI Global
3. Supthitha Pal and Dhishna P. "Engaging Women's Writing: Voices from Kerala." Post Pandemic Literary and Cultural Perspectives. Gyanabati Khurajam (ed.) Michigan: Iterative International Publishers, 2022. ISBN: 978-1-68576-380-0. 95-101. Print.

BOOKS PUBLISHED :-

Dr. Pradyot Ranjan Jena

1. Alem, H. , & Jena, P. R. , (Eds.). (2022). Sustainable Agricultural Value Chain. IntechOpen. London <https://doi.org/10.5772/intechopen.94780>.

POSTERS PRESENTED

Dr. Bijuna C. Mohan

1. Naik, Chuleshwar, and Bijuna C. Mohan. "Role of marketing channels in price realization: Analysis of selected crops in India." *Agricultural Economics Research Review* 35.conf (2022): 222-222.
2. Soma Amol Dhaigude and Bijuna C. Mohan (2023). Social Commerce the new avatar of e-commerce: Systematic Literature Review. The 8th Indian Academy of Management Conference. NMIMS, Mumbai. January 6-8, 2023.
3. Soma Amol Dhaigude and Bijuna C. Mohan (2023). Social Commerce and Customer Satisfaction: An Empirical Investigation. International Conference: Emerging Trends in Operations and Analytics (ICETOA 2023). T A Pai Management Institute, Manipal. March 17-19, 2023

STTPS (SHORT TERM TRAINING PROGRAMMES)/SCHOOLS

Five days Management Development Programme (MDP) on "Contemporary Skill Development in Effective Leadership, Team-Building and Communication" by Dr. Sheena (Chairperson) and Dr. Savita Bhat (Coordinator) 20-24 March 2023.

WORKSHOPS

Dr. Pradyot Ranjan Jena
Title - Progress in adoption of sustainable agriculture in India: Barriers and opportunities
From 25-04-22 to 29-04-22

Dr. Bijuna C. Mohan

Coordinated two-day National workshop in association with the Centre for System Design on Design for MSMEs from 21st March to 22nd March 2023. The workshop was attended by over 50 MSME participants. The workshop was sponsored by the Ministry of MSME.
Dr. Sheena

20 one day workshops conducted for various engineering colleges in the states of Karnataka, Kerala and Tamil Nadu on Virtual labs by Dr. Sheena as the Outreach Coordinator in collaboration with the Centre for System Design, NITK from April 1st, 2022 – March 31st, 2023

FACULTY DEVELOPMENT PROGRAMME

Dr. Sheena

1.FDP: Gender Sensitisation programme for the teaching, non-teaching staffs and students of NITK, Surathkal from 25th November, 2022 till 6th December, 2022 organised by Dr. Sheena.

2.FDP: International Women's Day celebration programme that included a panel discussion and physical demonstration exercises from 6th to 7th March, 2023

organised by Dr. Sheena

Dr. Sheena and Dr. Savita Bhat:

1. Five days Management Development Programme (MDP) on "Contemporary Skill Development in Effective Leadership, Team-Building and Communication" by Dr. Sheena (Chairperson) and Dr. Savita Bhat (Coordinator) from March 20-24 2023.

DEPARTMENT OF WATER RESOURCES AND OCEAN ENGINEERING

Book Chapters

1. Madhusoodhanan S., Rao S. July 2022, Stability Analysis of Emerged Seaside Perforated Quarter Circle Breakwater Using Soft Computing Techniques, Data Engineering and Communications Technologies, (LNDECT, volume 114), http://dx.doi.org/10.1007/978-981-16-9416-5_13
2. Gururaj, P., Umesh, P., Sara, P.E.K., Shetty, A. (2022). Top Surface Soil Moisture Retrieval Using C-Band Synthetic Aperture Radar Over Kudremukh Grasslands. In: Jha, R., Singh, V.P., Singh, V., Roy, L.B., Thendiyath, R. (eds) Hydrological Modeling. Water Science and Technology Library, vol 109. Springer, Cham. https://doi.org/10.1007/978-3-030-81358-1_4

CONSULTANCY PROJECTS

DEPARTMENT OF CIVIL ENGINEERING

Dr. Vinoth and Dr. Sridhar, along with Dr. Pruthviraj U (CSD, NITK Surathkal), were awarded a consultancy project on "Rockfall Hazard Analysis and Identification of Critical Areas in MRPL Aromatic Complex" by Mangalore Refinery and Petrochemical Limited (Aromatic Complex), MSEZ, Mangalore.

Annual Report 2022-23

Dr. Sreevalsa Kolathayar and Dr. Pavan G S were awarded a consultancy project on "Stability Analysis of Masonry and Earthen Dam Sections of Ukai Dam Under DRIP" by the Water Resources Division, Narmada, Water Resources, Water Supply and Kalpsar Department, Government of Gujarat.

Dr. Sreevalsa Kolathayar carried out a consultancy project "Landslide Hazard Assessment, Geotechnical Investigations, and Slope Stabilization Measures" for the Indian Naval Academy Campus, Ezhimala

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

1. Proof of Concept (v2) of New IP, Futurewei technologies. Inc., PI: Dr. Mohit P Tahiliani at the cost of USD 40000, January 2022- January 2023
2. Re-implementing Hyperloglog in a binary compatible SPARK, Epsilon, India. PI: Dr. Annappa & Dr. Mohit P Tahiliani, at the cost of Rs.3.30 Lakhs from April 2022-July 2022.
3. Knowledge Partner for Cloud Development and Architecture, Tata Consultancy Services(TCS)-iON. PI: Dr. Annappa & Dr. Sourav Kanti Addya at the cost of Rs. 21.68 Lakhs from July 2022 to July 2024.

DEPARTMENT OF MINING ENGINEERING

1. Dr. Subray R. Hegde: Life Extension of Scientific Study for Slope & Dump Stability as per Reg. No 106(2) of CMR -2017 for Utkal-'D' Coal Mine of M/s. NALCO - Odisha, M/s. Utkal Coal Mining India Private Limited (2022).
2. Scientific Study on Slope Stability Analysis of Highwall Benches & OB Dumps at Proposed JK Coal Mine, Yellandu Area- SCCL (2022)
3. Scientific Study for Controlled Blasting in Guruvanipalli Limestone Mine Limestone Mine to apply for permission for blasting upto 100m from 132KV Power Line, M/s. Ultratech Cements Private Limited, Ananthapur, AP, (2022)

4. Slope Stability Study of Proposed Rough Stone Quarry of M/s. SRC Projects Private Limited, Tiruvannamalai Dist, Tamil Nādu, (2022).
5. Assessment of Intensity of Ground Vibrations Generated Due to Tunnel Blasting on Surrounding Structures, Hindustan Petroleum Corporation Limited- Mangalore (2022).
6. Scientific Study for evaluation of method of working, ultimate pit slope, dump slope and monitoring of slope stability at RG OCP-II, RG Area to comply Reg No. 106 of CMR-2017, SCCL (2022).
7. Scientific study for establishing safe distance from the existing road, gas pipe line and other structures if any performing blasting operations at Naini coal mine, SCCL-Odisha (2022).
8. Scientific study for stabilization of slided dump and stability analysis of new dump of Karadikolla Suresh Iron Ore Mine- M/s. P. Balasubba Setty & Son, Hosapete, Karnataka (2022).
9. Scientific Study on the feasibility for doing Mining below the existing Prang Limestone Band at 'Nongtra Limestone Mines' of M/s Lafarge Umiam Mining Pvt. Ltd. East Khasi Hills, Meghalaya (2022).
- 10 Scientific study on slope stability study for highwall benches and stabilization of hillocks on east and west side at the proposed Goleti OC Mine, Bellam Palli Area, SCCL (2023).
- 11 Third party inspection and certification of underground mine development works at Uti Gold Mine, Hutti Gold Mines Company (2022).
- 12 Scientific study for stability analysis of Pit benches of Basant Nagar Limestone Mine, Telangana State (2022).
- 13 Geotechnical Study of the Quarry for Safe Workings and Optimum Design in Survey No.192, Madahalli Village, Gundlupet Taluk, Chamarajanagar District.
- 14.Karnataka Extension of third party inspection and certification of underground mine development works at Uti Gold Mine, Hutti Gold Mines Company (2022).
- 15.Slope Stability Studies for Safe Workings and Optimum Design of M/s Muhammedali P Quarry Located at Morayur Village, Kondotty Taluk, Malappuram District, Kerala.
- 16.Slope Stability Study of the ZambhidadgaDongor Iron Ore & Manganese Ore Mine (M.L.No.3/Fe/Mn/79) of Naraina Sinai Quirtonim for Safe Workings and Optimum Design situated at Cavurem Village, Quepem Taluk, South Goa
- 17.Slope Stability Study of the Kalay Iron Ore Mine of Fomento Resources Pvt. Ltd. for Safe Workings and Optimum Design situated at Santona Village, Sanguem Taluka, South Goa District, Goa.

DEPARTMENT OF METALLURGICAL & MATERIALS ENGINEERING

1. Metallurgical Failure Analysis (WO: 2200002897-0) Consultancy Project amounting Rs. 25 Lakhs sanctioned by MRPL, Mangalore; Duration: 12/2022 to 12/2023
2. Life Extension of Industrial Thermocouples, MRPL Funded R&D Project amounting Rs. 20 Lakhs, Completed, March-2023
3. Failure Analysis of Water-Wall Boiler Tubes, MRPL funded Consultancy Project amounting, Rs. 6.6 Lakhs, completed, 2022
4. Failure Analysis of Water-Wall Tubes of UB-2, MRPL Consultancy Project amounting, Rs. 6.6 Lakhs, completed, 2022
5. Failure Analysis of DCU Preheater Exchange Tube MRPL Consultancy Project amounting, Rs. 6 Lakhs, completed, 2022

15 HUMAN RESOURCE DEVELOPMENTS

15.1 TRAINING STATUS

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

1. Prof. K. P. Vittal, attended an International Workshop on "Protection and Stability of Renewable Dominated Power Grids", IISc Bangalore on 2-4 January 2023.
2. Prof. K. P. Vittal, attended the IEEE 3rd Global Conference for Advancement in Technology (GCAT 2022), Bangalore, on 7-9, October, 2022.

15.2 PLACEMENT OF STAFF FOR ACADEMIC EXCELLENCE

DEPARTMENT OF CHEMICAL ENGINEERING

Dr, Vidya Shetty K, Departmental Advisory Board, Department of Chemical Engineering, MIT Manipal

Dr. Vidya Shetty K , VTU Nominee for BOS for Department of Chemical Engineering, R.V College of Engineering

Dr. Vidya Shetty K VTU Nominee for BOS for Department of Chemical Engineering, BMS College of Engineering

Dr. Vidya Shetty K, Member of First Year Board of Studies , MIT Manipal

Dr. Vidya Shetty K , Member of the Board of Studies (Chemical Engineering) of KLE Technological University, Hubballi.

Dr. Vidya Shetty K, Member of BOS, Department of Chemical Engineering, SIT Tumkur

Dr. Vidya Shetty K, Member of BOS, Department of Chemical Engineering, MVJ College of Engineering

DEPARTMENT OF CIVIL ENGINEERING

Prof. Subhash C. Yaragal was appointed as a Nominee of VTU Belagavi to the "Internal Quality Assessment Committee (IQAC)" of PDACE, Kalaburagi (Autonomous) from 31st Jan 2022 to 30th Jan 2025.

Prof. Sitaram Nayak was appointed as a nominee of VTU Belagavi to the "Internal Quality Assessment Committee (IQAC)" of NMAMIT, NITTE (Deemed to be University) from Jan 2022 to Jan 2025.

Dr. Bibhuti Bhusan Das has been nominated as a Member of the Board of Studies in Civil Engineering for a period of 3 years for NMAMIT, NITTE (Deemed to be University).

Dr. Bibhuti Bhusan Das has been nominated as a BOS Member for a period of one year for Mangalore Institute of Technology and Engineering (MITE), Mangalore.

Dr. Raviraj H Mulangi has been nominated as a BOS Member KLE Technological University, Hubli.

Dr. Raviraj H Mulangi has been nominated as a BOS Member G.I.T., Belgaum.

Dr. Sreevalsa Kolathayar was inducted as an Expert member of the Working Group (WG) on developing a new Indian Standard IS 13920 (Part 11) on "Earthquake Resistant Design and Detailing of Coastal Structures".

Dr. Sreevalsa Kolathayar was inducted as an Expert member of the Working Group on developing a new Indian Standard IS 15988 (Part 11) “Earthquake Safety Assessment and Retrofitting - Coastal Structures”.

Dr. Sreevalsa Kolathayar was re-elected as TC Member of “Earthquake Engineering and Soil Dynamics”, Technical Committee of Geo-Institute, American Society of Civil Engineers (ASCE)

Dr. Sreevalsa Kolathayar was nominated as Executive Committee Member, Indian Society of Earthquake Technology (ISET), IIT Roorkee.

Dr. Rajasekaran, C has been nominated as a BOS Academic Council Nominee for Bannari Amman Institute of Technology, Sathyamangalam, Tamil Nadu.

Dr. Rajasekaran, C has been nominated as a BOS Member for Noorul Islam Centre for Higher Education, Kumaracoil, Tamilnadu.

Dr. T. Palanisamy has been nominated as a BOS Member for Annapoorna Engineering college, Salem, India.

Dr. T. Palanisamy has been nominated as a BOS Member for Dr. N. G. P College of Engineering and Technology, Coimbatore, Tamil Nadu, India.

Dr. T. Palanisamy has been nominated as a BOS Member for Government College of Engineering (GCE), Salem, Tamil Nadu, India.

Dr. Babloo Chaudhary has been nominated as the Secretary of Asian Regional Technical Committees 1 (AsRTC1): Geotechnical Mitigation and Adaptation to Climate Change-induced Geo-disasters in Asia-Pacific Regions of ISSMGE.

Dr. Sreevalsa Kolathayar was nominated as a member of the Estate & Works Committee of Chanakya University (2022).

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

1. Dr. Dattatraya N Gaonkar , Delivered Keynote address on “Materials for Renewable Energy Dominated Future Grid: Issues and Challenges” 2nd Global Conference on Recent Advancements in Sustainable Materials (GC-RASM 2022) is organized by AJ Institute of Engineering and Technology, Mangaluru, Karnataka, India during 28 – 29, July 2022
2. Prof. B. Venkatesa Perumal delivered Keynote address on “IoT application to Electric Vehicle” during FDP on AEVT-22- ADVANCES AND CHALLENGES IN ELECTRIC VEHICLE held at PSG College of Technology, Coimbatore, India on 23 November 2022.
3. Prof. B. Venkatesa Perumal delivered Keynote address on “Chargers for Electric vehicle and its impact on AC Grid” during TECHNOLOGY-22 held at RNSIT, Bengaluru on 18 November 2022.
4. Prof. B. Venkatesa Perumal delivered Keynote address on “Solar Based EV Charger and System Impact with Grid” during ATAL FDP on Electric Vehicles held at Vivekananda College of Engineering for Women (Autonomous), Elayampalayam, Tiruchengode, Tamil Nadu on 14th December 2022.
5. Dr. P. Parthiban delivered Keynote Session during 1st International Conference on Recent Trends and Innovations in Sustainable Electrical Energy Systems (RISEE 2023), 30-31st March 2023.

DEPARTMENT OF INFORMATION TECHNOLOGY

Prof. Ananthanarayana V S appointed as Chairman for the selection of MIS officer (on contract) during 2022-23.

Prof. Ananthanarayana V S appointed as Expert committee member for the mock MBA visit to CHEM, CSE, MEC, MET departments on 20 and 21st December 2022

DEPARTMENT F PHYSICS

Sterin N S, Postdoctoral fellow at University of Oregon USA.

Sukanya Maity, Postdoctoral fellow at University of linkoping, sweden

16 STUDENTS PLACEMENTS

Highlights

The year 2022-23 has been a successful year for Career Development Centre. We had reasonably good Placements and Training slots. Most of the companies including PSU's GAIL, BEL, BEL-CRL Bangalore, C-DOT, MRPL, HPCL and BPCL conducted placement / Internship drives in virtual, physical and hybrid modes. The CDC also participated in the two NBA exercises, with the chairmen of the visiting team at the CDC. Both chairmen appreciated the facilities, placement and gave valuable advice. As Chairman of CDC, on Behalf of the Institute, I thank all who enabled the entire process in very successfully.

Main Objectives:

To provide opportunities for,

1. Placement to all students of the final year B.Tech, M.Tech, MCA, MBA and M.Sc.
2. Training to all students to be covered during the 5th, 6th and 7th Semester vacations. The compulsory training for B.Tech. Mining Engg. Students during the 5th and 6th Semester vacations.
3. Provide Counseling and facilitate development of Soft Skills and Personal Effectiveness to help students build a successful career.

Vision & Mission statements of CDC

Vision

To empower students to discover and pursue a path to a fulfilling career, so they can make their own unique marks on the world, achieving career contentedness and success.

Mission

The mission of Career Development Centre is to support and facilitate students as they explore the career options, gain valuable experience, develop as professionals, become leaders of the country and launch their career plans with all round employability, entrepreneurship, and life skills.

Performance Overview: (as on 11.04.2023)

- ❖ A total of 337 Companies visited NITK Surathkal for Campus Recruitment/Internship.
- ❖ 82 Companies visited NITK for Placement process for the first time.
- ❖ 1458 students are placed – 787 B.Techs, 567 M.Techs, 51 MCAs, 31 MBAs, 22 MSc.

PLACEMENT RECORD FOR 2022-23

Program	% placed
B.Tech	91.08
M.Tech	74.70
MCA	94.44
MBA	72.09
MSc(PHY+CHEM)	34.92

BRANCHWISE UG PLACEMENTS 2022-2023 (as on 11-04-2023)

Branch	Total Eligible Students	Placed
CIVIL	91	65
CHEMICAL	55	50
COMPUTER	115	112
E & C	112	108
E & E	114	104
IT	112	112
MECHANICAL	180	162
METALLURGY	40	36
MINING	45	38
Total	864	787

(31 B.Tech Students have opted out of the placement process for pursuing Higher Studies)

(The data given is as on 11-04-2023 and placements are expected to continue till 30-06-2023)

Internship for the Academic Year 2022-23

Sl. No.	Branch	No. of Slots
01	Chemical Engineering	7
02	Civil Engineering	4
03	Computer Engineering	93
04	Electronics & Communication Engineering	46
05	Electrical & Electronics Engineering	32
06	Information Technology	79
07	Mechanical Engineering	29
08	Metallurgical & Material Engineering	4
09	Mining Engineering	0
	Total Number of Students	294

Number of Companies : 48	Number of Internship: 294
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17. SPECIAL INITIATIVES

17.1 Scholarships / Assistanceship

As per the guidelines of Govt. of India (MHRD) Merit and Merit cum Means Scholarship have been awarded to I B.Tech. students every year who have got 60% above marks in +2 exam and the same will be continued based on their performance in II, III & IV B.Tech. Examinations. In addition, based on performances at the semester Examinations scholarship have been awarded to the students of II, III and IV year B.Tech. Several other scholarship awarded by Central and State Govts., Endowments, Institution of Engineers etc., are enjoyed by the students. SC/ST students will be paid post-matric scholarship and facilities of Fee Concessions.

The Post Graduate students who have qualified with GATE are paid a sum of Rs.12,400/- as P.G. stipend per month. M.Tech. (Q.I.P.) Regular and (Q.I.P.) Poly are paid Rs.4,000/- per month.

Full-Time Ph.D. Research Scholars are paid institute scholarship @ Rs.25,000/-p.m for I and II year and III, IV and V year Rs. 28,000/- per month. Ph.D. QIP(R) students are paid Fellowship of Rs.9,000/- per month and a contingent grant of Rs.10,000/- per year.

17.2 Memorandum of Understanding

Sl.No	Date of Signing MOUs	Duration	Organization/Institute	Domain
1	11-04-2022	5	CSIR-Institute of Minerals & Materials Technology Bhubaneswar	To Promote Collaborative research and exchange of knowledge and technical knowhow between the two institutions in areas of mutual interest
2	19-04-2022	5	Department of Psychiatry Yenepoya Medical College, Deralakatte Mangalore	To encourage co-operation between administration on providing necessary service and expertise from either end to address the stress-related medical issues and psychological problems among NITK Students
3	29-04-2022	3	UD Trucks India Private Limited, Bengaluru	To Promote students, Faculty Employees of UD Trucks Interaction
4	10-05-2022	1	Fourth Frontier Technologies Private Limited, Bangalore	To collaborate on learning new technologies with the FFTPL program, develop project prototypes, and organise student internships
5	11-05-2022	5	NITTE(Deemed to be University), Deralakatte, Mangalore	To encourage direct contact & co-operation between their faculty and administrative staff, departments & research institutions, within fields that are mutually acceptable

6	26-05-2022	3	SEG Automotive India Pvt. Ltd, Bengaluru	To Co-operate with each other to explore the possibility of research collaboration in Electric Vehicle Technology
7	13-06-2022	3	Industry Network Technology Council (INTC)	To Promote education and collaboration on current and evolving Internet Standards in a Vendor-Neutral Environment.
8	23-06-2022	3	Robosoft Technologies Private Limited, Udupi	To collaborate in India to develop curriculums or any other mutually agreed activities
9	11-07-2022	3	Srinivas University , Mukka, Mangaluru	To encourage collaboration and synergy between their staff and students in areas like R&D, Organising conferences etc.
10	16-07-2022	5	Karnataka State Minerals Corporation limited Bengaluru	Research, Training and Internship to BE/B.Tech students by KSMCL during their Training
11	25-07-2022	3	QUNU Labs Private Limited , Bangalore	To promote interaction between QNu labs in Cybersecurity, Quantum safe internet technologies, Network Security, Cryptography, and allied areas
12	05-08-2022	2	TATA Consultancy Service Mumbai	To research collaborations and also for the development of projects and patents in the area of Quantum Computing as well as the exchange of students to the TCS to work on their problem statements.
13	05-08-2022	3	TATA Communication Limited, Mumbai	To collaborate on Learn with TCL program, develop project prototypes and TCL designed curriculum elective (2/3 credits) offered under the name TCL course. Accordingly, both Parties shall work together on developing and shaping the curriculum guided by TCL technological focus.
14	09-09-2022	3	Niveus Solutions Pvt. Ltd, Udupi	To advance multidisciplinary research, development, and education in emerging technologies and applications, such as cloud infrastructure, Data Analytics, AI, ML and a few others
15	16-12-2022	5	EM Electronix Pvt. Ltd, Bengaluru	To Promote Collaboration in the area of EV Control Unit and Charges

16	06-02-2023	5	Bharat Electronics Ltd (BEL) Bengaluru	Solving Academic research Pressing problems faced by Defence, Strategic, and Civilian Sectors
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17.3 Innovations & Technology Transfer

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Innovations:-

COMPUTER SCIENCE AND ENGINEERING

Full system modeling of POWER9 processor in a standard architecture simulator, gem5. The models are in the queue to being up streamed in the core gem5 thread.

COMPUTER SCIENCE AND ENGINEERING

Process is going on to setup MoU with ICMR- National Institute for Research in Tuberculosis

DEPARTMENT OF MECHANICAL ENGINEERING

BAJA NITK Racing car launch on 9 February 2023.

Battery Thermal Management using Boltzmann Method by Dr. Arumuga Perumal D.

DEPARTMENT OF INFORMTION TECHNOLOGY

- Prof. Ananthanarayana V S delivered presidential address in the valedictory function of 7th IEEE ICRAIE 2022 on 3rd December 2022.
- Prof. G. Ram Mohana Reddy delivered Keynote Talk on "Research Trends in IoT and Smart Applications", FDP on Applications of AI and IoT in Engg. E&ICT, NITW and GH. Patel College of Engg and Tech, V.V. Nagar, Anand, Gujarat, India, Feb. 27, 2023.
- Prof. G. Ram Mohana Reddy delivered Keynote Talk on "AIML: Research Trends and Applications", FDP on Applications of Artificial Intelligence and IoT in Engg., E&ICT, NITW and Sridevi Women's Engg. College, Hyderabad, India, Aug 22 - Aug 30, 2022.
- Prof. G. Ram Mohana Reddy delivered Keynote Talk on "AIML: Research Trends and Applications", FDP on Recent Research Trends and Applications of AIML, E&ICT, NITW and KUCET Warangal, Telangana, India, August 10 - August 20, 2022.
- Prof. G. Ram Mohana Reddy delivered Keynote Talk on "Research Trends in AI & IoT and Some Smart Applications", FDP on AI in IoT (AIOT), E&ICT, NITW and CS Dept., KU Warangal, Telangana, India, July 22 - August 02, 2022.
- Prof. G. Ram Mohana Reddy delivered Keynote Talk on "AI Trends 2050 and Smart Applications", FDP on AI for Computer Vision and Image Processing (AICVIP), E&ICT, NITW and KITS, Warangal, Telangana, India, June 6-18, 2022.

TECHNOLOGY TRANSFER

DEPARTMENT OF CIVIL ENGINEERING

Dr. Bibhuti Bhusan Das delivered a research talk on the topics "Nanotechnology (Hydration and Microstructure Characteristics)" and "Sustainable Advances and
Annual Report 2022-23

Requirements of Research in Concrete Technology in the Era of the 21st Century" during AICTE sponsored one-week online ATAL FDP on 'Advances in Construction Techniques' organized by BLDEA's V.P Dr. P.G. Halakatti College of Engineering and Technology, Vijayapur-Karnataka on 5th and 6th January 2022.

Dr. Adani Azhoni delivered two lectures entitled "Emerging environmental issues in river management" and "Hazardous Waste Management: Practices, Issues and Challenges in Karnataka" in the DST-Sponsored Faculty Development Program organized by NIT Rourkela during 12th to 16th February 2022.

Dr. Adani Azhoni delivered a lecture on "Hazardous Waste Management: Practices and Challenges" at the Short-Term Training Program on "Neoteric Developments in Solid Waste Management" organized by NIT Arunachal Pradesh during 21st to 25th March 2022.

Dr. Subhash C. Yaragal gave an Invited Talk on the topic "Water and its Judicious Use" on World Water Day organized by Karnataka Urban Infrastructure Development and Finance Corporation, under Community Awareness, Participation Rehabilitation & Resettlement Activities (CAPRR) on 22nd March 2022.

Prof. Subhash C. Yaragal was invited as Keynote speaker for Three days Workshop on "Advances in Concrete Mix Design", S. G. Balekundri Institute of Technology, Belgaum on 25th March 2022.

Dr. Rajasekaran C. delivered a keynote lecture during Two-Day National Conference on "Sustainable Infrastructure with Responsible Consumption and Production" at Velammal College of Engineering & Technology, Madurai, Tamil Nadu on 25th March 2022.

Dr. Bibhuti Bhusan Das delivered a keynote address on the topic "Hydration and Microstructure Characteristics of Nano-Silica Admixed Mortar" during US2020 Partnership Workshop on "FRP Materials and Sustainable Structures," organized by Dept. of Civil Engineering, BITS-Pilani, India, held on 4th March 2022.

Dr Sreevalsa Kolathayar delivered a keynote lecture on "Earthquake Hazard Assessment" as a Keynote Speaker in the Second Virtual International Conference ERTSE 2022 organized by the Vellore Institute of Technology, Chennai in association with Indian Concrete Institute, Chennai Centre from 24th to 25th March 2022.

Dr. Sreevalsa Kolathayar delivered a talk on "Innovative Soil reinforcement techniques for sustainable construction" in Five-Days Online e-Short-Term Course on "Advances in Transportation and Environmental Geotechnics (ATEG-2022)" at NIT Hamirpur during 4th to 8th April 2022

Dr. Sreevalsa Kolathayar delivered a talk on "Geotechnical Interventions in DRR for Sustainable Development" at 5 - Day Short-term Course on "Soil and Rock Geotechnics for Sustainable Infrastructure (SRGSI)" organized by NIT Patna from 4th to 8th April 2022.

Dr. Pavan G S delivered an Invited talk on "Structural Masonry and Rammed Earth" organized by the Department of Civil Engineering, Nagarjuna College of Engineering and Technology, Bangalore on 27th May 2022.

Dr. Babloo Chaudhary delivered a keynote lecture on the topic "17 Years after the 2004 Indian Ocean Tsunami: Are We Prepared Enough?" at the National Workshop on Recent Advances in Geotechnics for Infrastructure (RAGI 2022), jointly organized by Association of Consulting Civil Engineers (India), Mysore Centre; Indian Geotechnical Society, Bengaluru Chapter; Vidyavardhaka College of Engineering, Mysuru; ATME College of Engineering, Mysuru; Maharaja Institute of Technology Mysore; Sri Jayachamarajendra College of Engineering, JSS Science & Technology

University, Mysuru and The National Institute of Engineering Mysuru on 28th May 2022.

Dr. Sreevalsa Kolathayar delivered a keynote lecture on the topic “Disaster Geotechnics” at the National Workshop on Recent Advances in Geotechnics for Infrastructure (RAGI 2022), jointly organized by Association of Consulting Civil Engineers (India), Mysore Centre; Indian Geotechnical Society, Bengaluru Chapter; Vidyavardhaka College of Engineering, Mysuru; ATME College of Engineering, Mysuru; Maharaja Institute of Technology Mysore; Sri Jayachamarajendra College of Engineering, JSS Science & Technology University, Mysuru and The National Institute of Engineering Mysuru on 28th May 2022.

Prof. Subhash C. Yaragal gave an Invited talk on World Environment Day on “Positive changes to protect earth” at an event organized by Suez Projects Private Limited and Government College of Teacher Education, Mangalore, on 6th June 2022.

Dr. Sridhar G delivered an invited lecture titled “Utilization of Iron Ore Tailing as Granular Fill in Mechanically Stabilized Earth Walls” during National Seminar on “Applications of Geosynthetics and Natural Fibers in Infrastructure Development” organized by Department of Civil Engineering, IIT Madras on 24th June 2022.

Dr. T Palanisamy delivered a keynote lecture on “Strengthening of RC Rectangular Beam Using Externally Bonded Basalt Fiber Reinforced Sheet” in the five-day faculty development programme on “Role of Smart Materials and Sensing Technologies in the Construction Sector” on 19th December 2022 at the Department of Civil Engineering, Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, Avadi, Chennai

Dr. T Palanisamy delivered an invited talk on “Microcharacterisation of Gel and Capillary Porous of Hydrated Cement Paste” on 3rd December 2022 at the Department of Civil Engineering, Alva's Institute of Engineering & Technology, Moodubidire, DK Dist., Karnataka, India.

Dr. T Palanisamy delivered a keynote talk on “Introduction of Micro Characterisation of Concrete” on 3rd November 2022 at the Two-day workshop on Non-Destructive Testing & Repair Material Characterization, NRMC-22, organized by the Department of Civil Engineering, National Institute of Technology Karnataka, Surathkal, India.

Dr. Sreevalsa Kolathayar delivered a talk titled “Estimation of Seismic Hazard at Bedrock and Surface Level: Different Approaches” on 11th August 2022 at 10-Days FDP on " Ground Motion Modeling and Response Computations in Earthquake Engineering" organized by Electronics & Information Communications Technology (E & ICT) Academy, NIT Warangal

Dr. Sreevalsa Kolathayar delivered a talk titled “Earthquake Hazard Assessment and Risk Mitigation” on 3rd November 2022 at the Aurecon GEE Series.

Dr. Sreevalsa Kolathayar delivered a talk titled “Geohazards and risk in the Himalayan Region- A Technical Perspective” on 1st October 2022 at a Virtual workshop on planning for sustainable and resilient transportation systems for the Himalayan region organized by IIT Delhi, IIT Palakkad, IIT Ropar, NMHS.

Dr. Sreevalsa Kolathayar delivered a talk titled “Earthquake Hazard and Risk Resilience” on 30th September, 2022 organized by IGS Chandigarh Chapter.

Dr. Sreevalsa Kolathayar delivered a talk titled “Landslide Early Warning Systems - Technical Perspective” on 15th October 2022 at the Karyashala High-end workshop, funded by SERB/DST entitled "Integrated Watershed Management: Development and Emerging Trends” organized by CWRDM, Govt. of Kerala

Prof Katta Venkataramana delivered a talk titled “Engineering Seismology & Lessons from Past earthquakes” on 14th December 2022 at the online Faculty Development Programme on “Structural Engineering & Concrete Technology” organized by LBS Institute of Technology for Women, Thiruvananthapuram, during 12-14 December 2022.

Dr. Sreekumar M. delivered a talk titled “Traffic Simulation: Development and Application” on 18th November 2022, organized by Jyothi Engineering College, Thrissur.

Dr. Suresha S.N. delivered an awareness talk titled “Code of ethics to practice civil engineering” on 27th September 2022 at the Department of Civil Engineering, Vivekananda College of Engineering and Technology, Puttur. The event was jointly organized by the ACCE (I) Mangalore Centre & The Ramco Cements Ltd.

17.4 Concessions For SCs, STs, Handicapped Students

All SC/ST candidates are eligible for exemption of Tuition Fees as per the order of M.H.R.D., GOI, New Delhi.

17.5 SC/ST CELL

The SC-ST Cell was established in the year 2006 by an act of parliament, Govt. of India. The primary responsibilities of the SC-ST cell are: Monitoring implementation of reservation roster, addressing grievances of SC/ST students and employees, coordinating scholarship schemes of the SC/ST students, organizing special coaching classes for the First year B. Tech. SC/ST students, and conducting training programmes for SC/ST students and employees. In addition to the primary responsibilities, the SC/ST cell has initiated new programmes for uplifting the academic standards and communication skills of the SC/ST students so that their chances of getting placed are increased.

Important activities undertaken by the SC/ST cell for the financial year 2022-23 are given below.

Coordination of Central Sector Scholarship Schemes:

SC Students: In 2021-22, Ministry of Social Justice and Empowerment, Govt. of India under the Central Sector scholarship of Top Class Education Scheme (TCES) for B.Tech. SC students have awarded TCES. Based on JEE (Main), top 50 students from second year and top 10 students from first, third and fourth year whose family income is below 8 lakhs were awarded TCES.

ST Students: In 2021-22, Ministry of Tribal Affairs, Govt. of India under the National Fellowship and Scholarship for Higher Education of ST Students-Scholarship scheme for B.Tech. ST students whose family income is below 6 lakhs has awarded NFSHES. A total of 124 ST students from first, second, third and fourth year B.Tech., have received the NFSHE scholarship.

Financial Assistance:

To support the financial needs of SC/ST students for pursuing quality education in Engineering, a scheme called **Financial Assistance to SC/ST students** has been offered. All the SC/ST students (UG/PG) who do not receive any other scholarships

and whose family income is below Rs. 4.5 Lakhs per annum are eligible. Under this scheme, the following items are offered on reimbursement basis.

- a) Book allowance: Rs.6000/- per year (Except M. Tech. and PhD students)
- b) Waiver of Hostel Fee (Except M. Tech. and PhD students)
- Purchase of Laptop up-to Rs.45000/- per student as one time assistance.
- Academic Performance Incentives (Rs.12,000-00 if CGPA is more than 6.5 and Rs.18,000-00 if CGPA is more than 8.0 in previous year) (Except M. Tech. and PhD students)

2. Student Welfare Programs being Coordinated:

(i) Conversation Partner Programme:

This program has been initiated to create opportunities to practice, build confidence, and improve conversational English skills of SC/ST Students by partnering them with volunteering senior students who are proficient in English. In addition to improving the English skills, this program also gives an opportunity for the partnering student to serve as a 'Buddy' for the new student. In this program the students will continue as conversation partners until the senior student graduates.

(ii) Faculty Mentoring Programme:

In this program one or two SC/ST students will be assigned to each volunteering Faculty member, who will work as a mentor for guiding and monitoring the academic progress of the SC/ST students. This arrangement is anticipated to give confidence and hope for a new student who may have difficulty in understanding and following the NITK academic setup on his/her own, and it will boost their confidence as they are being mentored by their own Professors in the absence of their parents on campus. In this program, the faculty mentor will continue to serve as Mentor for the assigned students until these students graduate.

3. Co-ordinated Special Coaching Classes for 1st year B. Tech SC/ST Students.

17.6 NSS (National Service Scheme)

The NSS unit of the NITK Surathkal (formerly KREC Surathkal) has been actively rendering its services to the backward areas and villagers of Dakashina Kannada district since its inception in this institute in 1964. The NSS unit organizes regular activities like, tree plantation, clean up of the hostels and NIT K Beach, organizes blood donation, medical, dental and eye camp for the villagers. It also involves in promoting literacy to villagers irrespective of their age, and enhances educational tools and, motivates primary school children of the schools located in various villages. The NSS unit of the institute was initially part of the Mysore University, Mangalore University and Vishvesvaraya Technological University. For the year 2010, the institute has already obtained permission from the Karnataka state NSS unit to have NSS unit which is independent to NIT K Surathkal.

17.7:- YOGA:-

A full-fledged centre is running as per the guidelines of NEP -2020. 1st year B.Tech students optional for a yoga certificate course under the guidelines of a certified yoga practitioner. The course is for 1 credit upon successful completion

17.8 RIGHT TO INFORMATION ACT (RTI 2005)

The Right to Information Act, 2005 empowers citizens to get information from any 'public authority'. The Central Public Information Officer (CPIO) of a public authority plays pivotal role in making the right of a citizen to information a reality. The Act casts specific duties on him and makes him liable for penalty in case of default.

RIGHT TO INFORMATION UNDER THE ACT:-

A citizen has a right to seek such information from a public authority which is held by the public authority or which is held under its control. This right includes inspection of work, documents and records; taking notes, extracts or certified copies of documents or records; and taking certified samples of material held by the public authority or held under the control of the public authority. The Act gives the citizens a right to information at par with the Members of Parliament and the Members of State Legislatures. Right to Information Cell was established as per the MHRD letter No. F.19- 31/2005-TS- III dated 20.09.2005.

Suo-Moto disclosures are uploaded on the NITK website under RTI section. These disclosures are mandatory and are crucial to ensure transparency and accountability. This would reduce the load of RTI Applications which are freely available to citizens. The 137 numbers of RTI Applications were received during the year 2022-2023 (from 01.04.2022 to 31.03.2023).

18. INDUSTRY INSTITUTE INTERACTION

Centre for Innovation, IPR and Industrial Consultancy (CIC):-

The CIC at NITK, Surathkal is engaged in building Institute Industry Collaboration for mutual benefit. The CIC is headed by a Faculty-in-charge, usually a faculty member of the Institute. The Faculty in-charge reports to Dean (R&C) and Director. CIC Cell is mainly involved in handling of Testing and Consultancy works and Patent related works of all the departments in the Institute:

Patents filed, published and granted for the year 2022-2023

Sl.No	Particulars	Total
1	No. of Patents Filed	12
2	No. of Patents Published	14
3	No. Patents Granted	6

Testing and Consultancy works: -

Testing and consultancy revenue generated for the year 2022-2023

Year	Total Revenue
2022-2023	496 Lakhs

18.2 INDUSTRY INSTITUTE COLLABORATION

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

IBM and NITK-IBM Computer Systems Research Group, NITK are working to build POWER Processor models into the gem5, full system simulator.

DEPARTMENT OF INFORMATION TECHNOLOGY

Dr. Sowmya Kamath S

Name of Industry: Hewlett Packard Enterprise
Nature of Collaboration: Academic, Research, Workshop activities
Period/Duration: April 2020 – ongoing

Dr. Bhawana Rudra

Name of the Industry: GOOGLE
Nature of Collaboration: Research
Collaboration
Period/Duration: Life time

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

AMD India Pvt. Ltd., Intel Technologies
Dell, Technologies, Mediatek,
NXP India Pvt. Ltd.,
Samsung Semiconductors,
National Instruments,
ABB Global Industries and Services Pvt. Ltd.,
Siemens Technology & Services Pvt. Ltd.,
Cadence, Nvidia Graphics Pvt. Ltd.,
ARM, Bharat Electronics,
Calligo Technologies,
CoreEL Technologies,
Emulex Communications,
Fluxgen Engg. Technology,
Google, Infineon Technologies,
LEOS, ISRO,
MCIT, Govt. of India,
Robert Bosch, SITAR,
Synopsys, Xilinx.

Nature of Collaboration (academic, research, training etc):- Academic and Research.

Period/Duration:- April 2022 to March 2023

DEPARTMENT OF Electrical & Electronics ENGINEERING

Name of Industry: Bosch Global Software Technologies Private Limited, Bangalore
Nature of Collaboration (academic, research, training, etc.): Academic
Period/Duration: October 2022 onwards

Name of the Faculty: Dr. Prajof P., And Dr. B. Dastagiri Reddy

Name of Industry: Hella India Automotive Pvt. Ltd., Pune
Nature of Collaboration (academic, research, training, etc.): Research
Period/Duration: November 2022 onwards

Name of the Faculty: Dr. Dharavath kishan
Name of Industry: Lapa Electric Pvt. Ltd., Bangalore
Nature of Collaboration (academic, research, training, etc.): Research
Period/Duration: March 2022 onwards

DEPARTMENT OF MECHANICAL ENGINEERING

- UD Trucks India Pvt. Ltd
The nature of collaboration is academic research-oriented. (MoU Signed)
Date: -29/4/2022
- Sri Sanjay Gandhi Institute of Trauma and Orthopedic center, Bangalore Research.
Nature of Collaboration is research oriented. (In depth study of heomo compatibility of thermally sprayed coatings) Date: -2021-till time.

SCHOOL OF HUMANITIES, SOCIAL SCIENCES AND MANAGEMENT

Dr. Bijuna C. Mohan:

Name of the industry:- ; Port Trust
Nature of Collaboration (academic, research training etc):- Consultancy
Period/Duration:- 2 years
Name of the industry:- Xupoli Technologies, USA
Nature of Collaboration (academic, research training etc):- Consultancy

Period/Duration:- 3 months

Dr. Sheena

Name of the industry:- ; Thumbi Labs

Nature of Collaboration (academic, research training etc):- Consultancy

Period/Duration:- 6 months

19. SIGNIFICANT ACHIEVEMENTS

DEPARTMENT OF CIVIL ENGINEERING

AWARDS AND RECOGNITIONS

Dr. Sreevalsa Kolathayar received Er. Dr. B R Samaga Young Civil Engineer Award 2022 by The Institution of Engineers (India), Mangaluru Local Centre.

DEPARTMENT OF CHEMICAL ENGINEERING

Achievements during 1st April 2022 to 31st March 2023

1. Mrs. S. Subraja, Ph.D. scholar of the Department of Chemical Engineering was awarded the best paper presentation award during the 3rd International Virtual Conference on Recent Trends in Clean Technologies for Sustainable Environment (CTSE-2022) held at SSN College of Engineering, Chennai during September 15-16, 2022.
2. Dr. Hari Prasad Dasari of the Department of Chemical Engineering was awarded fellowship for The Institution of Engineers (Nov-2022).
3. Pranathi Samineni, Atmuri Shourya, Sunaina S Patil and Hari Prasad Dasari of M.Tech and PhD respectively of the Department of Chemical Engineering was awarded best poster and flash talk award for paper titled "Coating and characterization of Brewer's yeast template-based synthesis of Ceria/Cordierite" at IIT Guwahati , BSBB-Dec 2022.
4. Ms. Sedevino Sophia, Research scholar in Chemical Engg. Department working under the guidance of Prof. Vidya Shetty K received Best paper award for the paper entitled "Electronic waste to resource- Microbial synthesis of CuO nanoparticles from e-waste and evaluation of its catalytic activity" authored by Sedevino Sophia and Vidya Shetty K, in the International

Conference on Environmental Sustainability (ICES-2023) held at Veermata Jijabai Technological Institute (VJTI), Mumbai during 16th to 17th of March, 2023

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Department has procured the following items.

Servers:

1. NVIDIA DGX -1 with 8 no's of V100 32GB GPU, Single 20-core Intel Xeon, E5-2698 v4 2.2GHz, 512GB 2133 MHz DDR4 RDIMM, 4 no's x 1.92TB SSD RAID 0, 8 x Tesla V100 32GB each with Nvlink offering: 1 Peta FLOPS, Ubuntu Linux
2. C-NVIDIA DGX- 1 with 8 no's of V100 32GB GPU, Single 20-core Intel Xeon, E5-2698 v4 2.2GHz, 512GB 2133 MHz DDR4 RDIMM, 4 no's x 1.92TB SSD RAID 0, 4 x Tesla V100 32GB each with Nvlink offering: 480TFLOP (FP16), Ubuntu Linux

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ACHIEVEMENTS DURING 1ST APRIL 2022 TO 31ST MARCH 2023

Vipin Sharma, Sandeep Kumar, Krishna Pandey, Rachit Patel and Sapna Katiyar, ;Assistance device for Visually and Hearing Impaired Person" ; Patent Application No. 202211039377 A, published in July 2022.

Startup: PSup Communities Pvt. Ltd by Aditya LHS (2022 BTech Batch) incubated by NASSCOM.

Startup: dArticle.io by Abhishek Ghadge (2021 BTech Batch), Blockchain based Text Generation Tool for Articles.

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Awards and Recognitions

1. Dr. Prajof P., was awarded Best Paper Award for his paper titled "A Novel Bidirectional Modified SEPIC Converter with Wide Voltage Conversion Ratio" in ICNTE-2023 organized by Fr. C. Rodrigues Institute of Technology, Vashi in association with IEEE and IAS on 11 January 20-21, 2023.
2. Dr. Debashisha Jena, was awarded "Best Paper Award for his paper titled "Probabilistic Load Flow Study Considering Fuzzy Logic based Contingency Sequencing for Network Outages" in 2nd International Symposium on Sustainable Energy and Technological Advancements (ISSETA 2023) Organized by NIT Meghalaya on 24th -25th February 2023.
3. Dr. Tukaram Moger, was awarded "Best Paper Award for his paper titled "Probabilistic Load Flow Study Considering Fuzzy Logic based Contingency Sequencing for Network Outages" in 2nd International Symposium on Sustainable Energy and Technological Advancements (ISSETA 2023) Organized by NIT Meghalaya on 24th -25th February 2023.
4. Miss. Sharvani Somayaji (191EE247) of VI Sem. B. Tech was awarded Prestigious URAM Scholarship for the year 2021-22, Amount: 1 Lakh (INR).
5. Mr. Vikas Singh, Ph.D Scholar awarded Best Paper Award for his paper titled "Probabilistic Load Flow Study Considering Fuzzy Logic based Contingency Sequencing for Network Outages" in 2nd International Symposium on Sustainable Energy and Technological Advancements (ISSETA 2023) Organized by NIT Meghalaya on 24th -25th February 2023.
6. Mr. Sunil Mandol, Ph.D Scholar awarded Best Paper Award for his paper titled "A Novel Bidirectional Modified SEPIC Converter with Wide Voltage Conversion Ratio" in ICNTE-2023 organized by Fr. C. Rodrigues Institute of Technology, Vashi in association with IEEE and IAS on January 20-21, 2023

Notable Achievements: Achievements during the year

1. Dr. Gururaj S. Puneekar was invited member of Expert Review Committee meet at MVJ College of Engineering, Bangalore.
2. Department of Electrical and Electronics Engineering started New M-Tech Programme on Power Electronics and Control for Electric Vehicle Sponsored by Bosch Global Software Private limited (BGSW) Bangalore in Hybrid mode (classes online and Exams at NITK Surathkal).

DEPARTMENT OF INFORMATION TECHNOLOGY

ACHIEVEMENTS DURING 1ST APRIL 2022 TO 31ST MARCH 2023

- **Prof. G. Ram Mohana Reddy** selected as an IEEE Computer Society Distinguished Visitor (Jan. 1, 2023 to Dec. 31, 2025)

DEPARTMENT OF MATHEMATICAL & COMPUTATIONAL SCIENCES

Achievements during 1st April 2022 to 31st March 2023:

1. Dr. D Pushparaj Shetty of MACS Department, Served in the Execom Committee of IEEE Mangalore Subsection as past chair during the year 2022.
2. Invited Lecture delivered By Dr. R Madhusudhan of Department of MACS on 16-05-2022, titled "RDBMS and data queries", A Short Term Course on "21 Days Summer school on Geospatial Science and Technologies", Department of Water Resources and Ocean Engineering, NITK, Surathkal.
3. Dr R Madhusudhan of MACS Department is a BOS Member, MSRIT, Bangalore, 07-05-2022.
4. Dr R Madhusudhan of MACS Department is a BOS Member, Galgotias University, Uttar Pradesh, India. 22-05-2022.

5. Dr R Madhusudhan of MACS Department is a Technical Committee member of NIMCET 2023.
6. Jidesh P. Member of BOS, MSc. Computer Science, St Aloysius College, Mangalore University.

DEPARTMENT OF MINING ENGINEERING

Signed MOU with following Institutes/organisations:

1. Karnataka State Minerals Corporation Ltd., for facilitating internship to UG students, training KSMCL personnel, and R&D in the Mining Engineering Domine
2. JSW Steels, Bellary for conducting High Impact Research in the areas of Mineral Processing and Environment (July 2022).
3. CSIR -Institute of Minerals and Materials Technology (Council of Scientific & Industrial Research), Bhubaneshwar to promote collaborative Research and Exchange of Knowledge in the area of Mineral Beneficiation and Mine Environment Science and Engineering (April 2022).

Awards and Recognitions:

- 1 Member of the Technical Committee constituted by the Karnataka State Pollution Control Board to give recommendations for Building Stone Quarrying activities in the year 2022 (May – July).
- 2 Member of the Technical Committee constituted by the Hutti Gold Mines Company Limited to explore feasibility and viability of mine reefs of Bharath Gold Mines Company Limited in the year 2022 (September).
3. Dr. K. Ram Chandar is Member Board of Studies- Kakatiya University- Warangal, Telangana (2022-2024).
4. Dr. K. Ram Chandar is Member Board of Studies- Mallareddy University- Hyderabad, Telangana (2022-2024)
5. Dr. Sandi Kumar Reddy is Member of PhD Pexpert panel-Visvesvaraya Technological University, Belgaum

DEPARTMENT OF METALLURGICAL & MATERIALS ENGINEERING

Faculty Achievements:

Progress in Polymer Research for Biomedical, Energy and Specialty Applications by S. Anandan, Selvakumar Murugesan, and Arunjunairaj Mahendran. CRC Press, Boca Raton, USA, 2022 BocaRaton, ISBN 9781032061009

Students Achivement:

1. Best Paper Award by Karakavalasa Kailasam, Robbi Vivek Vardhan, Saumen Mandal, “Low-cost fabrication of hydrophobic ceramic coating (Yb_2O_3) at low temperature on SS substrate by solution combustion technique”, “National Symposium on Electrochemical Science and Technology (NSEST 2021)”, June 24th – 25th, 2022, IISc Bengaluru, India.
2. Best poster presentation award by Rahul Kumar Singh in International conference on corrosion and coating (i3c) paper titled "Flow accelerated corrosion of API X70 steel in 3.5 wt.% NaCl solution with the addition of CO₂ gas".
3. Prasanna Sarkar got selected for two highly competitive research internships in 3rd year summer, 1) Mitacs Globalink & 2) IAS SRFP 2022.
4. Prasanna Sarkar got selected Mitacs Globalink program provides about 9000 CAD of financial support for 12 weeks.
5. Prasanna Sarkar worked on project titled “Laser ablation for energy storage” in Ontario Tech University, Canada.
6. Sukrit Dass (MT23S61227157) student of our department, who secured All India rank 84 in GATE 2023.
7. Rohit Singh (MT23S61227031), student of our department, who secured All India rank 132 in GATE 2023.

DEPARTMENT OF PHYSICS

Awards and Recognitions

- Anupriya James - Best poster presentation award in EMEE conference held at IIT Roorkee.
- Nishita Pawar - Received 1st prize in oral presentation in the international conference on Recent Advancement in Material and its applications (ICRAMSA'23)

SCHOOL OF HUMANITIES, SOCIAL SCIENCES AND MANAGEMENT

Dr. S. Pavan Kumar

1. Best paper award was conferred to Saraf, H. S., & Kumar, S. P. (2023). for the research paper "Engineering education for sustainable development: Bibliometric analysis" in the Tenth International Conference on Transformations in Engineering Education (ICTIEE 2023). Organized by IUCEE, held during 5th -8th January 2023.

DEPARTMENT OF WATER RESOURCES AND OCEAN ENGINEERING

Awards and Recognitions

Alka Abraham and Subrahmanya Kundapura "Identifying the potential impacts of climate change in streamflow in a humid tropical basin", 2nd International Conference on River Corridor Research and Management, 30th May – 1st June 2022, Combinedly held by IIT Guwahati and IIT Jammu.

Parthasarathy K S S and Subrahmanya Kundapura, "Mapping of Flood inundated urban regions using Sentinel-1 SAR imagery for the 2018 and 2019 Kerala floods", 2nd International Conference on River Corridor Research and Management, 30th May – 1st June 2022, Combinedly held by IIT Guwahati and IIT Jammu.

Ms. Elisuba Kuruvilla, Akshya Soman Research Scholars & Dr. Subrahmanya Kundapura, Dept. of Water Resources and Ocean Engineering, has received 'Best Paper Award' for the paper titled 'Machine Learning Ensemble Model for Flood Susceptibility

Mapping' in the 7th IEEE International Conference on recent advances and Innovation in Engineering (7th IEEE ICRAIE 2022) held during 1st December to 3rd December 2022 held at NITK, Surathkal

Deepa C, Research Scholar Dept. of Water Resources and Ocean Engineering, has received Student Travel Grant to participate in the 2022 American Geophysical Union (AGU) Fall Meeting, 12-16 December 2022, in Chicago, Illinois, USA

Addition(s) to Building Infrastructure Building Infrastructure

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

The building vacated by the Dept. of Computer Science and Engg. (while moving to a new building) has been allotted to the Dept. of E&C Engg.

ACHIEVEMENTS



Several batches of KREC/NITK visited the campus in person during the months of May 2022 to March 2023. Moreover, NITK Surathkal Alumni Association organized 14th Global Convention from December 23-24, 2022 in the campus.

The alumni footfalls in NITK campus started with 1979 batch visiting the campus in the month of May 2022, almost after 43 years of graduation. During their visit, they interacted with several departments and centres to know how they can assist the institution going forward. Some of the alumni from this group have initiated a team called “IMPACT ‘79” to improve the ties with industries and bring quality R&D projects to NITK.

1979 batch alumni Meeting with Hod’s and Centre heads

Subsequently, alumni from 1978 batch visited the campus during November 24-26, 2022. The batch visited all the departments and had discussions with faculty to explore the areas in which they can extend their support to the institution. A few of them also contributed to the institution’s endowment fund.



1978 batch alumni with Director (i/c) Dean Alumni Affairs



MCA reunion group at SAC

On November 26, 2022, a group of MCA alumni (1994-1998 batch) visited the campus. They held a stage function and felicitated their faculty members. Besides, they also assured of contributing to the alma mater in various possible ways.



Alumni Group of 1976 batch handing over donation

About 65 alumni from 1976 batch visited the campus during 9-11 December 2022. The group had a stage function in the Main Seminar Hall and also visited different departments and centres. The reunion batch also contributed to the Institute endowment fund. One of the alumni from this batch Dr. Bopaya Bidanda from university of Pittsburg USA which was attended by students and faculty.

During 16 – 18th December 2022 a group of alumni comprising of old students from 1971 - 75 batch (KREC Friends) was on campus for reunion. A stage function was organized in the Main Seminar Hall with faculty and administrative officials attending the event. Sri N G Tukaye MD of EM Electronix delivered a talk on Manufacturing for Defense applications. The talk was attended by faculty and PG students. The batch also contributed generously to the Institute endowment fund. During this time a E Vehicle model developed by CSD and sponsored by 1972 batch was launched.



MOU exchange with EM Electronix



N G Tukaye MD EM Electronix delivering Talk

Alumni from 1977 batch, 1980 batch and 1985 batch also had their reunion and were on campus during 20-22 December 2022.



1980 Batch reunion



A group from 1977 batch



A group from 1985 batch in front of First Hostel Block



Stage function of 2000 batch reunion

On 22nd December batch of 2000 visited the campus and went around the campus and expressed their happiness about the research work taken up in the Institute. They also assured of supporting their alma mater in near future.



The Global Alumni association (NITK Surathkal Alumni Association) organized 14th Global Convention on the campus during 23-24 December 2022. About 270+ alumni attended the convention with many alumni joined by their families. There was representation from alumni from most of the batches including 1967 batch to 2021 batch. Alumni from USA, UAE, Ethiopia, and many other countries participated. A grand stage function was organized in the Silver Jubilee Auditorium. All the Faculty and Non-Teaching staff of the Institute were invited for the event. During the two days of the convention sessions on Education and Technology, Panel Discussion, Author's corridor, Entrepreneur's lane, Launch of E Vehicle, and entertainment events like classical music, sand art, and Yakshagaana were organized.

Address by Director (Additional Charge) Prof Prasad Krishna during the inaugural function of GC-14



Batch of 1982 organized their reunion on 7th and 8th of Jan 2023. A stage function was held in LHC-C Seminar Hall. A few of the retired faculty who taught the batch were felicitated along with the Director and other officials of the Institute. The batch also visited CRF and CSD and departments.

Handing over books authored by our alumni to Library



Address by director (additional Charge) Prof. Prasad



Krishna Felicitation to teachers



Felicitation to teachers



At CSD and CRF

On Behalf of the Director and entire NITK Family, we congratulate and thank all the batches who had their reunion and also congratulate and thank the organizing committee of NITKSAA 14th Global Convention. We look forward to alumni visiting the Institute regularly and extending their support in the growth of the Institute.

On 04th of February 2023, 1973 batch organized their reunion on the occasion of completing 50 Years of graduation (Golden Jubilee Reunion). 73 batchmates with families attended the event. The stage function was organized in LHC C Seminar Hall during which the batch felicitated their teachers. The batch visited all the Departments, Library, and different Centers. They also pledged to renovate two lawn Tennis courts of the institute and provide an Astroturf surface for these two courts. The Bhumi Pooja was performed on 05th Feb 2023.



A group from 1973 batch in front of the Library



1973 batch at the lawn Tennis court

Award of cash and certificate of merit for the wards of Non -teaching and Contract staff.

NITK/KREC Alumni of the 1981 batch have profoundly contributed to support NITK Non-teaching and contract staff by contributing Rs. 4,73,663/- to NITK/KREC endowment fund. The purpose of the contribution is to award a cash scholarship and certificate of merit for SSLC passed children of NITK Non – teaching and contract staff. The award is a cash scholarship of Rs. 10,000 each for two meritorious and deserving children of nonteaching/contact employees who secured the highest score in their SSLC examination (of 2020-21 and 2021-22) every year. These students are Mr. Karthik R Poojary S/o Mrs. Sandhya Chemical Engineering Department and Ms. Muktha Patil D/o Mr. Prakash Gouda S.N Security Office, Mr. Manish R Shettigar S/o Mrs. Yashoda, NITK Hostel and Mr. Pawan P Bangera S/o Mr. Purandara Security office. This cash scholarship was given during the NITK Foundation day on 6th August 2022.

Yoga Camp 1st to 7th June 2022:-

NITK organised a Yoga practice camp under the guidance of Guru Raghavendra Rao from 1st to 7th June 2022. Around 200 faculty, staff and their family members and students were regularly attending the camp from 5.30pm to 6.30pm.

It was indeed a great experience for everyone present there to practice this holistic approach of life under the guidance of the renowned practitioners of this field. Everyone praised and expressed their heartfelt acknowledgement and thanks to the organizing team and the Yoga experts for organizing such mesmerizing and healthy sessions and were insisting the staff and students to continue the same practice of Yoga at their daily lives. Refreshments were served at the end.

Fig: 1

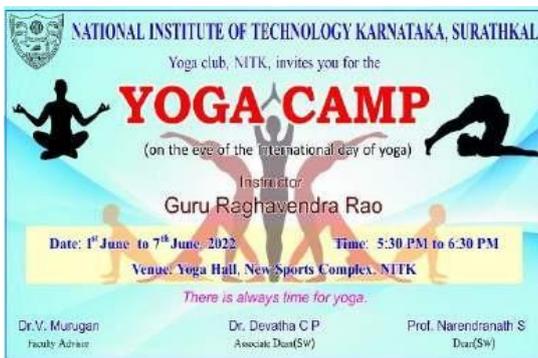


Fig:2



Fig: 3

Fig:4



Fig:5

Fig:6



Fig:1,2,3,4,5,6 Yoga Camp in Yoga Hall New Sports Complex

8th International Day of Yoga



On the occasion of the celebration of International Day of Yoga on June 21st 2022, the live streaming of Honorable Prime Minister's programme was arranged in Digital Library of our Institute from 6.30 am onwards. All the officials of the Institute along with faculty, staff and students attended the programme. The honorable Prime Minister's message to the students, faculty, and Staff emphasized the importance of Yoga and how yoga helped the nation to recover from the pandemic.

Live streaming of PM's Programme from Digital Library

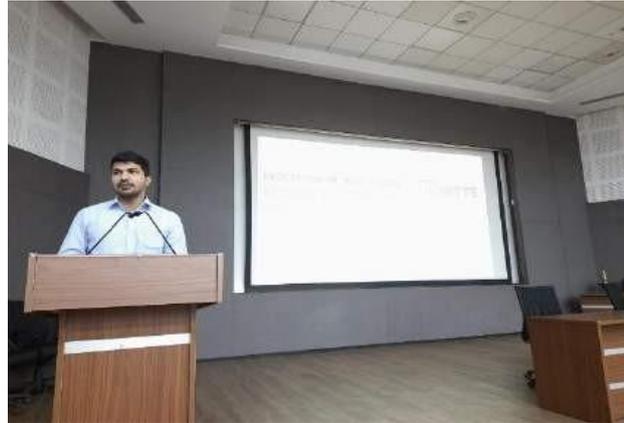
It was followed by a mass demonstration of the Common Yoga Protocol with full of enthusiasm and healthy spirit in the Yoga Hall of New Sports Complex. Around 350 participants including Faculty, staff, students and research scholars attended in the programme. The programme was coordinated from the office of the Dean (Student Welfare). All the participants were given a specially designed T-shirt for the IDY. Prof. Vidya Shetty, Dean Academic and I/c Dean (SW) delivered the welcome address. Prof. Udayakumar R Yaragatti, Director I/c NITK, delivered the introductory speech and enlightened the gathering about the benefits of Yoga. Yoga Guru Shri. Radhesh Mohandas, an alumnus of NITK batch of 1999, B.Tech. (CS NITK), MS demonstrated various yogic postures as per the Common Yoga Protocol suggested by Ministry of AYUSH, MOE GoI and also explained the benefits of those asanas and pranayamas. He demonstrated all types of Asanas (Standing, Sitting, Supine position and prone position asanas along with Suryanamaskar in the beginning) and few techniques of Pranayamas to the participants. He also explained about the holistic approach of Yog and its benefits for different hypo kinetic diseases of modern society. The session ran for almost two hours and at the end everyone were feeling relaxed and reenergised. The session ended with the chanting of the Shanti Mantra and meditation.





Yoga Programme and demonstration, practice

The second part of the IDY celebration held at Lecture Hall Complex - C where Dr. Arun Thejaus K. P. (BNYS, MDO from NITTE university, Mangalore shared his vast experience on “Yoga and Traditional System of Medicine”. He explained the importance of Food and food habits for a healthy life style and fit body. He emphasised on the challenges of health in the primitive period to modern era and presented a detailed cross-sectional study of how the food playing the only role in our life. The session was highly effective to the participants.



IDY Celebration held at Lecturer Hall Complex C

BAJA Club Activities

BLENDER WORKSHOP by BAJA Club:

BAJA NITK organised Blender workshop for the students of NITK Surathkal. Blender session was a 3 hour long sessions for 2 days conducted in the Mining Seminar Hall of NITK during 26th to 27th August 2022.



Blender workshop by BAJA Club

CAR LAUNCH by BAJA Club:

A new 4 wheel drive car was launched on 9th Feb 2023. It was named BNR Achilles and this was the result of continuous effort of BAJA Club members. The proud moment for the team to launch the vehicle in the presence of dignitaries of NITK and visiting professor, Dr. Jessica, ECAM, France.



Launch of BNR Achilles, 4 wheel drive car by BAJA Club

Music Club Activities:

Unplugged Music night was organised by Music Club, NITK on 10th February 2023 at the pavilion, the event was an acoustic music night. The audience immersed itself in soulful music, the lighting added an extra dimension to the already magical stage armed with a stunning setup. From the choice of instruments to relaying the beauty of their music, the musicians made it memorable.



Music night by Music Club

Encore Music Night organised by Music Club, the event encompassed songs from Western and Eastern tracks. The event opened with an English song ,”Wavin Flag”.The setlist consisted of 22 songs with 11 songs each from Eastern and Western compositions. The Eastern tracks covered languages like Hindi, Sanskrit , Tamil and Kannada. Western songs covered genres ranging from Pop, Rock and 60’s rock. The new addition to this music night was that a Japanese song was performed for the first time. The song was called Sign.



Encore Music Night by Music Club

AMATEUR ASTRONOMY CLUB ACTIVITY:

Antariksh was organised by AAC club on 24th and 25th September 2022 from 10:00 AM - 6:00 PM , Antariksh is the AAC Project Expo held every year during the tech fest, Engineer. A few interesting projects like Mars Rover, JWST model and Black hole image model were presented in the expo. Astrofest is the another flagship event organised by AAC Club on 24th March 2023. This was an astronomy themed quiz with questions ranging from various domains of science and physics.



Astrofest event organised by AAC Club

SPICMACAY Club Activities

SPICMACAY NITK organized a Hindustani Vocal music concert on Friday, 10 March 2023 at the SJA. presented by prominent classical musician Shri. Koushik Aithal, who belongs to the Kirana Gharana style of Hindustani music. He was accompanied by



Shri. Yogeesh Bhat on the Tabla and Shri. Sameer Havaldar on the Harmonium. The second concert of the circuit was arranged at AB Shetty Memorial College of Dental Sciences, a part of the NITTE Group of Institutions, on the morning of 11th March 2023. Shri. Aithal presented a Bandish in Raag Ahir Lalit followed by compositions in Raag Ahlaiya Bilawal, Desh, and a few bhajans of Purandaradasaru and senior



Hindustani vocalist Pt. Parameshwar Hegde.

Hindustani Vocal music concert by SPICMACAY Club in SJA

Aradhana 2023 organised by SPICMACAY NITK (Internal) from 1st to 3rd Feb 2023. In the morning, various competitions were held with school students (from classes 1 to 10) from in and around Mangalore as the contestants and in the evening, budding classical artists from inside and outside the college showcased their skills in various Indian classical art forms. The events attracted 161 registrations. The concerts consisted of various performers ranging from instrumental to singers of both Classical and Hindustani, along with dancers of various forms, such as Bharatnatyam and Yakshagana.



Aradhana 2023 organised by SPICMACAY

Utkrishta Bharath Club Activities:

The Kalaripayattu Performance the rich legacy of the martial art form of Kerala organized by Utkrishta Bharath on 15 Aug 2022. The event saw noted exponents from Hindustan Kalari Sangam, Kozhikode imparting stick, sword, marma and other combat techniques by the martial arts enthusiasts.



The Kalaripayattu Performance organised by Utkrishta Bharath

Hindi Evam Sanskrit Club (HESC) Activities



Hindi Pakhwada was organised by HESC , it is a long event organized to spread awareness about among students from various backgrounds. The on 14th September 2022 and concluded on 29th 2022.

Netaji Subhash Chandra Bose Jayanti:-

On the occasion of Netaji Subhash Chandra Bose Jayanti, HESC organized multiple events on 23rd January and 24th January. Students participated in the events and pay tribute to their beloved leader Netaji Subhash Chandra Bose. Various competitions were held on the occasion of Netaji Subhash Chandra Bose Jayanti like Essay writing, poem recitation, Painting competition.



Banner of Netaji Subhash Chandra Bose Jayanti celebration in our Institute Jayanti



Celebration of Netaji Subhash Chandra Bose



Celebration of Netaji Subhash Chandra Bose Chandra Jayanti



Essay Competition during Netaji Subhash Bose Jayanti



Painting Competition during Netaji Subhash Chandra Bose Jayanthi

MOTHER TONGUE DAY

On the auspicious occasion of **International Mother Tongue Day**, the Hindi and Sanskrit Club got the opportunity to organise various programs. NITK is a diverse place where thousands of students come from different cultural backgrounds to learn from all over India. Large number of students participated in the events like Folk song competition, guess who competition, Linguistic Workshop.



Folk song competition banner competition during International Mother Tongue Day



Participants of Folk song



Guess who competition during International Mother Tongue Day



Linguistic Workshop

IEEE Club Activities

IEEE NITK Student Branch is proud to have hosted the 7th edition of the **IEEE International Conference on Recent Advances and Innovations in Engineering (ICRAIE 2022)**, which was held from the 1st to the 3rd of December 2022 . The

conference featured 3 research tracks - Computer Science/Information Technology, Electronics & Communication Engineering, and Electrical Engineering respectively.



Inauguration of IEEE International Conference

Embedathon was an Embedded Systems hackathon held over a course of 16 weeks from December 2022 to February 12th 2023. The event included hardware and software subtasks followed by the final hackathon. The event saw a participation of nearly 500 people. Expert tech talks and workshops were also conducted as part of the event.

Dishaspoorti organised by IEEE Club:-



Dishaspoorti event organised by IEEE Club

As part of the event **Dishaspoorti** organised by IEEE Club, the students from 8th, 9th and 10th grade of the NITK Kannada Medium School were mentored and introduced to various new concepts such as logic gates, Vedic math, and basic Python programming. An advertisement competition where students were to enact an advertisement on a product of their choice was also conducted.

Orientation and Induction Programme:

The Orientation Programme for all the first year B.Tech. students was conducted on 10th November 2022 at Silver Jubilee Auditorium (SJA) of the Institute. All the First year students along with their parents have attended the programme.

Fig:1

Fig: 2



Inauguration Ceremony of Orientation Programme in SJA

Induction Programme for the benefit of newly joined first year students was conducted from 10th to 13th November 2022. First year students given training in various aspects of fitness, stress management. They also exposed to various art forms, music, etc..





Induction Programme was conducted for first year B.Tech students

NSS Activity

BEACH CLEAN UP DRIVE AT IDAYYA BEACH

The event was organised collectively by the Centre for Marine Living Resources and Ecology, Kochi and NSS NITK at Idayya beach, Surathkal on August 30th 2022. A grand total of 115 members of NSS NITK were present at the site. The Dean of Student Welfare was the Chief Guest at the event. In evening clean-up drive was started in the beach, by picking up all the plastic found alongside the sea coast. The total waste collected was 350 kg. The waste was taken by the Centre for Marine Living Resources and Ecology, Kochi for Recycling purposes.



Beach Clean up Drive

SWATCHATHA PAKHWADA

The event was conducted on NITK beach on the eve of Swachhata Pakhwada. The program was proposed to bring a fortnight of intense focus on the issues and practices of Swachhata by engaging various departments of the Government. Total waste of 600 kg was collected from the beach. The waste was taken for recycling.



SWATCHATHA PAKHWADA cleaning drive

SWACHHTA PAKHWADA - 2

The event was conducted in Sasihithlu beach on the eve of Swachhata Pakhwada. The event is conducted from September 1st to September 15 2022. NSS NITK conducted a Clean drive on 10th September 2022. The event began at 8:00 in the morning and a total of 50 students and the localities also attended the event. First, cleaning the waste around the village roadside and then moved slowly towards the beach for cleaning up the beach.

SWACHHTA PAKHWADA in Sasihithulu beach



Rashtriya Ekta Diwas Celebrations 2022 and “Unity Run”

On the occasion of 147th birthday of Sardar Vallabhbhai Patel, NITK Surathkal organized Rashtriya Ekta Diwas celebration followed by Unity Run on 31st October 2022. Director, Deans, Registrar, Joint Registrar, All Assistant Registrars, All Associate Deans, Faculty, Staff and Students assembled at the Institute Main Building at 6.45AM.

The Unity Run from NITK to Surathkal City and back to NITK covering a distance of about 5 kms was kick started by waving the Flag by the Chief Guest. More than 900 students including with faculty and staff participated and successfully completed the run.

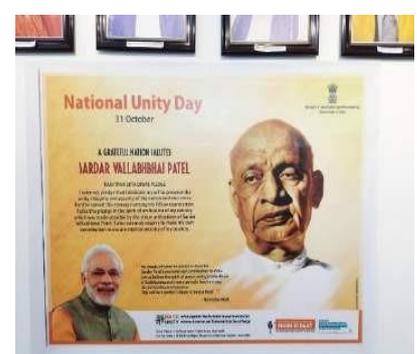
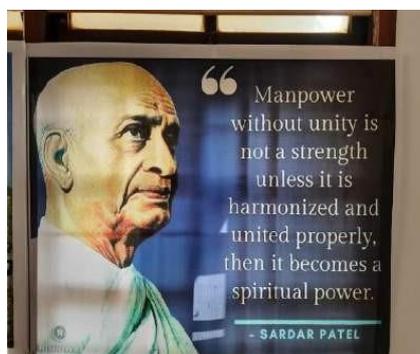
Fig: 1



Fig:2



Rashtriya Ekta Diwas Celebrations 2022, Unity Run organised by NITK To celebrate the life and contributions of Sardar Vallabhbhai Patel, an exhibition titled "Sardar Patel" was held from 25th to 31st October 2022 in Diamond Jubilee Exhibition Hall Main Building.



An exhibition titled "Sardar Patel" was organised

Kananda Vedike Activities HUDUGAT HUDUKATA

Kannada Vedike organized one of its flagship events – Hudugata Hudukata on 27th of August. Registrations for the event were only open to the freshers of NITK . The main motto of this event was to introduce the freshers to Kannada and make them learn a few words in Kannada by making them explore the NITK campus by playing the treasure hunt in which the clues printed in Kannada. 136 teams had registered for this event out of which 128 teams participated. Each team had 3-4 members in it with at least one non- Kannadiga and at least one Kannadiga. In total, 503 students participated in the treasure hunt. The event started at the Students’ Activity Centre(SAC). Participants were asked to perform activities like singing, dancing, and introducing themselves in Kannada and were taught a few simple Kannada words to the non Kannadiga participants.



HUDUGAT HUDUKATA and event winner

Koti Kanta Gayana: - On 28th October 2022, Koti Kanta Gayana, an event initiated by the Karnataka government was conducted in Pavilion at 11:00 am. More than 250 people participated in the event including Director, All Deans, Registrar, Joint Registrar, All Associate Deans, Assistant Registrar, HoD's students and Staff. The event was a unison singing event of various Kannada songs that reflect the heritage and culture of Karnataka, namely, "Nada Geethe", "Udayavagali Namma Cheluva Kannada Nadu", "Barisu Kannada Dindimava", "Hacchevu Kannadada Deepa", "Vishwavinutana Vidyachethana", and Huttidare Kannadanadinalli Huttabeku".



Koti Kanta Gayana event in Pavilion

Kannada Rajyotsava - Parva Main Event:-

On 3rd November 2022, the main event of Kannada Rajyotsava was held with Prof. Gururaj Krajagi (Director of Academy of Creative Teaching, Bengaluru) as Chief Guest, Shri. Nakul Abhiyanekar (Music Director & Playback Singer) as Guest of Honour, along with the honorable presence of Prof. G C Mohan Kumar (Director in charge NITK), Prof. Narendranath S (Dean - Student Welfare) and Dr. Raviraj H M (faculty advisor of Kannada Vedike NITK). The event started at around 4:00 pm with the procession of Kannadambe followed by cultural programs in SJA and the day concluded with Bhuri Bhojana, a dinner organized by Kannada Vedike in Old Sports Complex.



Kannada Rajyotsava – Parva celebrated in SJA

Engineer 2022

The annual technical symposium of National Institute of Technology Karnataka (NITK) Surathkal, Engineer 2022 was celebrated from 22nd to 25th September 2022. The 3 day long event commenced in the presence of Mitra-humanoid robot. Dr. Venkata Ramana Akkaraju, Chairman, New Mangalore Port Authority, Ministry of Ports, Shipping and Waterways Government of India was the chief guest for the inauguration ceremony. There was filled with eye-catching events and workshops like Bot Hockey (hockey played by bots built by students), wright flight(flying models built by students) gaming event, The Space Quiz, Engixlor, Engi Talk, Antariksh, Drone Competition, Fox Hunt, Squid Game, NITK Racing Workshop, Engineer Hackathon, Magic Show and many more events. Following this the college aura was heated up as the students danced in the beats of DJ Night.



Inauguration Ceremony Of Engineer 2022 in SJA

DJ night during Engineer 2022

Incident

Incident, the Annual Cultural Fest of National Institute of Technology Karnataka, Surathkal was back with a bang from the 16th to the 19th of March. Themed "A Tale of Bards and Knights", Incident 2023 truly brought a medieval vibe to the lush-green campus of NITK and set the stage for arguably the grandest edition of the fest.

Incident was officially inaugurated at 6 PM at a formal ceremony featuring lots of high-profile guests like Shri Prakash Belawadi, Shri Shanth Thimmaiah and Smt. Tulsi Gowda. It was truly a fitting inauguration ceremony for the festival.

Now coming to the day events, there were a plethora of competitions held across all 3 days of the festival across various domains such as Music, Dance, Sports, Literature, Business, Fashion, Drama and many more. Incident 2023 witnessed huge numbers in participation from outside of NITK too and everyone were eager to make a mark on this fabulous stage. The day events also consisted of various performance-based events such as Inci-Talks (Shri Shankar Bidari and Shri Girish Bharadwaj), Acts by street performers like Fire shows, juggling, magic shows and even Bike Stunt Shows.

All the days would conclude with the Pro-Shows which were held at the main ground. The Incident 2023 Pro-Show lineup was nothing short of spell-binding. The Pro-Show of Day 0 was a Comedy Night headlined by Gurleen Pannu, an upcoming artist in the comedy scene. Day 1 Pro-Show was the Fusion Night and there were spectacular performances by Mysore Xpress and Masala Coffee on a stunning stage setup. It was truly a night to remember. Day 2 was the DJ Night which was headlined by 2 renowned DJs DJ Aceaxe and DJ Gian Nobilee. And last but certainly not the least, the last performance at Incident, the Day 3 Pro-Show was by none other than Sunidhi Chauhan and to tell that she set the stage on fire would be an understatement.



Incident Inauguration by Shri Prakash Belawadi, Shri Shanth Thimmaiah and Smt. Tulsi Gowda.



various competitions organised during Incident



Bollywood night by singer Sundhi Chawhan

20. ASSOCIATED CENTRES

NITK - Science and Technology Entrepreneurs' Park (STEP)

The country will celebrate January 16 as national startup day. Our startups are changing the rules of the game. Startups as the “backbone” of new India and the engine that will power the nation’s economic growth in the run-up to the 100th year of independence said, Prime Minister Narendra Modi. Today entrepreneurship has created many opportunities for creative minds across various fields. As Prime Minister said it has been inspiring in many ways. Our society and people taking the entrepreneurial plummet have led to capital flow into the Indian startup. As said by PM, our nation will be the next hub of innovation. We step will keep striving hard to amplify this growth.

WE CONDUCTED 8 TRAINING PROGRAMMES DURING THE YEAR.

NAME OF EVENT

1. IOT WITH MACHINE LEARNING AND DATA SCIENCE (ONLINE PROGRAMME CONDUCTED TWICE)
82+77= 169

2. INTERNSHIP ON SMALL SATELLITE DESIGN-2021 (ONLINE PROGRAMME)
52

3. SHORT-TERM COURSE ON PCB DESIGN USING OPEN-SOURCE TOOLS FOR BEGINNERS (ONLINE PROGRAMME)
70

4. INDUSTRIAL INTERNSHIP ON IOT WITH MACHINE LEARNING & DATA SCIENCE (ONLINE PROGRAMME CONDUCTED TWICE) – **60 + 57= 117**

5. ONE MONTH INTERNSHIP ON IMAGEPROCESSING – **68**

6. ONE MONTH INTERNSHIP ON ARTIFICIAL INTELLIGENCE – **90**

VARIOUS ACTIVITIES:

1. On 26th April 2022, ARUN M ISLOOR (Professor I/C NITK-STEP) gave a talk on the Relevance of IPR to the Academic Environment on the

occasion of WORLD INTELLECTUAL PROPERTY DAY.

2. On 2nd, and 5th May 2022, Dr. LAKSHMI SHIVANAND and Dr. NAGARAJAYYA (professors) at Reva University, Bangalore visited STEP along with 49 Students. ARUN M ISLOOR (Professor I/C of NITK-STEP) deliver a talk on ‘Startups for Students’.
3. Be an entrepreneur – Become an Employer 2021-22 Government of Karnataka organized a workshop on “Be an Entrepreneur – Become an Employer” to create awareness among young professionals and graduate students on the advantages of becoming a self-reliant entrepreneur and contributing to the economy instead of seeking employment. The program was held on 12th May 2022 at TMA Pai International Convention Centre, M G Road, Kodialbail, Mangaluru. ARUN M ISLOOR (Professor I/C of NITK-STEP) participated in the same.
4. On 24th May 2022, NITK & National Innovation Foundation (NIF), an autonomous body of DST, Government of India jointly organized a day-long workshop ‘INSPIRE - MANAK’. This was a mentoring workshop where 63 students of 6-12 std from across Karnataka who are shortlisted for National level Exhibition and Project Completion (NLEPC). The program was Coordinated by ARUN M ISLOOR (Professor I/C of NITK-STEP).
5. On 3 June 2022, Startup Karnataka, KITS, Department of E, IT, Bt and S & T, Government of Karnataka had organized a Zoom webinar on ‘Beyond Bengaluru Startup Grid-All Hands call’ ARUN M ISLOOR (Professor I/C of NITK-STEP) and STEP staffs participated in the same.
6. On 22 June 2022, Karnataka Digital Economy Mission (KDEM) arranged an Online Meeting on Karnataka Accelerator Network - Stakeholder Consultation in which ARUN M ISLOOR (Professor I/C of NITK-STEP) and STEP staffs participated.

7. On 23 June 2022, N.M.A.M. Institute of Technology, College in Deralakatte arranged an Online Lecture in which ARUN M ISLOOR (Professor I/C of NITK-STEP) spoke on 'The Art of Innovation in Academia'.
8. On 26 June 2022, the "KREC 79ers Impact group's" team visited NITK-STEP and discussed the activities and future vision of STEP. ARUN M ISLOOR (Professor I/C of NITK-STEP) and Incubatees of STEP were percents.
9. On 8th July 2022, ARUN M ISLOOR (Professor I/C of NITK-STEP) deliver a talk on 'Startups for Students' for NITK Students at the Digital Library seminar hall NITK. Around 49 students participated.
10. On 15th July 2022, ARUN M ISLOOR (Professor I/C of NITK-STEP) deliver a talk on INNOVATION IN ACADEMIA at SDM College of BUSINESS ADMINISTRATION, Mangalore.
11. On 27th, July 2022, NIT Andhra Pradesh, arranged an Online Session in which ARUN M ISLOOR (Professor I/C of NITK-STEP) spoke on Accelerators/Incubation Opportunities for Students & Faculties- Early-Stage Entrepreneurs.
12. On 27th August 2022, ARUN M ISLOOR (Professor I/C of NITK-STEP) deliver a talk on 'Innovation & Startups' for faculties of Bundelkhand University, Jhansi Kanpur U.P.
13. On 8th October 2022, ARUN M ISLOOR (Professor I/C of NITK-STEP) participated in Mangalore Technology Conclave 2022 as one of the panel members on the topic ENTERPRENEURS IN & DAKSHINA KANNADA.
14. On 21st October 2022 STEP organized a talk on the ROLE OF STARTUPS IN ACADEMIA by Dr. C V Kamath for general public NITK faculties and students.
15. On 10th November 2022, ARUN M ISLOOR (Professor I/C of NITK-STEP) addressed around 800 students & parents at SJA as part of the orientation program for freshers
16. On 11th November 2022 Session on START UP IN ACADEMIA was arranged at the Dept of Chemical Engineering, NITK as part of the orientation program for freshers.
17. On 17th November 2022, the VIGYAN JYOTHI program was organized for 45 Navodaya Students. All students and staff were welcomed by ARUN M ISLOOR (Professor I/C of NITK-STEP) Later talk was arranged for students on Incubation Opportunities for Students.
18. On the 16th & 17th of December 2022, Karnataka Digital Economy Mission (KDEM) organized the second edition of Mangaluru Technovanza at the TMA Pai International Convention Centre, M.G. Road, in which ARUN M ISLOOR (Professor I/C of NITK-STEP) and STEP staffs participated.
19. On 16th February 2023 Ministry of Education's Innovation Cell (MIC) and the All-India Council for Technical Education (AICTE) arranged an online meeting about the NATIONAL INNOVATION START UP POLICY-2019) in which ARUN M ISLOOR (Professor I/C of NITK-STEP), Advisory Committee members and STEP staffs participated.
20. On 26th February 2023, an interview on the Emerging Areas for Startups in New age Economy live program was organized by Namma Kudla TV channel ARUN M ISLOOR (Professor I/C of NITK-STEP) was invited as a key speaker.
21. On 28th, February 2023, NITTE organized a webinar on "STARTUP BOOSTER PROGRAMME ON THE STARTUP FOUNDER TEAM MANAGEMENT" which our STEP staffs attended this session.
22. On 3rd March 2023 a webinar was organized under the aegis of the Ministry of Skill Development and Entrepreneurship (MSDE) on Pradhan Mantri Kaushal Vikas Yojana 4.0 (PMKVY 4.0-2022-2026) in which ARUN M ISLOOR (Professor I/C of NITK-STEP) and STEP staffs participated.

EXISTING ENTREPRENEURS:

1. Kambala Solutions Pvt. Ltd.
2. Accretegeo Private Limited
3. Bellare Gis Consultancy Pvt.Ltd
4. Tech Millennials Pvt.Ltd.
5. Shree Jayalakshmi Enterprises
6. Expert Vision Labs Pvt.Ltd.
7. Soft Machine
8. Aakruthi3d Pvt.Ltd
9. Serpro Consultancy Pvt.Ltd
10. Penzigo Technology Solutions Pvt.
11. Hermitech Private Limited
12. Cem Echola Private Limited
13. Kaarbaar Online Services Private Limited.
14. Halsus Technologies Pvt Ltd.
15. Quadrivalent Labs Pvt.Ltd

5. Dr. Shyam Lal, Dr. Sandeep Kumar, Dr. Sushil Kumar Pandey- (Aiquantum Smart Solutions Pvt.Ltd.)

Existing Entrepreneurs' Students

1. Prashraya Welfare Foundation
2. Flexibus
3. Trunq Technologies Limited Liability Partnership

Existing Entrepreneurs Alumni

1. Tech Millennials Pvt.Ltd.
2. Sasyaani Private Limited
3. Vishuddhi Aqua Tech Pvt.Ltd Jrdc Engineering Pvt.Ltd

STARTUP BY NITK FACULTY MEMBERS:

1. Dr. Pathipati Srihari, - (Sri Shasha Prayathi Technologies Limited)
2. Dr. Arun Mohan Isloor, - (Apahatech Solutions Llp)
3. Dr. B Dastagirireddy, - (Dri-Ev Tech Solutions Pvt Ltd)
4. Dr. Mohit Prakash Tahiliani, - Stackwalk Technologies Pvt. Ltd

20.1 CENTRE FOR CONTINUING EDUCATION (C.C.E)

Sl. No	Title of the Course	Duration	Organized through	Name of the Course Coordinators	No. of Participants attended	Course Intended for
1.	“MACHINE LEARNING AND DEEP LEARNING FOR REMOTE SENSING APPLICATIONS”	21-04-2022 To 25-05-2022	Department of Electronics and Communication Engineering, NITK	Dr. Shyam Lal	35	ISRO Scientist, sponsored by NRSC, Hyderabad
2.	“Skill Development Activities on Design and Development of Switched Mode Power Converters”	02-01-2023 To 01-03-2023	CENTRE FOR RESEARCH IN ELECTRIC VEHICLES (EV) AND PHOTOVOLT AICS (PV) SYSTEMS	Prof. B.Venkatesaperumal & Dr.V. Vigneshkumar	22	Schneider Electric Employee Sponsored by Schneider Electric

21 FINANCE AND ACCOUNTS

Expenditure position for the Five years

Year	Oh.35 (Capital)	Revenue Grant 31&36	Total
2018-19	5413.50	15067.04	20480.54
2019-20	1094.76	16311.21	17405.97
2020-21	2595.03	14750.97	17346.00
2021-22	2096.74	16808.35	18905.09
2022-23	4278.71	19772.41	24051.12

BALANCE SHEET AS AT 31-03-2023

(AMOUNT - ₹)

PARTICULARS	SCH. NO.	CURRENT YEAR	PREVIOUS YEAR
<u>SOURCE OF FUNDS :</u>			
CORPUS/CAPITAL FUND	1	88,49,02,009	(26,45,29,745)
DESIGNATED/ EARMARKED/ ENDOWMENT FUNDS	2	3,85,46,31,657	3,64,94,39,740
LOAN/ BORROWINGS	3	1,14,84,78,970	1,01,66,13,576
CURRENT LIABILITIES AND PROVISIONS	3 (B)	6,80,34,23,167	6,71,79,23,434
TEQIP PROJECT - PHASE III	26	-	3,45,90,110
TOTAL		12,69,14,35,803	11,15,40,37,115
<u>APPLICATION OF FUNDS :</u>			
FIXED ASSETS			
Tangible Assets	4(A)+(D (b))	6,18,71,70,822	4,62,72,29,309
Intangible Assets	4(c)	1,81,25,988	2,48,96,728
Capital Works-In-Progress	4(B)	83,28,02,463	1,16,14,88,687
INVESTMENTS FROM EARMARKED/ ENDOWMENT FUNDS	5		
Long Term		3,91,88,67,000	3,61,92,38,191
Short Term		-	-
INVESTMENTS - OTHERS	6	-	-
CURRENT ASSETS	7	1,21,33,71,492	1,22,86,53,519
LOANS, ADVANCES & DEPOSITES	8	52,10,98,038	45,79,40,571
TEQIP PROJECT - PHASE III	26	-	3,45,90,110
TOTAL		12,69,14,35,803	11,15,40,37,115

SIGNIFICANT ACCOUNTING POLICIES

23

CONTINGENT LIABILITIES & NOTES ON ACCOUNTS

23(A)

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31.03.2023

PARTICULARS	SC.NO.	CURRENT YEAR	PREVIOUS YEAR
<u>INCOME:</u>			
ACADEMIC RECEIPTS	9	50,60,53,900	44,08,84,999
GRANTS/SUBSIDIES	10	1,97,72,41,733	1,67,49,44,873
INCOME FROM INVESTMENTS	11	3,71,06,251	2,85,87,626
INTEREST EARNED	12	28,09,981	26,53,346
OTHER INCOME	13	32,33,72,803	11,05,10,371
OTHER RESEARCH PROJECTS		8,39,71,014	6,55,09,741
PRIOR PERIOD INCOME	14	1,32,128	-
TOTAL (A)		2,93,06,87,809	2,32,30,90,955
<u>EXPENDITURE:</u>			
STAFF PAYMENTS & BENEFITS	15	1,52,77,59,285	1,70,55,08,090
ACADEMIC EXPENSES	16	50,79,57,107	44,59,66,785
ADMINISTRATIVE & GENERAL EXPENSES	17	28,65,08,030	22,61,73,848
TRANSPORTATION EXPENSES	18	15,65,034	13,97,570
REPAIRS & MAINTENANCE	19	14,05,49,781	8,36,16,685
FINANCE COST	20	7,44,44,899	6,34,18,260
DEPRECIATION	4	38,09,18,232	27,49,98,146
OTHER EXPENSES	21	7,94,64,095	2,96,39,887
PRIOR PERIOD EXPENSES	22	-	-
TOTAL (B)		2,99,91,66,463	2,83,07,19,271
<u>BALANCE:</u>			
EXCESS OF EXPENDITURE OVER INCOME	(B-A)	6,84,78,654	50,76,28,316
SIGNIFICANT ACCOUNTING POLICIES	23		
CONTINGENT LIABILITIES & NOTES ON ACCOUNTS	23(A)		

RECEIPTS & PAYMENTS FOR THE YEAR ENDED 31-03-2023

RECEIPTS	Current Year	Previous Year	PAYMENTS	Current Year	Previous Year
Opening Balances:			Establishment and Administrative expenses	1,90,99,35,326	1,73,58,09,528
(a) Cash in hand	22,596	14,973			
(b) Bank Balances:			Payments Against Earmarked/Endowment Funds	16,47,86,976	15,02,70,690
(i) In current accounts	19,64,09,174	5,33,34,913			
(ii) Savings accounts	2,19,91,566	5,07,93,004	Payments Against Sponsored Projects/Schemes	7,61,87,850	19,02,93,020
(iii) HEFA accounts	4,30,50,812	22,26,654			
(iv) TSA accounts	26,70,44,487	-	Investments	3,22,80,53,126	1,97,74,77,686
Grants Received:			Expenditure on Fixed Assets & Capital WIP	1,60,53,64,653	1,13,98,02,644
(a) From Govt. of India					
Capital Grant	42,82,00,000		Deposits & Advances	1,94,12,01,987	1,64,60,24,922
Revenue Grant	1,97,76,26,318				
	2,40,58,26,318		Any Other Payments	1,29,86,84,199	90,54,49,917
Less : Refund	26,77,58,447	2,13,80,67,871			
(b) From State Government	-	-	Closing Balances:		
			(a) Cash in hand	11,088	22,596
Academic Receipts	77,82,20,446	47,33,86,701	(b) Bank Balances:		
Receipts Against Earmarked/Endowment Funds	53,24,90,897	30,31,27,346	(i) In current accounts	13,47,22,877	19,64,09,174
Receipts Against Sponsored Projects/Schemes/Plan	91,59,23,447	41,91,21,828	(ii) Savings accounts	5,15,65,123	2,19,91,566
Income on Investments	3,74,79,457	2,11,85,200	(iii) HEFA accounts	5,58,157	4,30,50,812
Interest Received :	18,66,190	23,46,541	(iv) TSA accounts	-	26,70,44,487
Deposits & Advances	1,98,28,41,770	2,27,62,59,692			
Investments Encashed/matured	2,61,66,88,043	2,04,05,95,174			
Any other receipts:	87,89,74,606	59,86,23,283			
TOTAL	10,41,10,71,362	8,27,36,47,042	TOTAL	10,41,10,71,362	8,27,36,47,042

NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA SURATHKAL

SRINIVASNAGAR, MANGALORE - 575 025 INDIA



AUDIT REPORT

2022-23

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**SEPARATE AUDIT REPORT ON THE ACCOUNTS OF THE
NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA,
SURATHKAL, MANGALORE FOR THE YEAR 2022-23.**

1. We have audited the attached Balance Sheet of National Institute of Technology, Karnataka, Surathkal, Mangalore, as at 31st March 2023 and the Income & Expenditure Account / Receipts & Payment Account for the year ended on that date under Section 19(2) of the Comptroller and Auditor General's (Duties, Powers and Conditions of Service) Act, 1971. The audit on the accounts of the Director, National Institute of Technology, Karnataka, Surathkal is entrusted under the NIT Act 2007 further amended NITSER Act 2012. These financial statements are the responsibility of the Institute's management. Our responsibility is to express an opinion on these financial statements based on our audit.

2. This Separate Audit Report contains the comments of the Comptroller and Auditor General of India (CAG) on the accounting treatment only with regard to classification, conformity with the best accounting practices, accounting standards and disclosure norms, etc. Audit observations on financial transactions with regard to compliance with the Law, Rules and Regulations (Propriety and Regularity) and efficiency-cum-performance aspects etc., if any, are reported through Inspection Reports / CAG's Audit Reports separately.

3. We have conducted our audit in accordance with auditing standards generally accepted in India. These standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatements. An audit includes examining on a test basis, evidences supporting the amounts and disclosure in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of financial statements. We believe that our audit provides a reasonable basis for our opinion.

4. Based on our audit, we report that:

- i We have obtained all the information and explanations, which to the best of our knowledge and belief, were necessary for the purpose of our audit.
- ii The Balance Sheet and Income & Expenditure Account/Receipt & Payment Account dealt with by this report have been drawn up in the format prescribed by the Ministry of Education, Government of India.
- iii In our opinion, proper books of accounts and other relevant records have been maintained by the Institute in so far as it appears from our examination of such books.
- iv We further report that :

(A) REVISION OF ACCOUNTS:

The NITK revised the accounts on the basis of audit observations and resubmitted the revised accounts on 27.07.2023. The effect of revision is as under:

- (i) The "Sources and Application of Funds" increased by ₹42,828/- from ₹ 12,69,13,92,975/- to ₹12,69,14,35,803/-.
- (ii) The Income increased by ₹ 4,99,42,544/- from ₹ 2,88,07,45,265/- to Rs. 2,93,06,87,809/-. The Expenditure increased by ₹ 4,93,78,922/- from ₹ 2,94,97,87,541 to ₹ 2,99,91,66,463/-.
- (iii) The excess of expenditure over income decreased by ₹ 5,63,622/- from ₹ 6,90,42,276/- to 6,84,78,654/-

(B) COMMENTS ON ACCOUNTS:

-Nil-

(C) GRANTS-IN-AID :

During the financial year 2022-23, NITK received a total grant of ₹ 240.58 Crore (Capital grants - ₹42.82 Crore, Revenue grants - ₹ 197.76 Crore, Academic receipts - ₹ 45.39 Crore), out of which ₹ 267.28 Crore was utilized/refunded to MoE (including previous years' unutilized bealance of ₹ 26.70 Crore) leaving an unutilized balance of 'Nil' as on 31st March 2023.

- (v) We report that the Balance Sheet and Income & Expenditure Account/Receipt & Payment Account dealt with by this report are in agreement with the books of accounts.
- (v) In our opinion and to the best of our information and according to the explanations given to us, the said financial statements read with the Accounting Policies and Notes on Accounts, and subject to the matters stated above and other matters mentioned in Annexure to this Audit Report gives a true and fair view in conformity with accounting principles generally accepted in India.
- a. In so far as it relates to the Balance Sheet, of the State of Affairs of the National Institute of Technology, Karnataka, Surathkal as at 31 March 2023;
- and
- b. In so far as it relates to Income & Expenditure Account of the deficit for the year ended on that date.

Deepna 6/9/23

**PRINCIPAL DIRECTOR OF AUDIT (CENTRAL)
BENGALURU**

ANNEXURE

1. Adequacy of Internal Audit system

There is a separate Internal Audit Wing (IAW) functioning in the Institute conducting audit regularly every year.

2. Adequacy of Internal Control System

The prevailing internal control system is adequate. The IAW covers all areas of transactions like receipt and utilization of grants, IRG, construction activities, transactions related to funds etc. Four members from the Accounts section (Joint Registrar, Asst. Registrar, Superintendent and Sr. Assistant) are actively involved in the preparation of Annual accounts and assisted by Chartered Accountants M/s Nitin J Shetty & Co.

3. System of physical verification of fixed assets

Physical verification of fixed assets for the period 2022-23 has been carried out by the Institute.

4. System of physical verification of Inventory

Physical verification of inventory for the period 2022-23 has been carried out by the Institute.

5. Regularity in payment of statutory dues

The Institute is exempted from payment of income tax under Section 12 of the Income Tax Act. All the statutory dues of the institute towards EPF and ESI were remitted within the stipulated date.

Dupma 6/9/23

**PRINCIPAL DIRECTOR OF AUDIT (CENTRAL)
BENGALURU**

NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA SURATHKAL

P.O. SRINIVASNAGAR, MANGALORE - 575 025 INDIA

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DIRECTOR'S REPORT

Introduction

National Institute of Technology Karnataka, Surathkal formerly, Karnataka Regional Engineering College Surathkal is one of the Seventeen REC's established in the country by the Government, started in the year 1960. It was the second among the first batch of Eight RECs' set up in the Country. The Institute was upgraded to NIT and conferred Deemed University status w.e.f. 26.06.2002 as per GOI order No.F9 6/95 U3 Dt 26.06.2002 and now holds a statutory status as "Institute of National Importance" by an Act of Parliament - NIT Act notified on 15th August 2007, further amended and notified as NITSER Act 2012.

The Institute is located at Srinivasnagar, Surathkal, of Mangaluru city in Dakshina Kannada District, Karnataka State, on the West Coast National Highway (NH 66), having campus area of 295 acres.

During the year NITK has achieved significant growth in various spheres of its activities. Our efforts in teaching, infrastructure building, research and development, Testing and Consultancy, developing entrepreneurship, and student training and placement have been responsible for NITK being placed amongst the top technological institutions in the country. We wish to acknowledge the strong support we receive in all our activities from our distinguished alumni who occupy coveted positions in the Industry.

It is now my pleasant duty to place before you, a brief report highlighting our significant achievements during the year 2022-23. I wish to place before you, some of the new initiatives taken at NITK so as to scale greater heights in teaching, research and outreach activities and get recognised as 'A National Institute with an International Recognition'.

Governance:

NITK, an Institute of National Importance, is governed by the Board of Governors, under the NITSER Act 2012 and Statutes laid down by the Govt. of India. The Board consists of representatives from Govt. of India, Govt. of Karnataka, Industry, Educationists and the Institute Senate. The Director is the Executive Head of the Institute. The day-to-day activities are carried out by the Director, with the support of Deans, Registrar, Joint Registrar, Heads of the Departments, Professor-in-charge of various activities and Assistant Registrars. Several committees have also been formed to facilitate decision-making process, effective.

Faculty and Staff:

Availability of high-quality human resources has been the major factor contributing to the success achieved in different spheres of activities at NITK, all these years. The institute is making concerted efforts to fill up all the vacant positions, both in faculty cadre as well as non-teaching staff. During the period of the report, the total number of faculty and non-faculty are 269 and 108 respectively.

Institute Ranking:

The NITK has secured 12th Rank in all India Ranking for Engineering by the NIRF and secured 38th position in overall ranking category in the year 2023.

Financial Support:

There has been an enhanced Revenue and Capital grants, increase in R&D funding, an increase in student intake, Testing and Consultancy output and initiation of a few new infrastructural projects. The total internal revenue generation through fee collection and other receipts were Rs.81.88 crores. Our Corpus fund and Institute Development fund has grown steadily to about Rs.299.62Crores.

Academic Activities:

Presently, NITK offers B.Tech programs in 11 disciplines and M.Tech programs in 26 specializations. In addition, MSc Programs are offered by both Departments, Physics and Chemistry and the MBA and MCA programs are offered by the School of Management and MACS Department respectively. While M.Tech (Research) Programs are offered in all PG specializations, doctoral research is also being undertaken with scholars registered in all the Departments. A limited number of seats are offered under self-financed category for PG program.

For the academic year 2022-23, about 1018 students were admitted to the B.Tech. Program based on their scores in JEE-Mains Examinations, 653 M. Tech and M. Tech by Research through GATE, 94 students were admitted to the M.Tech program through self-financed category. 68 in MSc, 56 in MBA and 68 in MCA. A total of 139 students joined the Doctoral programs, focusing increased research at the Institute. There are about 1120 Research Scholars in the Institute and during the reference year, 126 students have been awarded PhDs.

Students' performance in examinations continues to be excellent with an overall pass percentage of more than 98.95%. A large number of our students have graduated with distinction. This year too, our students have excelled in GATE-2022 and CAT-2022 examinations which have fetched them admissions to top technological and business schools of India to pursue their post-graduate programs or MBA studies.

R & D Activities:

Domains of R&D activities in NITK are inclusive of below mentioned but not limited to them. Environmental free construction technology and materials. Earthquake area studies and resilient buildings. Water resource identification and usage, Breakwater designs, GIS and Remote Sensing. Systems Engineering in Vehicles and Biomedical applications including EV and their charge management. Blue energy systems. 5G applications in Engg. Systems. Aerial and Underwater communication. AI and ML applications with Block chain technology to Engg and e-governance. Developing useful chemicals from agricultural waste products. Carbon-free processes of chemical and ore extractions. Desalination and waste management. Environment friendly mining, rock blasting, ore extraction and mineral processing. Developing green processes for material extraction and manufacturing.

Through the R&D activities, innovations not limited to below mentioned are contributed by faculty of NITK, Novel designs of Break waters for Coastal Protection. Jute applications in Soil erosion and land sliding. Vehicle dynamics studies and intelligent suspension system. Alternative energy sources for vehicles. Energy from waste food. EV charge management. Wireless interfaced IC technology for Data transfer. Removal of heavy metals from contaminated water by adsorption using melanin bound activated carbon. Method, system and apparatus for upgrading tyre pyrolysis oil.

Visible results of these activities are, on average 9+ publications, 55+citations per faculty per year in the last 5 years. There is also a jump in IP filing in the last few years and we have on average 6 patents/year. We have received various funded projects under CRG, BIRACS and TARE from DST and also projects from other agencies like DRDO and ISRO. We have partnered with ISRO and we are a Regional Academic Center for Space (RAC-S) to coordinate with ISRO for managing projects in the Southern region. We have handled about 130+ projects in the last year and have received about 52+ crores for these projects. We have also started a CoE with Siemens in Digital Manufacturing. We are also promoting research through our one stop resource cell called 'Central Research Facility'. Incentivizing R&D activities has led to very visible outcomes listed above.

Infrastructural Facilities:

The following works were completed during the financial year 2022-23 through CPWD:

Sl. No	Name of the project/ work	Estimated cost
1	Construction of building for Security Office and Security Gate at the main entrances of the campus (Eastern and western side).	Rs.1.36 crore
2	Construction of Concrete testing Laboratory and Environmental Engineering Laboratory for Department of Civil Engineering (G+1 floor as annex to the existing building)	Rs.1.32 crore
3	Construction of New building for School of Interdisciplinary Studies (to house different Centers of Excellence) and Central Research Facility (CRF) – Under HEFA	Rs.48.00 crore
4	Construction of New Girls Hostel with modified 427 capacity (212 double occupancy + 3 single occupancy for differently abled persons) [Block No. 6 - Sowparnika] – Under HEFA	Rs. 37.88 crore

The following works were under construction during the financial year 2022-23 through CPWD:

Sl. No	Name of the project/ work	Estimated cost
1	Construction of SKY-TRACK (Foot over bridge) across National Highway - 66 to connect eastern and western parts of the campus	Rs.3.20 crore
2	EWS Reservations - Construction of New Boys' Hostel of 200 triple occupancy rooms (Block No. 11)	Rs.43.00 crore
3	Const. of Heavy Structural Testing Laboratory Dept of Civil	Rs.7.96 crore
4	Const. of Lecture hall Complex – Block D [under HEFA]	Rs.54.76 crore

Industry-Institute Collaborations

NITK Understands that the objective training of students can only be met when we have meaningful and continuous interaction with industries. To enhance the confidence in managing new knowledge society requires continuous learning through novel approaches supported with research and development works in the areas of Science, Engineering and Humanities. Thus, the Institute vision and mission reflects this and Office of the Dean (Institutional Relations) strives to meet this mission by building relationship with knowledgeable and committed Technologists/-Companies-Universities to serve our country and humanity as a whole. The hard work and sincerity are strong pillars of success. Through our practices we strive to impress our students to inculcate these values and support the mission of NITK. Our doors are always open to Universities, research organizations, industries and utility companies to collaborate with us in building valuable knowledge society foreseeing bright future.

NITK, Surathkal has signed MoUs with leading Industries/Research labs/Academic Institutions in India and Abroad and other Institutions to facilitate student internships, faculty/staff exchange and joint research. We look forward to more such collaborations both in India and abroad.

MOU's signed during the period April 2022 to March 2023 were;

- Bharat Electronics Ltd (BEL) Bengaluru
- EM Electronics Pvt. Ltd, Bengaluru
- Karnataka State Minerals Corporation limited Bengaluru
- Niveus Solutions Pvt. Ltd, Udupi
- Robosoft Technologies Private Limited, Udupi
- TATA Consultancy Service Mumbai
- SEG Automotive India Pvt. Ltd, Bengaluru
- TATA Communication limited, Mumbai
- Fourth Frontier Technologies Private Limited, Bangalore
- UD Trucks India Private Limited, Bengaluru

Training and Placement:

The Department Career Development Centre (CDC) of the Institute facilitates on campus recruitment and placement of our students and also arranges for their training/internship in Industry. NITK is one of the top preference institutions in the country to many companies for campus placements and internships. During 2022-23 the percentage of eligible students placed was 93% for UG and 81% for PG as on date of this report. The recruitment process which is expected to happen till the end of June 2023. The average salary for 2022-23 is 15.73 LPA. This year top PSU's like BEL, BEL-CRL, GAIL, MRPL, HPCL, BPCL and C-DOT visited the campus.

Social outreach activities:

The institute has provided two high mast lamps worth Rs.0.97 lakh to Sasihitlu village Fishermen area and a Fire Safety system worth Rs.3.50 lakh was provided to a school. Regular ShramDaan events under Swachh Bharath Abhiyan program are being conducted on weekends by NITK SEVADAL with the active participation of faculty and staff members to improve the campus ambience and foster the feeling of oneness among all members of the institute family. Institute Swachh Bharath program team also participating in the swachh Surathkal city program in association with local NGOs.

Acknowledgement and Conclusions:

At this juncture, I personally acknowledge the support and encouragement received from the Chairman and members of the Board of Governors. The members of the Senate, all my colleagues – both faculty and non-teaching members have been very supportive of all the new initiatives being contemplated and implemented. I record my appreciation for the students of the outgoing batch for their disciplined behaviour and keen participation in the activities of the Institute. Again, on behalf of all the members of Team-NITK, I wish to place on record, our gratitude to the MoE-GOI, Govt. of Karnataka and other agencies for their constant support and encouragement.

Date : 14-07-2023
Place : Surathkal

Sd/-
(PROF. BHALLAMUDI RAVI)
DIRECTOR
N.I.T.K., SURATHKAL

NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA

SURATHKAL

P.O. SRINIVASNAGAR - 575 025

BALANCE SHEET AS AT 31-03-2023

(AMOUNT - ₹)

PARTICULARS	SCH. NO.	CURRENT YEAR	PREVIOUS YEAR
SOURCE OF FUNDS :			
CORPUS/CAPITAL FUND	1	88,49,02,009	(26,45,29,745)
DESIGNATED/ EARMARKED/ ENDOWMENT FUNDS	2	3,85,46,31,657	3,64,94,39,740
LOAN/ BORROWINGS	3	1,14,84,78,970	1,01,66,13,576
CURRENT LIABILITIES AND PROVISIONS	3 (B)	6,80,34,23,167	6,71,79,23,434
TEQIP PROJECT - PHASE III	26	-	3,45,90,110
TOTAL		12,69,14,35,803	11,15,40,37,115
APPLICATION OF FUNDS :			
FIXED ASSETS			
Tangible Assets	4	6,18,71,70,822	4,62,72,29,309
Intangible Assets	4(A)+(D (b)) 4(c)	1,81,25,988	2,48,96,728
Capital Works-In-Progress	4(B)	83,28,02,463	1,16,14,88,687
INVESTMENTS FROM EARMARKED/ ENDOWMENT FUNDS	5		
Long Term		3,91,88,67,000	3,61,92,38,191
Short Term		-	-
INVESTMENTS - OTHERS	6	-	-
CURRENT ASSETS	7	1,21,33,71,492	1,22,86,53,519
LOANS, ADVANCES & DEPOSITES	8	52,10,98,038	45,79,40,571
TEQIP PROJECT - PHASE III	26	-	3,45,90,110
TOTAL		12,69,14,35,803	11,15,40,37,115
SIGNIFICANT ACCOUNTING POLICIES			
CONTINGENT LIABILITIES & NOTES ON ACCOUNTS			
	23		
	23(A)		

PLACE: SURATHKAL

DATE :14-07-2023

Sd/-

(RAVINDRANATH K.)

REGISTRAR

N.I.T.K., SURATHKAL

Sd/-

(PROF. BHALLAMUDI RAVI)

DIRECTOR

N.I.T.K., SURATHKAL

NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA

SURATHKAL

P.O. SRINIVASNAGAR - 575 025

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31.03.2023

		(AMOUNT - ₹)	
PARTICULARS	SC.NO.	CURRENT YEAR	PREVIOUS YEAR
INCOME:			
ACADEMIC RECEIPTS	9	50,60,53,900	44,08,84,999
GRANTS/SUBSIDIES	10	1,97,72,41,733	1,67,49,44,873
INCOME FROM INVESTMENTS	11	3,71,06,251	2,85,87,626
INTEREST EARNED	12	28,09,981	26,53,346
OTHER INCOME	13	32,33,72,803	11,05,10,371
OTHER RESEARCH PROJECTS		8,39,71,014	6,55,09,741
PRIOR PERIOD INCOME	14	1,32,128	-
TOTAL (A)		2,93,06,87,809	2,32,30,90,955
EXPENDITURE:			
STAFF PAYMENTS & BENEFITS	15	1,52,77,59,285	1,70,55,08,090
ACADEMIC EXPENSES	16	50,79,57,107	44,59,66,785
ADMINISTRATIVE & GENERAL EXPENSES	17	28,65,08,030	22,61,73,848
TRANSPORTATION EXPENSES	18	15,65,034	13,97,570
REPAIRS & MAINTENANCE	19	14,05,49,781	8,36,16,685
FINANCE COST	20	7,44,44,899	6,34,18,260
DEPRECIATION	4	38,09,18,232	27,49,98,146
OTHER EXPENSES	21	7,94,64,095	2,96,39,887
PRIOR PERIOD EXPENSES	22	-	-
TOTAL (B)		2,99,91,66,463	2,83,07,19,271
BALANCE:			
EXCESS OF EXPENDITURE OVER INCOME	(B-A)		50,76,28,316
SIGNIFICANT ACCOUNTING POLICIES	23		
CONTINGENT LIABILITIES & NOTES ON ACCOUNTS	23(A)		
PLACE: SURATHKAL			
DATE : 14-07-2023			

Sd/-

(RAVINDRANATH K.)

REGISTRAR

N.I.T.K., SURATHKAL

Sd/-

(PROF. BHALLAMUDI RAVI)

DIRECTOR

N.I.T.K., SURATHKAL

NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA

SURATHKAL

P.O. SRINIVASNAGAR - 575 025

SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31.03.2023

	CURRENT YEAR	PREVIOUS YEAR
(AMOUNT - ₹)		
SCHEDULE NO. 1 - CORPUS/CAPITAL FUND		
CORPUS /CAPITAL FUND:		
A CORPUS FUND:		
Balance at the Beginning of the Year		(14,51,50,623)
Add : Contributions towards Corpus/Capital Fund	-	
Add : Grants from MoE, Govt. of India to the extent utilised for Capital Expenditure	42,78,70,625	
Add : TEQIP III	3,45,90,110	
Add : Assets Capitalised out of completed Sponsored Projects, Where Ownership Vests in the Institution	72,61,69,199	
Add : Assets Capitalised out of Revenue Grant	2,92,80,473	38,82,49,194
	1,21,79,10,407	24,30,98,571
	95,33,80,662	-
	-	-
Less : Interest on Mobilisatin Advance	6,84,78,654	50,76,28,316
Less : Transferred to Income & Expenditue Account towards Recurring Expenses	-	-
Less : Deficit Transferred from Income & Expenditure Account	-	-
	88,49,02,009	(26,45,29,745)
TOTAL - A		
B CAPITAL FUND OF PROJECTS & EARMARKED FUNDS		
Opening Balance.	-	-
Add : Assets Donated/Gift Received	72,45,01,798	1,35,427
Add : Assets from Completed Projects	-	14,27,16,663
Add : Assets from Workshops	3,97,716	6,68,804
Add : Assets from Funds	12,69,685	12,09,023
	72,61,69,199	14,47,29,917
Add : Additions during the year	-	-
Less : Assets of incomplete projects	72,61,69,199	14,47,29,917
Less : Transferred to Corpus Fund	-	-
	72,61,69,199	14,47,29,917
	-	-
	88,49,02,009	(26,45,29,745)
TOTAL - B		
BALANCE AS AT THE YEAR - END FOR SCHEDULE - 1 (A+B)		

PLACE: SURATHKAL

DATE : 14-07-2023

Sd/-

(RAVINDRANATH K.)

REGISTRAR

N.I.T.K., SURATHKAL

Sd/-

(PROF. BHALLAMUDI RAVI)

DIRECTOR

N.I.T.K., SURATHKAL

NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA

SURATHKAL

P.O. SRINIVASNAGAR - 575 025

SCHEDULE 2 - DESIGNATED/ EARMARKED/ ENDOWMENT FUNDS AS ON 31-03-2023

PARTICULARS	CAMPUS DEVELOPMENT FUND		EQUIPMENT MAINTENANCE FUND		GOLDEN JUBILEE DEVELOPMENT FUND		HOSTEL DEVELOPMENT FUND		IIIP DEVELOPMENT FUND		INSTITUTE SCHOLARSHIP FUND		PROFESSIONAL DEVELOPMENT FUND		R & D CONSULTANCY FUND		STAFF DEVELOPMENT & WELFARE FUND		SELF FINANCING		
A																					
(a) Opening Balance of the Fund	1,63,46,973	1,11,83,631	35,40,024	1,61,95,933	48,87,897	36,58,24,067	1,03,590	1,05,70,746	6,54,89,694	48,30,55,994	1,15,94,041										
(b) Additions during the year																					
(i) Donations/ Grants/ Fee/ Loans & Advances	-	22,01,372	-	-	7,84,469	3,19,82,070	2,205	8,57,516	2,00,58,349	5,51,43,077	-										
(c) Income from Investments	9,25,265	6,01,593	1,94,230	8,95,424	2,68,626	1,16,24,415	11,842	5,66,815	29,95,427	73,36,495	-										
(d) Interest on Savings Bank A/c.	-	-	-	-	-	-	-	-	-	-	-										
(e) Other Additions																					
(i) Miscellaneous Income/Adj	-	-	-	-	-	-	-	-	-	-	-										
(ii) Transfer	-	-	-	-	-	-	-	-	-	-	-										
TOTAL A	1,72,72,238	1,39,86,596	37,34,254	1,70,91,357	59,40,992	40,94,30,552	1,17,637	1,19,95,077	8,85,43,470	54,55,35,566	1,15,94,041										
B																					
Utilisation/ Expenditure towards Objectives of Funds :																					
(I) Capital Expenditure																					
Fixed Assets	-	-	-	-	-	-	-	47,413	-	-	-										
(II) Revenue Expenditure																					
Salaries, Wages & Allowances Etc	-	-	-	-	-	-	-	-	-	-	-										
Other Administrative/ Activity Expenses	27,39,989	-	51,320	-	-	31,18,688	-	3,51,405	1,57,29,098	17,04,564	1,15,94,041										
Sports & Games/Swimming Pool	-	-	-	-	-	-	-	-	-	-	-										
(III) Transfer/ Refund-Admission Fee/TDS	-	-	-	-	-	-	-	-	-	-	-										
TOTAL B	27,39,989	-	51,320	-	-	31,18,688	-	3,98,818	1,57,29,098	17,04,564	1,15,94,041										

PARTICULARS	CAMPUS DEVELOPMENT FUND		EQUIPMENT MAINTENANCE FUND		GOLDEN JUBILEE DEVELOPMENT FUND		HOSTEL DEVELOPMENT FUND		IIP CELL DEVELOPMENT FUND		INSTITUTE SCHOLARSHIP DEVELOPMENT FUND		PROFESSIONAL DEVELOPMENT FUND		R & D CONSULTANCY FUND		STAFF DEVELOPMENT & WELFARE FUND		SELF FINANCING
	FUND	FUND	FUND	FUND	FUND	FUND	FUND	FUND	FUND	FUND	FUND	FUND	FUND	FUND	FUND	FUND	FUND	FUND	
Closing Balance at the year end (A-B)	1,45,32,249	1,39,86,596	36,82,934	1,70,91,357	59,40,992	40,63,11,864	1,17,637	1,15,96,259	7,28,14,372	54,38,31,002	1,76,62,149								
Cash & Bank Balance	-	26,69,172	-	-	2,17,233	24,98,889	-	12,50,897	8,74,606	3,32,12,357	-								
Investments	1,76,84,392	1,11,71,081	37,12,330	1,67,05,891	56,57,224	39,46,11,296	1,21,255	1,01,85,762	7,12,96,944	50,54,83,094	-								
Interest Accrued but not due	2,24,101	1,46,343	47,043	6,20,398	66,535	92,01,679	6,772	1,59,600	6,42,822	51,35,551	-								
TDS	-	-	-	-	-	-	-	-	-	-	-								
Sundry Creditors/Payables	(33,76,244)	-	(76,439)	(2,34,932)	-	-	(10,390)	-	-	-	-								
Misc Advance/Receivable	-	-	-	-	-	-	-	-	-	-	-								
TOTAL	1,45,32,249	1,39,86,596	36,82,934	1,70,91,357	59,40,992	40,63,11,864	1,17,637	1,15,96,259	7,28,14,372	54,38,31,002	1,76,62,149								

PLACE: SURATHKAL

DATE : 14-07-2023

Sd/-

(RAVINDRANATH K.)

REGISTRAR

N.I.T.K., SURATHKAL

Sd/-

(PROF. BHALLAMUDI RAVI)

DIRECTOR

N.I.T.K., SURATHKAL

SCHEDULE 2 - DESIGNATED/ EARMARKED/ ENDOWMENT FUNDS AS ON 31-03-2023

	ENDOWMENT CHAIR FUND	STUDENT ACTIVITY COUNCIL	NITK CORPUS FUND	CCE FUND	STUDENT PRIZE FUND	NITK/KREC ENDOWMENT FUND	DASA	GRAND TOTAL 2022-23	GRAND TOTAL 2021-22
A									
(a)	81,16,756	8,70,68,664	2,44,59,34,751	52,21,211	74,82,217	2,74,43,160	7,93,80,390	3,64,94,39,740	3,48,95,68,844
(b)									
(i)	-	3,50,00,000	5,91,86,598	5,50,000	-	2,90,24,805	3,19,490	23,51,09,951	19,22,49,307
(c)	77,916	31,56,070	18,41,54,074	2,26,790	-	10,22,580	8,95,075	21,49,52,637	12,37,85,252
(d)	-	3,09,203	58,53,756	19,634	-	-	85,416	62,68,009	30,60,073
(e)									
(i)	-	5,19,511	-	-	-	6	-	5,19,517	1,18,120
(ii)	-	-	8,06,78,970	-	-	-	-	-	-
TOTAL A	81,94,672	12,60,53,448	2,77,58,08,149	60,17,635	74,82,217	5,74,90,551	8,06,80,371	4,18,69,68,823	3,80,87,81,596
B									
Utilisation/ Expenditure towards Objectives of Funds :									
(I)									
Capital Expenditure	-	6,14,324	-	-	-	21,598	-	6,83,335	12,09,023
Fixed Assets	-	-	-	-	-	-	-	-	-
(II)									
Revenue Expenditure	-	32,77,955	-	-	-	4,73,797	-	37,51,752	46,607
Salaries, Wages & Allowances Etc	-	87,81,680	18,41,54,073	2,42,500	21,000	1,10,72,642	1,401	23,95,62,401	15,29,90,248
Other Administrative/ Activity Expenses	-	76,60,708	-	-	-	-	-	76,60,708	50,95,979
Sports & Games/Swimming Pool	-	-	-	-	-	-	-	-	-
(III)									
Transfer/ Refund-Admission Fee/TDS	-	-	-	-	-	-	8,06,78,970	8,06,78,970	-
TOTAL B	-	2,03,34,667	18,41,54,073	2,42,500	21,000	1,15,68,037	8,06,80,371	33,23,37,166	15,93,41,857
Closing Balance at the year end (A-B)	81,94,672	10,57,18,781	2,59,16,54,076	57,75,135	74,61,217	4,59,22,514	-	3,85,46,31,657	3,64,94,39,740
Represented by									
Cash & Bank Balance	-	2,46,28,182	66,66,743	10,62,000	-	1,03,56,733	-	8,34,36,811	9,09,57,414
Investments	1,15,81,248	8,28,56,429	2,63,68,30,000	45,39,669	98,58,579	3,50,67,252	-	3,81,73,62,446	3,56,12,57,757
Interest/Accrued but not due	18,709	11,59,865	8,22,66,302	1,08,096	-	3,65,198	-	10,01,69,014	5,79,97,587
TDS	-	22,44,635	2,87,94,854	65,370	-	1,38,361	-	3,12,43,220	2,67,01,030
Sundry Creditors/Payables	(34,05,285)	(51,82,830)	(16,29,03,823)	-	(23,97,362)	(5,030)	-	(17,75,92,335)	(8,74,74,049)
Misc Advance/Receivable	-	12,500	-	-	-	-	-	12,500	-
TOTAL	81,94,672	10,57,18,781	2,59,16,54,076	57,75,135	74,61,217	4,59,22,514	-	3,85,46,31,657	3,64,94,39,740

PLACE: SURATHKAL

DATE : 14-07-2023

(RAVINDRANATH K.)

REGISTRAR

N.I.T.K., SURATHKAL

Sd/-

(PROF. BHALLAMUDI RAVI)

DIRECTOR

N.I.T.K., SURATHKAL

(AMOUNT ₹)

SCHEDULE NO. 3 - CURRENT LIABILITIES & PROVISIONS		CURRENT YEAR	PREVIOUS YEAR
A. (a) SECURED LOANS			
1. Central Government		-	-
2. State Government (Specify)		-	-
3. Financial Institutions			
4. Banks:			
5. Other Institutions and Agencies		-	-
6. Debentures and Bonds		-	-
7. Others (Specify)		-	-
Total		-	-
Note: Amounts due within one year			
B (b) UNSECURED LOANS			
1. Central Government		-	-
2. State Government (Specify)		-	-
3. Financial Institutions		-	-
4. Banks:		-	-
a) Term Loans		-	-
i) HEFA Loan A/c.No.0010110000070 - CRF Equipment	54,76,23,936	-	55,57,86,127
ii) HEFA Loan A/c.No.0010110000075 - COE & CRF Building	28,08,17,033	-	26,89,32,835
iii) HEFA Loan A/c.No.0010110000123 - New Girls Hostel Building	26,43,50,465	-	19,18,94,614
iv) HEFA Loan A/c.No.0010110000160 - Lecture Hall Complex	5,56,87,536	-	-
b) Other Loans (Specify)		-	-
5. Other Institutions and Agencies		-	-
6. Debentures and Bonds		-	-
7. Fixed Deposits		-	-
8. Others (Specify)		-	-
Total		1,14,84,78,970	1,01,66,13,576
Note: Amounts due within one year			
BALANCE AS AT THE YEAR - END FOR SHEDULE - 3 (A(a)+B(b))		1,14,84,78,970	1,01,66,13,576

(AMOUNT ₹)

	CURRENT YEAR	PREVIOUS YEAR
A. CURRENT LIABILITIES AND PROVISIONS:		
<u>CURRENT LIABILITIES:</u>		
1 Deposits from Staff & Lease	4,30,135	4,39,985
2 Deposits from Students	4,56,46,251	3,95,26,692
3 Sundry Creditors - Others		
Student Activity Council	51,82,830	48,66,152
DASA 2019	-	3,19,490 0
NITK/KREC Endowment Fund	5,030	2,96,607
NITK Corpus Fund	16,29,03,823	7,85,18,982 2
4 Deposit - Others	7,28,34,153	6,74,18,779
5 Statutory Liabilities		
a) Overdue	-	-
b) Others	-	-
6 MoE Surplus Grant	-	26,70,44,487
7 Other Current Liabilities		
Bills Payable	16,91,56,894	10,86,85,340
Salary Deductions	2,79,77,276	2,55,39,991
Projects/Other Reseaech Schemes:	20,17,84,717	21,57,11,682
SC/ST Scholarship Grant	4,03,857	5,54,922
Workshop/seminar Grant	29,99,469	30,00,728
TOTAL (A)	68,93,24,435	81,19,23,837

		(AMOUNT ₹)	
		CURRENT YEAR	PREVIOUS YEAR
B. PROVISIONS:			
1	For Taxation	-	-
2	Gratuity	36,45,77,749	37,08,31,204
3	Superannuation Pension	5,16,44,71,945	4,97,02,32,143
4	Accumulated Leave Encashment	45,72,04,828	45,49,89,602
5	Trade Warranties/Claims	-	-
6	Other (Specify)		
	a. Audit Fee	2,50,000	2,00,000
	b. Children Education allowance	71,67,500	74,11,225
	c. Electricity charges	57,23,184	49,81,823
	d. Fellowship/Stipend	2,88,41,283	3,62,00,000
	e. Hostel Establishment Charges	13,53,623	8,08,414
	f. Mtce of Electrical Installation	2,17,953	1,95,828
	g. Mtce of Waste Water Disposal	9,05,704	3,71,291
	h. Merit Cum Means Scholarship	48,56,000	40,56,000
	i. Merit Scholarship	12,20,000	9,40,000
	j. Pay & Allowance	5,39,16,025	4,85,62,827
	k. Professional Fee	5,60,000	5,60,000
	l. Telephone /Telex	1,44,962	1,06,964
	m. Water Supply	16,07,628	8,00,000
	n. Provision for Other Expenses	6,89,051	-
	o. Provision for GST	27,29,149	43,98,980
	p. Testing & Consultancy Payable	1,76,62,149	-
	q. N I T Transit House - Provision	-	3,53,297
TOTAL (B)		6,11,40,98,733	5,90,59,99,598
BALANCE AS AT THE YEAR - END FOR SCHEDULE - 3 (A + B)		6,80,34,23,167	6,71,79,23,435

PLACE: SURATHKAL

DATE : 14-07-2023

Sd/-

(RAVINDRANATH K.)

REGISTRAR

N.I.T.K., SURATHKAL

Sd/-

(PROF. BHALLAMUDI RAVI)

DIRECTOR

N.I.T.K., SURATHKAL

SCHEDULE 3(A): SPONSORED PROJECTS

Sl. No.	Particulars	Opening Balance	Receipts	Interest	Expenditure	Closing Balance
1	5G Project Funding - Mohit Tahiliani	13,75,703	-	30,641	7,33,227	6,73,117
2	ADA-Generation of Design-Ashokbabu	43,39,131	-	51,294	43,36,297	54,128
3	ADBI-Impact Soil Health Card Scheme- Prad Jena	2,32,385	20,08,704	41,657	8,32,009	14,50,737
4	Alumni Android Based Home Automtn - Venkatesh P	2,209	-	55	2,209	55
5	Alumni-Bio-Hydrogen Storage Tech - Ravishankar	2,48,202	-	3,038	2,48,202	3,038
6	Alumni Bio Waste Recycling - Vasudeva M	73,223	1,33,692	1,880	1,71,299	37,496
7	Alumni Chito -Oligosaccharides Medical - Keyur	45,547	-	1,127	45,547	1,127
8	Alumni-CSD Robocon N I T K-Pruthvi/KVG	-	3,20,000	507	94,675	2,25,832
9	Alumni - CWEP Project - Vasudeva M	13,23,207	-	27,397	5,80,005	7,70,599
10	Alumni DC Hoome Sikar Based Grid- Suresh Y	8,403	-	160	8,403	160
11	Alumni-Des&Assel 7seater E Van - Pruthviraj	26,007	-	644	26,007	644
12	Alumni-Develop of Dense & Porous - Rajasekaran	1,09,165	-	2,297	1,09,165	2,297
13	Alumni-E Bike for Security in NITK-Pruthviraj	5,849	-	145	5,849	145
14	Alumni-Food Waste to Biogas BCNG -Keyur/Saidu	9,09,713	1,274	11,854	9,10,987	11,854
15	Alumni-Food Waste to Hydrogen -Saikat Dutta	5,07,390	-	12,476	2,77,135	2,42,731
16	Alumni- Food Waste to Hydrogen SMR- Vasu/Ashok	12,53,985	-	21,237	8,28,957	4,46,265
17	Alumni Freelance Platfmm Built on Blkchain-Saurv/Moh	-	17,70,000	9,836	1,07,509	16,72,327
18	Alumni-Green Hydrogen Seawater Ele- Saikat/Vasu	-	5,00,000	11,224	11,590	4,99,634
19	Alumni - IIT Madras - EXPLORE - K V G	10,85,033	-	24,294	3,71,143	7,38,184
20	Alumni-Immersive Leng Using AR&VR-Pru/Gang	2,92,487	-	1,712	2,92,487	1,712
21	Alumni-Impln of Organic Biogas-Orissa- Vasudev	-	8,74,440	17,707	8,74,440	17,707
22	Alumni-Impln of Organic Waste-Orissa-Vasudev	-	18,28,400	35,985	18,28,400	35,985
23	Alumni-Industry Safety Traing Simn AR&VR-Pru/Gan	15,800	-	391	15,800	391
24	Alumni-Influ of Perforation Cold Formed Steel- VVK	-	11,12,000	13,140	4,46,880	6,78,260
25	Alumni-Inv&Opt Green Hyd RDF- Vas/Veer	-	12,53,418	27,583	1,73,387	11,07,614
26	Alumni- Maire Tech Fac Res Sustainable Devt- Vasu	-	4,80,000	6,660	4,00,000	86,660
27	Alumni-NBO-Sumanth Govindarajan	26,906	-	516	26,906	516
28	Alumni-Novel B C for Electric Vehicle- A Perumal	38,502	-	953	38,502	953
29	Alumni-Prototype of Reliable ICN- Mohit P T	445	-	11	445	11
30	Alumni SEARCH- Pruthviraj / K V Gangadharan	-	11,25,577	2,338	8,93,003	2,34,912
31	Alumni Silent Speech Interface Dev - Krishnan	36,542	-	662	36,542	662
32	Alumni -Trishul Jal Sanchayan - Pruthviraj U	2,488	-	62	2,488	62
33	Alumni-URJA-Solar Chrg Stn for E-Mob- Pruthviraj	60,827	2,16,000	895	2,76,827	895
34	Alumni-Vidh Yug E -Cycle for NITK-Pruth/KVG/Moh	-	15,00,000	11,365	14,29,817	81,548
35	ANSYS Software Post Doctrol Fellowship	19,54,387	-	52,676	41,078	19,65,985
36	Aumni- Devt of Electric System for S L- V Perumal	25,450	-	630	25,450	630
37	Boeing Company- Vijay Desai	26,59,995	13,69,352	72,089	7,56,208	33,45,228

Sl. No.	Particulars	Opening Balance	Receipts	Interest	Expenditure	Closing Balance
38	COSH-CSE-IPv6 - Mohit T	-	40,25,650	63,404	-	40,89,054
39	CPCB - Random Verfy - Azhoni	72,545	-	1,302	24,321	49,526
40	CSD Industrial Project - K V Gangadharan	4,81,416	-	12,998	-	4,94,414
41	CSIR-CRRI-Devt of Trip- Mithun Mohan	5,76,551	-	13,382	3,87,765	2,02,168
42	C S I R - Fellowship - Kiran Antony	-	20,000	294	8,912	11,382
43	C S I R - Fellowship- Revathy J M	-	15,068	180	8,567	6,681
44	CSR-HEFA-Chito Oligosaccharides -Keyur Raval	-	18,00,000	-	99,000	17,01,000
45	DAE-Fractional Regularization Methods-Jidesh	62,027	-	1,292	23,610	39,709
46	DBT-Dev of Artificial Intelligence- J Rajan	1,00,005	-	359	1,00,005	359
47	DBT-Social Economic-A Azhoni	2,75,011	-	1,485	2,75,011	1,485
48	Defin of Delay Sequencig Blast Design- Karra Ram	-	10,65,010	12,390	68,090	10,09,310
49	Design & Dev of Ultra Low Power CMOS-Sandeep	3,23,477	10,10,303	2,360	8,59,160	4,76,980
50	Design & Exeution Fisheries Project-Pruthviraj	5,04,91,719	-	13,39,396	28,31,307	4,89,99,808
51	Design Innovation Center -S.M.Kulkarni	6,58,943	-	13,191	4,73,745	1,98,389
52	Dev of Effluent Treatment Tech for CN- B Manu	90,426	-	2,257	82,000	10,683
53	Devt of DC-DC Converter for PV System-Vignesh	-	1,47,000	2,902	1,26,774	23,128
54	Devt of High Temp Wear & Erosion Resist - Rajasekara	-	41,54,000	8,412	4,15,400	37,47,012
55	DHI-Devt of Brushless DC- Gangadhar	2,15,834	-	4,306	2,15,834	4,306
56	Digital India In Faculty Youth Award	15,01,767	-	40,548	-	15,42,315
57	DRDO-Design & Devt - Raj Mohan	35,206	6,51,755	9,119	6,17,107	78,973
58	DRDO-Design of Shock- Hemanth Kumar	-	13,71,950	27,748	4,10,416	9,89,282
59	DRDO-Devt of Low Phase Radar Appln-Mandeep S	-	17,36,200	25,794	15,34,982	2,27,012
60	DRDO-Modeling & Simul- Guruprasad K R	6,19,945	5,16,576	11,479	9,03,423	2,44,577
61	DRDO-Partial Slip-Vadivuhezion K	5,93,092	3,14,335	5,650	7,61,162	1,51,915
62	DRDO-Shock Response Studies - M Doddamani	-	19,72,946	33,750	5,33,131	14,73,565
63	DRDO-Sigma Delta Space Time Adaptive- Srihari	7,713	60,741	328	68,454	328
64	DST-Achieving Beyond Birthday B S - B R Shankar	-	7,50,600	1,689	1,689	7,50,600
65	DST-Cp-ABE Scheme Decryptn-Alwyn	63,081	-	284	63,081	284
66	DST-CSRI-Automatic Detection & Qlfn- Jenny	6,805	-	168	6,805	168
67	DST-CSRI-Speaker Recotn - Shashidhar	19,04,234	-	41,006	10,04,758	9,40,482
68	DST-Des&Dev of Nanoscale Interg Sys- Sandeep	9,03,501	-	-	8,28,855	74,646
69	DST-Design & Test - Parthasarasthy	15,40,307	-	39,563	1,50,000	14,29,870
70	DST- Devt of Value -Dr.B.B.Das	2,10,857	-	1,835	2,10,857	1,835
71	DST-Devt of Convertible -Saurbh Chandraker	39,41,731	-	1,03,831	10,20,878	30,24,684
72	DST-Entrepreneurship Training Program-Alwyn	19,144	-	474	19,144	474
73	DST Fellowship - Venkatramana	12,217	4,51,520	2,809	3,83,080	83,466
74	DST Fellowship- Vigneshwar Ganesh Bhat	2,19,135	4,78,960	3,014	2,19,135	4,81,974
75	DST-FIST-Program-HOD of App. Mech	32,43,605	-	58,385	32,43,605	58,385

Sl. No.	Particulars	Opening Balance	Receipts	Interest	Expenditure	Closing Balance
76	DST-Indo-Portugal-Debabrata Karma	1,93,674	-	3,050	1,93,674	3,050
77	DST-Inspired Fellowship-Vasundhara R	-	4,58,960	1,645	4,58,960	1,645
78	DST Inspire - Dr Poornesh K K	1,21,483	-	3,250	1,652	1,23,081
79	DST-Integrated Photocatalytic - Vidya Shetty	2,15,752	-	1,207	2,15,752	1,207
80	DST-SEED-Design & Devt -Hemanth Kumar	16,02,267	-	38,740	4,24,801	12,16,206
81	DST-Ultrafine Grain - A S S Balan	3,75,641	-	9,003	1,10,389	2,74,255
82	ESTC-Coastal Ocean Tech-Dr Manu	3,25,890	-	2,667	3,25,890	2,667
83	Experimental & Numerical - Jeyaraj P	3,61,457	-	2,440	3,61,457	2,440
84	FI ST Program-Vijay Desai Mechl	13,23,910	-	2,979	13,23,910	2,979
85	Foundation for ISHRAE -Cost of Effe- Doddamani M	1,37,240	-	2,671	51,266	88,645
86	Global Vipassanna Foundation - Pavan G S	4,87,660	11,26,900	28,787	5,67,891	10,75,456
87	Govt of Maharashtra -Computatin Site- Sreevalsa K	-	24,00,000	25,147	8,23,669	16,01,478
88	Hutti Gold Mines-Development of Value - Aruna	52,460	-	1,416	-	53,876
89	I B M SUR Award - Basavaraj Talwar	18,99,295	-	49,116	9,62,001	9,86,410
90	ICSSR:Study of Adaptation to Tech Innovation-P R Je	22,560	-	152	22,560	152
91	ICSSR-Assing Impact of Climate Change - Rajesh A	34,611	-	934	-	35,545
92	ICSSR-Assing the Impact of PMFBY- Rajesh A	36,311	80,000	1,427	1,16,311	1,427
93	ICSSR-Exp Efficient Solutions - Ritanjali M	3,51,083	-	9,479	-	3,60,562
94	ICSSR-JSPS(Japan) -Moving Climate - Jena	1,90,269	-	3,426	1,90,269	3,426
95	ICSSR-Make in India Initiative- Sheena , SOM	29,472	1,60,000	1,279	1,89,472	1,279
96	ICSSR-Socio-Economic - A Azhoni	30,401	-	547	30,401	547
97	Imprint Project - Arun Kumar Thalla	49,289	-	776	49,289	776
98	Industry Sponsor Research-Imprint	44,821	-	1,210	-	46,031
99	Info.Security Education & Aware-Phase II-Alwyn	28,21,634	-	76,114	31,283	28,66,465
100	INSPIRE Faculty Award-Kishore Sridharan	13,18,452	-	26,699	13,18,452	26,699
101	INTEL India Fellowship -Basavaraj Talawar	1,06,344	-	2,871	-	1,09,215
102	ISEF-Electrification of Indian C-Ports -Gangadharan	-	40,52,442	26,946	1,81,425	38,97,963
103	ISRO-Customized Reconfigule Platform-Annappa	40,926	-	1,105	-	42,031
104	ISRO-Design &Analysis - Partha Sarathy	82,579	6,69,624	6,131	1,62,535	5,95,799
105	ISRO-Design Dev of Multi Harmonies-Sandeep	2,97,468	5,400	6,253	1,79,656	1,29,465
106	ISRO-Design & Devt of Multiimpet-Karthikeyan	15,77,049	-	21,656	15,50,521	48,184
107	ISRO-IIRS-Des & Dev of Auid Software Tools- Shyamla	-	16,44,000	27,335	6,25,252	10,46,083
108	ISRO-Layer Based - Srikanth Bontha	14,91,673	-	38,444	2,31,601	12,98,516
109	ISRO-Progra Photonic Microwave -Mandeep Singh	6,79,324	-	11,110	6,76,999	13,435
110	ISRO RACS- NITK Centre	34,533	-	932	-	35,465
111	ISRO-Realisation of A1 - G V Preetham K	1,43,242	-	3,060	71,708	74,594
112	ISRO-Respond Dev of Automatic Land- Shyamlal	1,21,225	3,68,234	4,198	3,83,559	1,10,098
113	Karnataka State Bio Fuel Dev Board	3,21,431	1,000	8,703	-	3,31,134

Sl. No.	Particulars	Opening Balance	Receipts	Interest	Expenditure	Closing Balance
114	KSMC - Devt. of A Communion -Dr.Harsha	1,73,946	-	2,789	1,73,946	2,789
115	KSTePS:Experi Verification of Three Phase-Y Suresh	5,56,966	-	10,489	5,56,966	10,489
116	KSTEPS-Dept of Sturctural -Ravishankar K S	10,02,250	-	27,061	-	10,29,311
117	KSTePS-Development of Anti-Udaya Bhat K	22,05,759	18,23,467	41,065	21,31,585	19,38,706
118	KSTEPS- Devlpt of Met - M R Rehman	2,02,901	-	5,478	-	2,08,379
119	Ksteps-Devt of Ternary -Sathyabhama	-	7,50,000	-	-	7,50,000
120	KSTePS-Effective Online Framework-Nagamma Patil	57,858	-	130	57,858	130
121	KSTEPS-Optimal Controller Wide Speed-Parthiban	55,572	46	1,169	55,618	1,169
122	KSTEPS-Solar Based Electric Vehi Charger- B V P	-	15,00,000	-	-	15,00,000
123	KSTePS-VGST-Des&Dev of Parthal Proc-Wassem	-	3,00,000	-	-	3,00,000
124	KSTEPS-VGST-Extraction of Max Power-Karthikeyan	2,83,527	-	3,943	2,79,064	8,406
125	L&T Sponsored MTech(CTM)Project	3,59,92,129	64,24,950	9,45,578	57,91,379	3,75,71,278
126	Maire Tecnimont Centre for Research-Vasudeva M	-	25,66,898	5,553	99,000	24,73,451
127	Meast & Asst of Dust NMDC Ballari-Harsh V	-	4,19,750	4,521	89,576	3,34,695
128	Measut & Asst of Dust Conctns - Kadaba- Harsha V	1,12,420	2,14,073	3,139	2,85,895	43,737
129	MEITY-Speech Tech in Indian Languages -Deepu V	-	35,80,600	47,371	35,80,600	47,371
130	Metallurgical Investigatin-Jagannath Nayak	68,283	-	1,844	-	70,127
131	MHRD-IMPRINT Project- Hemanth Kumar	6,63,133	-	2,984	6,63,133	2,984
132	MHRD-Virtual Lab- K.V Gangadharan	30,546	-	207	30,546	207
133	MHRD Virtual Lab Phase2 Gangadharan	72,04,987	17,40,801	1,43,306	54,64,176	36,24,918
134	Ministry of Mines -Devt of Novel - Arun Isloor	1,14,250	-	2,828	1,14,250	2,828
135	MOES-Unraveeling Submarine-Ramesh H	-	23,758	160	23,758	160
136	MOWR-Impact of Climate - Mahesha A	62,148	-	707	46,668	16,187
137	MPSW-Design Analysis -Dr Debabrata Karmakar	24,80,207	15,00,000	-	28,79,090	11,01,117
138	MPSW-NMPT-New Resilient - Babloo Choudry	-	30,20,000	28,946	5,62,975	24,85,971
139	MRDMS Summer/Winter School -Ramesh H	4,60,013	5,922	2,878	4,65,935	2,878
140	MSME-Awareness Program & Workshop-Bijuna/PU	-	17,00,000	6,413	5,56,225	11,50,188
141	MSME CLCS - TU Scheme- Bijuna C M/KVG	30,02,823	8,06,900	44,296	37,15,983	1,38,036
142	National Jute Board - Tech Dev-Sreevals K	-	14,39,415	3,239	-	14,42,654
143	NRB- Theoretical Study & Design of H E - Prarthiban	1,90,339	12,43,800	8,990	14,34,139	8,990
144	Phase 3-Virtual Lab-K V Gangadharan	43,58,884	1,42,00,000	1,35,611	1,02,90,600	84,03,895
145	Power Electronics System Using DSP-Prajof P	-	5,00,000	7,053	5,00,000	7,053
146	Raptor Design -High Gain- V Preumal , EE	92,498	-	2,497	-	94,995
147	Raptor Design-Voyager-V Perumal, EE	2,870	-	45	2,870	45
148	R & D Project-Investigation to Reduction-Harsha Var	4,42,945	-	11,168	80,454	3,73,659
149	SERB: Training MC for Power Electric Conv-R Raushan	-	5,00,468	2,742	5,00,468	2,742
150	SERB-Additive-Manufacturing - Srikanth Bonth	-	4,383	39	4,383	39
151	SERB-Affordable Thera Sol for Rehabi- Krishnan	12,80,421	-	19,712	10,59,889	2,40,244

Sl. No.	Particulars	Opening Balance	Receipts	Interest	Expenditure	Closing Balance
152	SERB-Analytical & Numerical - Gnanasekaran	1,05,053	-	473	1,05,053	473
153	SERB-A Retinex Inspired Framework - Jidesh P	2,84,751	7,00,000	13,849	6,50,579	3,48,021
154	SERB-Artificial Intelligence Based Mod-Shrutillipi	-	15,32,000	26,933	2,06,940	13,51,993
155	SERB-Asean-Investigation - Subhas C Katti	12,03,778	-	17,873	9,90,253	2,31,398
156	SERB-Asen-Design- Uday Kumar Dalimba	14,08,620	-	28,024	11,67,758	2,68,886
157	SERB-Automatic Early Detection of L C- Annappa	-	1,60,000	360	-	1,60,360
158	SERB-Automatic Multi Speaker- Deepu V	93,306	-	2,519	-	95,825
159	SERB-Conjunctive Use - Ramesh H	7,52,192	-	13,539	7,52,192	13,539
160	SERB-Des & Dev of Automated Kidney Cancer-Shyamal	1,56,131	-	2,277	1,56,131	2,277
161	SERB-Des&Dev of Gan HEMT Based LNA-Sandeep	97,544	5,00,000	6,535	5,48,291	55,788
162	SERB-Design Analysis - Debabrata Karmakar	1,28,079	-	857	1,28,079	857
163	SERB-Design Dev of Low Power High Effici-Dharavath	-	1,50,000	738	1,50,000	738
164	SERB-Design & Devt -Ajay Kumar Yadav	9,92,053	-	21,553	4,66,276	5,47,330
165	SERB-Design & Devt - Ramachandra Bhat	15,56,311	5,27,366	20,489	20,83,677	20,489
166	SERB - Design & Fabrication -Saurabh Chandraker	35,474	-	544	35,474	544
167	SERB-Des & Impln of Multi Attribute-Chandavarkar	2,35,898	-	1,062	2,35,898	1,062
168	SERB-Dev of Design Essentls for GA203-Nikhil	4,75,887	-	12,726	6,833	4,81,780
169	SERB-Dev of Highly Condu Ultrathin VS2-Sushil	13,89,116	4,71,520	20,068	17,33,729	1,46,975
170	SERB-Dev of Innovative - Palanisamy	3,16,067	6,50,000	14,712	8,41,747	1,39,032
171	SERB-Dev of Integrated Health Monitig-W Ahmad	13,88,692	-	27,848	9,51,416	4,65,124
172	SERB-Dev of Microbial - Devatha C P	-	12,06,000	24,572	6,91,536	5,39,036
173	SERB-Devt & Demonstration - Hari Prasad Dasari	5,15,355	60,553	3,137	5,75,908	3,137
174	SERB-Devt of Biodegrade-Jeyaraj	5,39,856	5,00,000	14,527	5,65,955	4,88,428
175	SERB-Devt of Cost - Ajay Kumar Yadav	9,71,152	5,00,000	26,306	5,95,102	9,02,356
176	SERB-Devt of Counter- Babloo Choudhary	1,09,300	3,47,899	4,194	3,99,610	61,783
177	SERB-Devt of Electro - Hari Prasad Dasari	3,17,901	6,00,000	10,839	7,44,784	1,83,956
178	SERB-DS & DV of Low Cost Power- Prajof P	-	1,50,000	1,268	1,50,000	1,268
179	SERB-DS&Imp of 3 Phase PWM -Arun D	-	1,50,000	1,252	1,50,000	1,252
180	SERB-Dynamic of LOW-Shajahan	-	10,66,292	-	10,66,292	-
181	SERB-Effect of Frictional - Vadivuchezhian	9,232	-	228	9,232	228
182	SERB-Effect of High - Debashree Chakraborty	7,36,553	4,50,000	18,202	8,48,698	3,56,057
183	SERB-Evaluation of Macro-Parthasarathy P	6,21,182	-	15,534	77,498	5,59,218
184	SERB-Expert Technique- Shivananda Nayak	1,02,853	-	533	1,02,853	533
185	SERB Fellowship- Vipin Joseph	99,751	-	184	99,751	184
186	SERB-Grid Interfacing of Solar Power-H Nagendrappa	-	83,959	718	83,959	718
187	SERB-Hands on Traing on DSP TMS 320F M-Dharavath	-	5,00,000	2,279	5,00,000	2,279
188	SERB-Highend Workshop - Alwyn R Pais	1,78,495	-	803	1,78,495	803
189	SERB-High End Workshop Network-Bhawana R	5,00,000	6,231	3,979	5,06,231	3,979

Sl. No.	Particulars	Opening Balance	Receipts	Interest	Expenditure	Closing Balance
190	SERB-Impounding of River - Ramesh H & Nasar	18,84,799	-	39,344	5,99,542	13,24,601
191	SERB-Improvement in the Prop - Sudhakar C J	1,56,367	-	4,222	-	1,60,589
192	SERB-Influence of Binary - B B Das	2,34,973	-	1,057	2,34,973	1,057
193	SERB-Interaction of Various Envt - Vinoth	26,11,479	-	25,169	26,10,074	26,574
194	SERB-Investigations on Origin - Poornesh K	2,46,925	-	213	2,46,925	213
195	SERB - Invest Induced - Anish S	3,47,425	-	8,570	89,066	2,66,929
196	SERB-Invest of Primordial-Sreenath V	9,52,860	-	22,650	8,50,925	1,24,585
197	SERB-Invest on Inertial -Ranjith M	-	18,00,000	4,050	-	18,04,050
198	SERB-Ionic & Mech -Poornesh K K	-	24,50,000	5,513	-	24,55,513
199	SERB-Laboratory Scale Demon of Kite-Karthikeyan	45,74,500	2,00,000	1,17,877	39,37,639	9,54,738
200	SERB-Logical Corr for Batteryess Internet- Biswajit	12,81,103	-	18,254	9,07,974	3,91,383
201	SERB- Metamaterial Based Novel- Krishnamoorthy	-	15,78,319	11,534	15,78,319	11,534
202	SERB-Multi Scale Model -Debashree Chak	5,01,125	-	9,446	4,25,475	85,096
203	SERB- Newdelhi - Project	-	1,65,202	372	-	1,65,574
204	SERB-Nonlockal &Non Convex Fractnl -Jedesh	-	2,20,000	1,440	20,000	2,01,440
205	SERB-Novel Catalytic -Saikat Dutta	-	7,73,080	6,269	2,97,166	4,82,183
206	SERB-Olefin Linked - Lakshmi Vellank	13,69,100	-	9,921	13,19,609	59,412
207	SERB-Organinc Rankine - Veeretty Gumpta	22,47,620	-	60,686	-	23,08,306
208	SERB-Particle Migration- Arun Mahalingam	22,33,244	-	56,669	2,01,600	20,88,313
209	SERB-Perforce Analysis & Enhancnt- Prabhu Krish	1,30,474	-	881	1,30,474	881
210	SERB-Performance Evaluation - Ramesh M R	-	16,08,270	3,619	-	16,11,889
211	SERB-Photonic Porous Silicon Nano- Mandeep Singh	20,75,699	-	23,016	19,41,040	1,57,675
212	SERB-Prawn Shell - Saumen Mandal	22,49,062	-	40,305	21,70,481	1,18,886
213	SERB-Predictive Asst of Posteral Risk-Bijay Mihir	2,33,055	4,50,000	7,623	5,25,596	1,65,082
214	SERB-RCMLI for Solar PV System-Ravi Raushan	-	1,50,000	1,024	1,50,000	1,024
215	SERB-Restricted Proper Edge Color of Graphs -Manu B	2,09,929	-	5,610	25,800	1,89,739
216	SERB-Selective Extraction - Regupathi	3,46,625	-	9,324	2,231	3,53,718
217	SERB-Semi Active -Hemanth Kumar	11,67,528	-	27,537	4,63,619	7,31,446
218	SERB-Smart Electric Vehicle - Dastogiri	17,40,246	15,500	19,452	15,82,582	1,92,616
219	SERB-SOCCER Sophisticated Optizd Dc Dc -Kalpana	-	17,11,000	11,327	98,913	16,23,414
220	SERB-Study on Non Linear Equations- Santho.Jjidesh	6,46,453	1,25,751	-	6,52,204	1,20,000
221	SERB-Synthesis of Azulence-Vijayendra S	12,98,424	2,00,000	15,199	12,66,902	2,46,721
222	SERB-Synthesis of Carbo -Beenesh P B	15,49,260	-	25,383	11,89,753	3,84,890
223	SERB-TARE-Nitte- Narayan Prabhu	12,957	3,35,000	5,471	3,47,957	5,471
224	SERB-TARE-Nitte- Regupathi	1,70,596	-	4,606	-	1,75,202
225	SERB - TARE - Nitte - Shrikantha Rao	3,462	3,00,000	3,056	3,03,462	3,056
226	SERB-Vritika--Des & Dev of Power Factor-Vignesh	2,057	-	9	2,057	9
227	Sparc-Adaption of Climate Smrt Agri- Pradyot	3,06,121	2,21,827	2,544	5,27,948	2,544

Sl. No.	Particulars	Opening Balance	Receipts	Interest	Expenditure	Closing Balance
228	Sparc-Additive Manu - M Doddamani	5,51,231	-	3,078	5,51,231	3,078
229	Sparc-Environmental-Dr Pritviraj	42,328	-	594	42,328	594
230	Sparc-Exploring Appns of Radiomies - Sumam	1,57,046	1,22,233	2,069	2,79,279	2,069
231	SPARC Project - Hemanth Kumar	14,525	-	165	14,525	165
232	Spare -Coastal-Dr Ramesh H	95,972	-	1,727	95,972	1,727
233	Training Programme- MRPL-Rashmi Uchil	-	1,01,695	435	-	1,02,130
234	U K Project- Collaborative Research - B B Das	13,98,238	1,96,658	36,807	5,26,134	11,05,569
235	Utilization of Fine Material of Mines Waste-Harsha	74,216	-	1,826	18,638	57,404
236	VGST-Dev. & Characterization -Ch S N Murthy	12,57,512	-	33,852	9,844	12,81,520
237	V GST-Develop of Low Cost-Arun M Isloor	24,39,544	-	62,610	3,59,179	21,42,975
238	VGST-KSTEPA-Desaltn of Sea Water - Debabrata Kar	5,614	3,592	21	9,206	21
239	VGST-Underground Mine Real Time Airquality -S K R	-	11,73,729	3,594	-	11,77,323
240	Visvesvarya PhD Scheme for EC & IT	-	5,62,950	767	5,62,950	767
		21,49,88,651	11,50,43,888	54,79,699	13,42,94,395	20,12,17,844

SCHEDULE 3(b): SPONDERED FELLOWSHIP AND SCHOLERSHIP

SI.No.	NAME OF SPONSOR	OPENING BALANCE AS ON 01.04.2022		TRANSACTIONS DURING THE YEAR		CLOSING BALANCE AS ON 31.03.2023	
		3 CR.	4 DR.	5 CR.	6 DR.	7 CR	8 DR.
1	2						
1	AICTE GRANT QIP REGULER	352732	-	431956	357376	427312	-
2	AICTE GRANT QIP PLAN (POLY)	370299	-	-	230738	139561	-
3	SC/ST Scholarship Grant - MSJE	5,54,922	-	2825130	2976195	4,03,857	-
4	Other External Scholarship	6085543	-	5724144	3882411	7927276	-
	TOTAL	7363496	-	8981230	7446720	8898006	-

SCHEDULE 3(C) UNUTILIZED GRANTS FROM GOVERNMENT OF INDIA

₹ in lakhs

PARTICULARS	CURRENT YEAR	PREVIOUS YEAR
A. Capital Grants:		
Balance B/F	2,631.72	128.82
Less: Refunds (unspent grant reversed by TSA) 2021-22	2,631.72	-
Balance	-	128.82
Add: Receipts during the year	4,282.00	4,599.64
Less: Refunds (unspent grant reversed by TSA) 2022-23	3.29	4,278.71
Total (a)	4,278.71	4,728.46
Less: Utilized for Revenue Expenditure	-	-
Less: Utilized for Capital Expenditure	4,278.71	-
Less: Excess Expenditure met from IRG	-	2,096.74
Total (b)	4,278.71	2,096.74
Unutilized carried forward grant under TSA (a-b) = (A)	-	2,631.72
B.i) Revenue Grants: OH 31		
Balance B/F	29.93	-
Less: Refunds (unspent grant reversed by TSA) 2021-22	29.93	-
Balance	-	-
Add: Receipts during the year	9,730.26	7,665.08
Less: Refunds (unspent grant reversed by TSA) 2022-23	0.05	9,730.21
Total (c)	9,730.21	7,665.08
Less: Utilized for Non-Salary Expenditure	12,161.77	-
Less: Excess Expenditure met from IRG	2,431.56	7,635.15
Total (d)	9,730.21	7,635.15
Unutilized carried forward grant under TSA (c-d) = (Bi)	-	29.93
B.ii) Revenue Grants: OH 36		
Balance B/F	8.80	1,120.40
Less: Refunds (unspent grant reversed by TSA) 2021-22	8.80	-
Balance	-	1,120.40
Add: Receipts during the year	10,046.00	-
Less: Refunds (unspent grant reversed by TSA) 2022-23	3.80	10,042.20
Total (c)	10,042.20	9,182.00
Less: Utilized for Salary Expenditure	10,583.16	-
Less: Excess Expenditure met from IRG	540.95	9,173.20
Total (d)	10,042.20	9,173.20
Unutilized carried forward grant under TSA (c-d) = (Bii)	-	8.80
Unutilized carried forward grant under TSA Grand Total (A+Bi+Bii)	-	2,670.44

IRG STATEMENT 2022-23

₹ in lakhs

PARTICULARS	CURRENT YEAR	PREVIOUS YEAR
Balance B/F IRG 2021-22	3,803.22	2,822.29
TOTAL INTERNAL RECEIPTS	8,185.17	5,812.53
	11,988.39	8,634.82
LESS: HEFA PRINCIPAL & OTHER EXPENDITURE	1790.21	-
LESS: EXCESS EXPENDITURE OF OH 31 & 36	2964.51	4,831.60
SURPLUS UNDER CAPITAL FUND/CORPUS	7,233.66	3,803.22

NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA

SURATHKAL

P.O. SRINIVASNAGAR - 575 025

SCHEDULE NO. 4

FIXED ASSETS & DEPRECIATION AS ON 31-03-2023

(AMOUNT - ₹)

PARTICULARS	GROSS BLOCK					DEPRECIATION				
	BALANCE AS ON 01.04.2021 1	ADDITIONS DURING THE YEAR 2	DELETIONS DURING THE YEAR 3	TOTAL 4 = (1+2-3)	RATE OF DEP.(%) 5	DEPRECIATION UP TO 31.03.22 6	DEPRECIATION FOR THE YEAR 7	PRIOR PERIOD DEPRECIATION 8	TOTAL DEPRECIATION 9 = (6+7+8)	BALANCE AS ON 31.03.2023 10 = (4-9)
(A) FIXED ASSETS										
(i) Tangible Asset										
Land : Freehold	90,49,981	-	-	90,49,981	-	-	-	-	-	90,49,981
Buildings : Freehold.	2,52,18,03,124	47,75,38,819	-	2,99,93,41,943	2.00	69,57,09,750	5,99,86,839	-	75,56,96,589	2,24,36,45,354
Buildings : Freehold (Residential).	77,49,59,274	2,89,90,019	-	80,39,49,293	2.00	6,67,96,723	1,60,78,986	-	8,28,75,709	72,10,73,584
Buildings : Freehold (Hostel).	1,04,62,69,149	33,46,83,682	-	1,38,09,52,831	2.00	45,09,64,188	2,76,19,057	-	47,85,83,245	90,23,69,586
Plant & Equipments	29,65,94,701	-	-	29,65,94,701	5.00	18,02,45,835	1,48,29,735	-	19,50,75,570	10,15,19,131
Vehicle	71,50,244	1,40,000	-	72,90,244	10.00	60,89,815	5,24,470	1,32,128	64,82,157	8,08,087
Furniture & Fixtures	27,05,53,643	1,73,79,414	-	28,79,33,057	7.50	12,51,73,489	2,15,94,979	-	14,67,68,468	14,11,64,589
Office Equipments	3,21,95,916	15,92,121	-	3,37,88,037	7.50	1,56,90,441	23,92,217	-	1,80,82,658	1,57,05,379
Computer & Peripherals	46,14,30,306	5,71,67,790	1,83,756	51,84,14,340	20.00	31,84,74,738	5,80,42,193	-	37,65,16,931	14,18,97,409
Electrical Installation	7,88,17,197	1,84,62,372	-	9,72,79,569	5.00	1,97,19,531	48,63,978	-	2,45,83,509	7,26,96,060
Library Books	2,41,18,066	4,24,612	-	2,45,42,678	10.00	2,22,53,269	4,55,440	-	2,27,08,709	18,33,969
Audio Visual Equipments	1,45,70,727	62,57,459	-	2,08,28,186	7.50	64,65,861	15,59,503	-	80,25,364	1,28,02,822
Tube Wells and Water Supply	12,48,734	69,432	-	13,18,166	2.00	2,11,394	26,363	-	2,37,757	10,80,409
Lab & Scientific Equipments	89,93,33,061	93,76,27,952	-	1,83,69,61,013	8.00	18,43,26,788	14,69,56,881	-	33,12,83,669	1,50,56,77,344
TOTAL 4 (A)	6,43,80,94,123	1,88,03,33,672	1,83,756	8,31,82,44,039		2,09,21,21,822	35,49,30,641	1,32,128	2,44,69,20,335	5,87,13,23,704

* Proportionate book value of land acquired by NHAI to be recoverable from GOK.

B. CAPITAL WORK IN PROGRES AS ON 31.03.2023

PARTICULARS	OP. BALANCE	ADD / TRANS.	TOTAL	TR. TO REVENUE	TR. TO ASSET	CL. BALANCE
WIP - Const.of New Boys Hostel	512785335.00	55,01,264	51,82,86,599	-	-	51,82,86,599
WIP - New Boys Hostel - Block No 11	121517425.00	17,57,85,159	29,73,02,584	-	-	29,73,02,584
WIP - Security Office at Main Ent	7838336.00	57,17,882	1,35,56,218	-	1,35,56,218	-
WIP - STP & Elec Work for Resi Apts Type V&VI	5517826.00	8,22,157	63,39,983	-	63,39,983	-
Constn of 10 M Dia RCC Open Well - P H 1-OH 35	-	24,66,662	24,66,662	-	24,66,662	-
Constn of Addl Bldg for Library	-	7,72,591	7,72,591	-	7,72,591	-
Constn of Bldg Concrete Testing & Envrn Lab	-	9,14,933	9,14,933	-	9,14,933	-
Constn of New Faculty Apartment V & VI	-	2,03,25,475	2,03,25,475	-	2,03,25,475	-
Constn of New Non-Faculty Apart , III & IV	-	23,24,561	23,24,561	-	23,24,561	-
Constn of New Sports Complex	-	5,238	5,238	-	5,238	-
Revn of Girls Hostel Kaveri - OH 35	-	41,96,696	41,96,696	-	41,96,696	-
Expenses from HEFA Loan						
WIP - New Girls Hostel - Block No 6	184297224.00	14,37,23,100	32,80,20,324	-	32,80,20,324	-
WIP - Constn of COE & CRF Bldg HEFA (School of Interdisciplinary Studies)	329532541.00	13,27,57,298	46,22,89,839	-	46,22,89,839	-
Constn of Lecture Hall Complex D-160	-	1,72,13,280	1,72,13,280	-	-	1,72,13,280
TOTAL 4 (B)	1,16,14,88,687	51,25,26,296	1,67,40,14,983	-	84,12,12,520	83,28,02,463
Figures for 2021-22	1,06,23,66,295	52,28,23,877	1,58,51,90,172	-	42,37,01,485	1,16,14,88,687

PARTICULARS	GROSS BLOCK			DEPRECIATION			BALANCE AS ON 31.03.2023
	BALANCE AS ON 01.04.2022	ADDITIONS DURING THE YEAR	DELETIONS DURING THE YEAR	DEPRECIATION UP TO 31.03.21	DEPRECIATION FOR THE YEAR	TOTAL DEPRECIATION	
	1	2	3	6	7	8=(6+7)	9 = (4-8)
(C) FIXED ASSETS							
Intangible Asset							
Software	6,24,22,296	48,02,268	-	5,20,92,954	1,02,35,110	6,23,28,064	48,96,500
E-Books	3,65,57,667	1,44,14,583	-	2,19,90,281	1,57,52,481	3,77,42,762	1,32,29,488
TOTAL (C)	9,89,79,963	1,92,16,851	-	7,40,83,235	2,59,87,591	10,00,70,826	1,81,25,988
TOTAL (A) + (C)	6,53,70,74,086	1,89,95,50,523	1,83,756	2,16,62,05,057	38,09,18,232	1,32,128	5,88,94,49,692
Figures for 2021-22	5,49,62,75,913	1,04,08,80,966	82,793	1,89,12,06,911	27,49,98,146	-	4,37,08,69,029

(D (a)) FIXED ASSETS OF VARIOUS PROJECTS & FUNDS AS ON 31-03-2023

	OP. BALANCE	ADDITIONS	TRANSFER	CL. BALANCE
OTHER RESEARCH SCHEMES				
Computer & Peripherals.	3,84,77,280	1,08,30,822	-	4,93,08,102
Plant & Equipment.	3,62,512	-	-	3,62,512
Electrical Installations.	59,89,563	19,46,468	-	79,36,031
Furniture & Fixtures	12,94,046	88,208	-	13,82,254
Office Equipments.	15,30,723	55,283	-	15,86,006
Books	6,06,455	1,43,658	-	7,50,113
Software	2,36,95,699	33,07,262	-	2,70,02,961
Audio Visual Equipments	9,91,077	4,28,923	-	14,20,000
Tube Wells and Water Supply	49,500	-	-	49,500
Lab & Scientific Equipments	14,39,60,532	1,77,97,876	-	16,17,58,408
TOTAL (D (a))	21,69,57,387	3,45,98,500	-	25,15,55,887
Figures for 2021-22	30,02,99,094	5,93,74,956	14,27,16,663	21,69,57,387

(D - B) FIXED ASSETS OF TEQIP AS ON 31-03-2023

PARTICULARS	BALANCE AS ON 01.04.2021	GROSS BLOCK			RATE OF DEP.(%)	DEPRECIATION			BALANCE AS ON 31.03.2023
		ADDITIONS DURING THE YEAR	DELETIONS DURING THE YEAR	TOTAL		DEPRECIATION UP TO 31.03.22	DEPRECIATION FOR THE YEAR	TOTAL DEPRECIATION	
TEQIP I Assets	18,42,37,765	-	-	18,42,37,765	5	6	7	8 = (6+7)	9 = (4-8)
TEQIP II Assets	9,70,19,243	-	-	9,70,19,243	-	-	-	-	18,42,37,765
TEQIP III Assets	-	3,45,90,110	-	3,45,90,110	-	-	-	-	9,70,19,243
TOTAL (D (b))	28,12,57,008	3,45,90,110	-	31,58,47,118	-	-	-	-	3,45,90,110
GRAND TOTAL (A) + (C) + (D (b))									31,58,47,118
Figures for 2021-22									6,20,52,96,810
									4,68,67,16,147 7

PLACE : SURATHKAL

DATE : 14-07-2023

Sd/-

(RAVINDRANATH K.)

REGISTRAR

N.I.T.K., SURATHKAL

Sd/-

(PROF. BHALLAMUDI RAVI)

DIRECTOR

N.I.T.K., SURATHKAL

SCHEDULE NO. 5 INVESTMENTS FROM EARMARKED/ ENDOWMENT FUNDS		(AMOUNT ₹)
	CURRENT YEAR	PREVIOUS YEAR
1 In Central Government Securities	-	-
2 In State Government Securities	-	-
3 Other Approved Securities	-	-
4 Shares	-	-
5 Debentures and Bonds	-	-
6 Term Deposits with Banks	-	-
Long Term Investments:		
Main Account Funds		
Balance at the beginning of the year	94,44,32,980	
Add: Additions during the year	54,05,30,329	
	1,48,49,63,309	
Less: Transferred/Matured.	41,06,24,660	94,44,32,980
Student Activity Council.	8,40,16,294	8,11,10,436
NITK Corpus Fund	2,71,90,96,302	2,49,96,85,383
KREC/NITK Endowment Investments	3,54,32,450	1,67,66,254
DASA	-	7,21,68,455
T&C - Performance Security FD with Exe. Engg. Minor Irrgn	6,76,246	5,24,089
Student Deposit	6,59,294	-
CCE Fund	46,47,765	45,50,594
7 Other	-	-
BALANCE AS AT THE YEAR - END FOR SCHEDULE - 5	3,91,88,67,000	3,61,92,38,191

PLACE: SURATHKAL

DATE : 14-07-2023

Sd/-

(RAVINDRANATH K.)

REGISTRAR

N.I.T.K., SURATHKAL

Sd/-

(PROF. BHALLAMUDI RAVI)

DIRECTOR

N.I.T.K., SURATHKAL

SCHEDULE NO 6 -INVESTMENTS - OTHERS		(AMOUNT ₹)	
		CURRENT YEAR	PREVIOUS YEAR
1	In Central Government Securities	-	-
2	In State Government Securities	-	-
3	Other Approved Securities	-	-
4	Shares	-	-
5	Debentures and Bonds	-	-
6	Other	-	-
BALANCE AS AT THE YEAR - END FOR SHEDULE - 6		-	-

PLACE: SURATHKAL

DATE : 14-07-2023

Sd/-

(RAVINDRANATH K.)

REGISTRAR

N.I.T.K., SURATHKAL

Sd/-

(PROF. BHALLAMUDI RAVI)

DIRECTOR

N.I.T.K., SURATHKAL

SCHEDULE NO 7 - CURRENT ASSETS		(AMOUNT ₹)
	CURRENT YEAR	PREVIOUS YEAR
1 Stock	-	-
2 Sundry Debtors	-	-
3 Cash and Bank Balances		22,596
a) Cash in Hand	11,088	
b) With Scheduled Banks		26,70,44,487
In Reserve Bank of India TSA-10681301001		19,57,50,030
In Current Accounts		6,59,144
State Bank of India CA No.10175365060	14,14,34,612	
State Bank of India CA No.37772503911	(67,11,735)	
In Term Deposit Accounts		
Balance at the beginning of the year	67,20,63,650	
Add: Additions during the year	2,44,56,31,203	
	3,11,76,94,853	
	2,13,38,94,928	
Less: Transferred/Matured.		
A) In Savings Bank Accounts		67,20,63,650
Canara Bank - SB A/c No.8517101000001	18,60,168	
Canara Bank - HEFA Principle Payment A/c.No.8517201000070	72,297	
Canara Bank - HEFA Interest Payment A/c.No.8517201000071	4,85,860	
SBI SB Account No.10175367556	4,97,04,955	
DASA CA-SBI No.38036472824	-	
DASA CA-UBI No.510101006781570	-	
SBI-CCE Fund No.10175366686	10,61,999	
SBI - NITK/KREC Endowment Fund No.37481178720	1,03,56,733	
SBI - NITK Corpus Fund No.10175367454	66,66,743	
SBI - Student Activity Council No.30118900494	2,46,28,182	
c) With non-Scheduled Banks		
4 Stamps	665	3,980
BALANCE AS AT THE YEAR - END FOR SHEDULE - 7	1,21,33,71,492	1,22,86,53,519

PLACE: SURATHKAL

DATE : 14-07-2023

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DIRECTOR

N.I.T.K., SURATHKAL

SCHEDULE 8 - LOANS, ADVANCES & DEPOSITS		(AMOUNT ₹)
	CURRENT YEAR	PREVIOUS YEAR
1 Advance to Employees		
a) Salary	-	-
b) Festival	-	-
c) Medical	-	-
d) Other	-	55,000
2 Long Term Advances to Employees (Interest Bearing)		
a) Vehicle Loan	-	-
b) Home Loan	-	-
c) Other	-	-
3 Advances and Other Amounts Recoverable in Cash or in Kind or for Value to be Received		
a) On Capital Accounts	-	-
b) To Suppliers	4,00,043	4,83,45,141
To CPWD	21,38,83,166	19,67,64,329
To NIMPRC	3,19,37,606	3,19,37,606
To Staff	25,000	-
To Others	20,05,619	17,70,770
c) Other		
Rent Receivable	2,45,653	7,89,016
Interest Receivable	2,68,194	2,68,194
L D Charges Receivable	77,375	-
Student Fee Receivable	40,26,510	41,67,451
Water/Electricity Charges Receivable	2,49,914	8,27,889
NITK Corpus Fund - Interest Receivable	15,45,68,353	7,01,83,511
Receivable From S A C - Incident	3,18,626	-
TDS Receivable	1,37,85,380	1,95,55,320
TCS Receivable	1,02,308	1,02,159
GST - TDS	38,460	96,423
GST/GST TDS Paid in Advance	-	34,200
Pre-Deposit-Service Tax-Immovable Property	9,591	9,591
Pre-Deposit-Service Tax Penalty-T&C	2,20,209	2,20,209
Loans, Advance/Receivable of Project/ Funds		

		(AMOUNT ₹)	
		CURRENT YEAR	PREVIOUS YEAR
	NITK Corpus Fund - TDS	2,70,93,825	2,30,34,644
	CCE - TDS	65,370	55,180
	NITK/KREC Endowment Fund - TDS	1,38,361	36,096
	DASA - TDS	17,01,029	16,05,733
	SAC - TDS	22,44,635	19,69,377
	SAC - Misc Advance	12,500	-
4	Prepaid Expenses		45,34,17,728
	a) Insurance	1,26,413	1,53,507
	b) Other Expenses		
	Prepaid Road Tax	8,434	5,364
	Prepaid Maintenance of Computers	2,12,40,000	1,08,00,000
	Prepaid Operating Cost - CRF	32,00,939	-
	Prepaid Operating Cost - Library	2,71,23,546	2,68,16,694
5	Deposits		
	a) Telephone	77,466	77,466
	b) Lease Rent	-	-
	c) Electricity	70,41,939	70,41,939
	d) Other - Gas & Oil suppliers	1,87,120	1,02,120
6	Income Accrued		
	a) On Investments from Earmarked/ Endowment Funds	-	-
	b) On Investment - Others	-	-
	c) On Loans & Advances	-	-
	d) Other		
	Leave Salary & Pension Receivable		15,42,402
	DCRG & Commutation - Receivable		90,55,145
7	Other - Current Assets, Recivables from UGC/Sponsored Projects	17,13,959	-
	a) Debit Balance in Sponsored Projects	-	-
	b) Debit Balance in Sponsored Fellowships & Scholarships	-	-
	c) Grants Receivable		
	DEIT Grant Receivable	-	3,00,450

		(AMOUNT ₹)	
		CURRENT YEAR	PREVIOUS YEAR
DST Interest Receivable	27,446		27,446
SERB Grant Receivable	1,90,199		1,90,199
Project Grant Receivable	50,41,850		-
HEFA CSR Contribution A/c	17,01,000	69,60,495	-
d) Other Receivables from UGC		-	-
8 Claims Receivable.		-	-
BALANCE AS AT THE YEAR - END FOR SHEDULE - 8		52,10,98,038	45,79,40,571

PLACE: SURATHKAL

DATE : 14-07-2023

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(RAVINDRANATH K.)

REGISTRAR

N.I.T.K., SURATHKAL

Sd/-

(PROF. BHALLAMUDI RAVI)

DIRECTOR

N.I.T.K., SURATHKAL

NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA, SURATHKAL

P.O. SRINIVASNAGAR - 575 025

SCHEDULES FORMING PART OF INCOME & EXPENDITURE FOR THE YEAR ENDED 31-03-2023

(AMOUNT ₹)

SCHEDULE NO 9 - ACADEMIC RECEIPTS	CURRENT YEAR	PREVIOUS YEAR
A Academic		
Admission Fee-College & Hostel	26,67,930	26,88,320
Library Fee	1,80,66,200	1,58,37,850
M.B.A.Tution Fee	1,05,50,000	76,25,000
M.C.A.Tution Fee	1,44,40,000	1,42,80,000
M.Sc.Tution Fee	41,85,000	29,92,500
Phd Thesis Processing/Evaluation Fee	32,19,240	46,45,368
Phd. Tution Fee	1,28,85,000	1,89,45,240
M.Tech Tution Fee	11,33,47,500	9,86,05,125
U.G Tution Fee	27,45,69,882	23,69,40,145
TOTAL (A)	45,39,30,752	40,25,59,548
B Examinations	-	-
TOTAL (B)	-	-
C Other Fees		
Central Computing Facilities Fee	2,14,23,384	1,80,47,300
Identity Card	8,400	3,800
Campus Amenities	72,82,110	29,77,325
Career Development Fee	87,92,140	71,54,795
Certificate Fee	2,21,675	2,24,650
Convocation Fee	50,20,720	49,30,090
Health Care Facility	72,88,010	29,77,325
Late Fee, Fine & Processing Fee	10,14,559	5,92,244
TOTAL (C)	5,10,50,998	3,69,07,529
D Sale of Publications		
Application Form/Prospectus	10,72,150	14,17,922
TOTAL (D)	10,72,150	14,17,922
E Other Academic Receipts	-	-
TOTAL (E)	-	-
TOTAL (F) = (A)+(B)+(C)+(D)+(E)	50,60,53,900	44,08,84,999

PLACE : SURATHKAL

DATE : 14-07-2023

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REGISTRAR
N.I.T.K., SURATHKAL

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(PROF. BHALLAMUDI RAVI)
DIRECTOR
N.I.T.K., SURATHKAL

(AMOUNT ₹)

SCHEDULE NO 10 - GRANTS/SUBSIDIES	CURRENT YEAR	PREVIOUS YEAR
11 GRANTS / SUBSIDIES :		
Balance B/F	26,70,44,487	12,49,21,686
Add : Receipts during the year - Revenue Grant	1,97,76,26,318	1,57,26,67,734
- Capital Grant	42,82,00,000	45,99,64,000
	2,67,28,70,805	2,15,75,53,420
Less : Refund to MoE - 2021-22	26,70,44,487	-
Less : Refund to MoE - 2022-23	7,13,960	-
Balance	2,40,51,12,358	2,15,75,53,420
Less : Utilised for Capital Expenditure (A)	42,78,70,625	21,55,64,060
Balance	1,97,72,41,733	1,94,19,89,360
Less : Utilised for Revenue Expenditure (B)	1,97,72,41,733	1,67,49,44,873
Balance C/F (C)	-	26,70,44,487

PLACE : SURATHKAL

DATE : 14-07-2023

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N.I.T.K., SURATHKAL

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DIRECTOR
N.I.T.K., SURATHKAL

(AMOUNT ₹)

SCHEDULE NO 11 - INCOME FROM INVESTMENTS		CURRENT YEAR	PREVIOUS YEAR
1	Interest		
	a. On Government Securities	-	-
	b. Other Bonds / Debentures	-	-
2	Interest on Term Deposits	25,20,58,888	15,23,72,877
3	Income Accrued but not Due on Term Deposits	-	-
4	Interest on Savings Bank Accounts	62,68,009	30,60,073
5	Others	-	-
	TOTAL (A)	25,83,26,897	15,54,32,950
	Less : Transferred to Earmarked / Endowment Funds (B)	22,12,20,646	12,68,45,325
	TOTAL (A)-(B)	3,71,06,251	2,85,87,626

PLACE : SURATHKAL

DATE : 14-07-2023

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N.I.T.K., SURATHKAL

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DIRECTOR
N.I.T.K., SURATHKAL

(AMOUNT ₹)

SCHEDULE NO 12 - INTEREST EARNED	CURRENT YEAR	PREVIOUS YEAR
1 Interest on Savings Bank Accounts	18,66,190	17,45,515
2 On Loans	-	-
3 On Debtors & Receivable		
Interest on Income Tax Refund	6,42,308	6,01,026
Interest on MESCOM Deposit/Other Advance	3,01,483	3,06,805
TOTAL	28,09,981	26,53,346

PLACE : SURATHKAL

DATE : 14-07-2023

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N.I.T.K., SURATHKAL

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(PROF. BHALLAMUDI RAVI)
DIRECTOR
N.I.T.K., SURATHKAL

(AMOUNT ₹)

SCHEDULE NO 13 - OTHER INCOME		CURRENT YEAR	PREVIOUS YEAR
A	1 Income from Land & Building		
	Testing & Consultancy	5,01,83,622	-
	Hostel Room Rent	9,26,17,305	2,01,74,694
	Rent From Building	32,23,246	9,87,851
	Rent from Guest House	27,32,438	10,60,384
	Rent from Quarters	60,41,162	61,99,305
	2 Water/Electricity Charges Collection-Qtrs	6,91,776	6,19,714
	3 Water/Electricity Charges-Contractor	5,20,135	35,623
	4 Liquidated Damages	5,09,683	62,206
	5 CRF - I R G	45,67,056	-
	6 NITK Corpus Fund - Interest.	15,45,68,353	7,01,83,511
	TOTAL (A)	31,56,54,776	9,93,23,288
B	Sale of Institute's Publications	-	-
	TOTAL (B)	-	-
C	Income from Holding Events	-	-
	TOTAL (C)	-	-
D	Other		
	1 Income from Consultancy	-	-
	2 RTI Fees	-	282
	3 Income from Royalty	-	-
	4 Sale of Application Form (Recruitment)	-	13,83,500
	5 Miscellaneous Receipts	8,69,621	25,91,190
	6 Profit on Sale/Disposal of Assets		
	a) Owned Assets	-	-
	b) Assets Received Free of Cost	-	-
	7 Gransts/Donations from Insitutions, Welfare Bodies & International Bodies	-	-
	8 Others (Specify)		
	Recurring Exp - Capital Grant	-	-
	Auction Sales	39,57,526	9,15,190
	CRF Receipts	-	17,88,336
	Leave Salary & Pension Contrib	18,05,556	29,29,566
	Lapsed Deposit	-	2,95,782
	Software Fee Plagiarism	1,66,000	1,54,000
	Transcript Charges	3,88,280	6,14,322
	Vehicle Running Charges	1,502	-
	Verification Fee	5,29,542	5,14,915
	TOTAL (D)	77,18,027	1,11,87,083
	TOTAL (A)+(B)+(C)+(D)	32,33,72,803	11,05,10,371

PLACE : SURATHKAL

DATE : 14-07-2023

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N.I.T.K., SURATHKAL

Sd/-

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DIRECTOR

N.I.T.K., SURATHKAL

(AMOUNT ₹)

SCHEDULE NO 14 - PRIOR PERIOD INCOME	CURRENT YEAR	PREVIOUS YEAR
1 Academic Receipts	-	-
2 Income from Investments	-	-
3 Interst Earned	-	-
4 Other Income - Depreciation	1,32,128	-
TOTAL	1,32,128	-

PLACE : SURATHKAL

DATE : 14-07-2023

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DIRECTOR
N.I.T.K., SURATHKAL

(AMOUNT ₹)

SCHEDULE NO 15 - STAFF PAYMENTS & BENEFITS	CURRENT YEAR	PREVIOUS YEAR
A STAFF PAYMENTS & BENEFITS (ESTABLISHMENT EXPENSES)		
a) Pay Non-Teaching	20,42,21,384	19,57,51,136
b) Pay-Teaching	72,56,88,538	67,81,90,072
c) New Defined Pension Contribution	5,11,13,921	4,72,16,715
d) LTC/Home Travel Concession	1,17,17,200	17,29,086
e) Medical Facility	1,65,59,751	1,38,85,586
f) Children Education Allowance	63,26,066	74,11,225
g) Others		
1 Livery to Class IV Staff	-	11,319
2 Cumulative Professional Dev Allowance	97,17,147	67,07,739
3 Staff Research Project	1,92,925	-
4 Staff Amenities	-	9,75,784
5 Training to Staff and Faculty	3,73,508	20,000
TOTAL	1,02,59,10,440	95,18,98,662
B EMPLOYEES RETIREMENT AND TERMINAL BENEFITS		
Opening Balance as on 01.04.2022	5,79,60,52,949	5,30,44,59,463
Add: Capitalised Value of Contributions Received from other Organisations	-	-
Total (a)	-	-
Less: Actual Payment during the year (b)	31,16,47,272	26,20,15,942
Balance as on 31.03.2023 (c)	5,48,44,05,677	5,04,24,43,521
Provision required on 31.03.2023 as per Actuarial Valuation (d)	5,98,62,54,522	5,79,60,52,949
A Provision to be made in the Current year (d-c)	50,18,48,845	75,36,09,428
B Contribution to New Pension Scheme	-	-
C Medical Reimbursement to Retired Employees	-	-
D Travel to Hometown on Retirement	-	-
E Deposit Linked Insurance Payment	-	-
TOTAL	50,18,48,845	75,36,09,428
TOTAL	1,52,77,59,285	1,70,55,08,090

PLACE : SURATHKAL

DATE : 14-07-2023

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N.I.T.K., SURATHKAL

Sd/-
(PROF. BHALLAMUDI RAVI)
DIRECTOR
N.I.T.K., SURATHKAL

SCHEDULE NO 16 - ACADEMIC EXPENSES	CURRENT YEAR	PREVIOUS YEAR
a) Participation in Conferences/Field work	13,65,093	11,50,307
b) Expenses on Seminars/Workshops	4,49,654	-
c) Payment to Visiting Faculty	55,99,948	25,95,042
d) Convocation Expenses	35,31,292	11,69,560
e) Stipend/Means-cum-merit Scholarship	48,44,000	43,20,000
f) SC/ST Plan Grant Exp	2,76,70,087	1,21,39,604
g) Others		
1 Admission Expenses	49,97,798	7,61,500
2 Centre of Excellence	4,40,680	5,76,287
3 Coaching to SC/ST Students	3,42,103	50,143
4 Expert Lectures	6,36,071	39,070
5 NCC/NSS Activities Expenses	18,17,051	12,32,820
6 Phd Contingencies	92,13,511	61,52,862
7 Phd Evaluation/Viva Exp	38,31,389	24,23,713
8 Practical Training at Mining Site	5,24,707	1,21,465
9 Research Interaction	24,29,147	20,45,097
10 PG Stipend/ PhD Fellowship	34,69,20,671	35,50,54,151
11 Hindi Cell Activities	1,66,953	56,666
12 Operating Cost-Applied Mech (W R & O)	13,99,283	7,28,817
13 Operating Cost-Career Development Centre (CDC)	6,47,041	2,27,649
14 Operating Cost-Central Computing Facility	2,45,280	3,36,023
15 Operating Cost-Central Research Facility	48,01,281	13,56,481
16 Operating Cost-Chemical Engg.	61,72,798	46,36,845
17 Operating Cost-Chemistry	46,37,838	34,25,979
18 Operating Cost-Civil	45,82,963	19,91,155
19 Operating Cost-Computer Engg	15,91,624	5,49,336
20 Operating Cost-E&C Engg.	19,72,981	10,16,476
21 Operating Cost-E&E Engg.	19,16,270	9,70,587
22 Operating Cost-School of Management.	14,38,845	10,46,081
23 Operating Cost-Information Tech	16,33,911	4,01,794
24 Operating Cost-Library	4,53,09,915	2,90,60,834
25 Operating Cost-MACS Dept.	6,10,449	5,77,378
26 Operating Cost-Mechanical Engg	65,39,828	46,57,342
27 Operating Cost-Metallurgical Engg.	40,95,477	20,16,555
28 Operating Cost-Mining	14,12,770	6,78,549
29 Operating Cost-Physics	36,58,095	24,00,617
30 Operating Cost-Sports	5,10,303	-
TOTAL	50,79,57,107	44,59,66,785

PLACE : SURATHKAL

DATE : 14-07-2023

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N.I.T.K., SURATHKAL

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DIRECTOR
N.I.T.K., SURATHKAL

(AMOUNT ₹)

SCHEDULE NO 17 - ADMINISTRATIVE AND GENERAL EXPENSES	CURRENT YEAR	PREVIOUS YEAR
A Infrastructure		
a) Electricity & Power	5,91,17,929	3,88,27,220
b) Water Charges	2,24,48,879	1,24,18,031
c) Insurance	-	-
d) Rent, Rates & Taxes (including property tax)	5,98,701	16,62,090
B Communication		
e) Postage	1,17,234	1,41,408
f) Telephone, Fax & Internet Charges	7,38,546	8,47,484
C Others		
g) Printing & Stationery	46,38,474	32,33,901
h) Travelling, TA & Conveyance	18,20,247	11,88,269
i) Hospitality/Entertainment	4,02,199	89,068
j) Auditor Remuneration	2,75,900	6,53,700
k) Professional Charges	9,29,470	10,31,625
l) Advertisement & Publicity	18,17,757	7,32,951
m) Magzines & Journals	59,000	48,99,793
n) Hostel Establishment	1,81,06,138	1,50,78,395
o) Others		
Dispensary	1,68,07,178	1,61,38,663
Security Outsourcing	6,20,78,385	5,16,48,451
Contractual Staff/Manpower	86,82,755	1,09,23,211
Miscellaneous Expenses	33,79,506	11,49,847
IRG Contingencies	5,18,718	-
Recurring Expenses from Projects: Other Research Project	8,39,71,014	6,55,09,741
TOTAL	28,65,08,030	22,61,73,848

PLACE : SURATHKAL

DATE : 14-07-2023

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N.I.T.K., SURATHKAL

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DIRECTOR
N.I.T.K., SURATHKAL

(AMOUNT ₹)

SCHEDULE NO 18 - TRANSPORTATION EXPENSES	CURRENT YEAR	PREVIOUS YEAR
1 Vehicles		
a) Running Expenses	13,95,617	13,74,388
b) Repairs & Maintenance	-	-
c) Insurance Expenses	1,69,417	23,182
2 Vehicles taken on Rent/Lease		
a) Rent/Lease Expenses	-	-
3 Vehicles Hiring Expenses	-	-
TOTAL	15,65,034	13,97,570

PLACE : SURATHKAL

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(PROF. BHALLAMUDI RAVI)
DIRECTOR
N.I.T.K., SURATHKAL

(AMOUNT ₹)

SCHEDULE NO 19 - REPAIRS & MAINTENANCE	CURRENT YEAR	PREVIOUS YEAR
a) Building (ACB)	2,25,03,855	63,75,480
Hostel	81,41,285	35,65,184
Residential Bldg	45,38,899	47,27,307
b) Furniture & Fixtures	2,32,405	-
c) Machinery & Equipments	98,05,711	84,79,111
d) Computers	3,05,83,335	1,49,34,112
e) Gardening	30,53,727	28,89,032
f) Others		
Internal Telephone	22,67,947	21,79,647
Guest House	8,30,325	24,97,567
Campus Maint/upkeeping	17,16,678	11,57,261
Electrical Installation	1,73,67,218	1,03,02,368
House Keeping Charges	2,68,87,950	2,04,21,181
Maintenance of Road	48,47,666	15,488
Maint. of Waste Water Disposal	72,21,778	55,46,411
Swachha Bharath Abhiyan	2,01,002	1,76,536
NIT Transit House	3,50,000	3,50,000
TOTAL	14,05,49,781	8,36,16,685

PLACE : SURATHKAL

DATE : 14-07-2023

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(PROF. BHALLAMUDI RAVI)
DIRECTOR
N.I.T.K., SURATHKAL

(AMOUNT ₹)

SCHEDULE NO 20 - FINANCE COSTS	CURRENT YEAR	PREVIOUS YEAR
a) Bank Charges	10,57,150	3,40,044
b) Others - HEFA Loan Interest	7,33,87,749	6,30,78,216
TOTAL	7,44,44,899	6,34,18,260

PLACE : SURATHKAL

DATE : 14-07-2023

Sd/-
(RAVINDRANATH K.)
REGISTRAR
N.I.T.K., SURATHKAL

Sd/-
(PROF. BHALLAMUDI RAVI)
DIRECTOR
N.I.T.K., SURATHKAL

(AMOUNT ₹)

SCHEDULE NO 21 - OTHER EXPENSES	CURRENT YEAR	PREVIOUS YEAR
a) Application Fee Refund	-	16,84,670
b) Transfer to Corpus/Capital fund to the extent of Capital Exp- IRG & Non Plan	2,92,80,473	2,79,55,217
c) Testing and Consultancy Expenses	5,01,83,622	-
d) Provision for Bad & Doubtful Debts/Advances	-	-
e) Irrecoverable Balances Written Off	-	-
f) Grants/Subsidies to other Institutions/Organisations	-	-
g) Recurring Expenses - Capital Grant	-	-
TOTAL	7,94,64,095	2,96,39,887

PLACE : SURATHKAL

DATE : 14-07-2023

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DIRECTOR
N.I.T.K., SURATHKAL

(AMOUNT ₹)

SCHEDULE NO 22 - PRIOR PERIOD EXPENSES	CURRENT YEAR	PREVIOUS YEAR
1 Establishment Expenses :	-	-
2 Academic Expenses	-	-
3 Administrative Expenses	-	-
4 Transportation Expenses	-	-
5 Repairs & Maintenance	-	-
6 Other Expenses - Depreciation on Fund/Project Asssets	-	-
TOTAL	-	-

PLACE : SURATHKAL

DATE : 14-07-2023

Sd/-
(RAVINDRANATH K.)
REGISTRAR
N.I.T.K., SURATHKAL

Sd/-
(PROF. BHALLAMUDI RAVI)
DIRECTOR
N.I.T.K., SURATHKAL

NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA

RECEIPTS & PAYMENTS FOR THE YEAR ENDED 31-03-2023

RECEIPTS	Current Year	Previous Year	PAYMENTS	Current Year	Previous Year
Opening Balances:			Establishment and Administrative expenses	1,90,99,35,326	1,73,58,09,528
(a) Cash in hand	22,596	14,973	Payments Against Earmarked/Endowment Funds	16,47,86,976	15,02,70,690
(b) Bank Balances:			Payments Against Sponsored Projects/Schemes	7,61,87,850	19,02,93,020
(i) In current accounts	19,64,09,174	5,33,34,913	Investments	3,22,80,53,126	1,97,74,77,686
(ii) Savings accounts	2,19,91,566	5,07,93,004	Expenditure on Fixed Assets & Capital WIP	1,60,53,64,653	1,13,98,02,644
(iii) HEFA accounts	4,30,50,812	22,26,654	Deposits & Advances	1,94,12,01,987	1,64,60,24,922
(iv) TSA accounts	26,70,44,487	-	Any Other Payments	1,29,86,84,199	90,54,49,917
Grants Received:			Closing Balances:		
(a) From Govt. of India			(a) Cash in hand	11,088	22,596
Capital Grant	42,82,00,000		(b) Bank Balances:		
Revenue Grant	1,97,76,26,318		(i) In current accounts	13,47,22,877	19,64,09,174
	2,40,58,26,318		(ii) Savings accounts	5,15,65,123	2,19,91,566
Less : Refund	26,77,58,447	2,13,80,67,871	(iii) HEFA accounts	5,58,157	4,30,50,812
(b) From State Government	-	2,03,26,31,734	(iv) TSA accounts	-	26,70,44,487
Academic Receipts	77,82,20,446	47,33,86,701	TOTAL	10,41,10,71,362	8,27,36,47,042
Receipts Against Earmarked/Endowment Funds	53,24,90,897	30,31,27,346			
Receipts Against Sponsored Projects/Schemes/Plan	91,59,23,447	41,91,21,828			
Income on Investments	3,74,79,457	2,11,85,200			
Interest Received :					
Deposits & Advances	18,66,190	23,46,541			
Investments Encashed/matured	1,98,28,41,770	2,27,62,59,692			
Any other receipts:	2,61,66,88,043	2,04,05,95,174			
	87,89,74,606	59,86,23,283			
TOTAL	10,41,10,71,362	8,27,36,47,042	TOTAL	10,41,10,71,362	8,27,36,47,042

PLACE : SURATHKAL

DATE : 14-07-2023

Sd/-

(RAVINDRANATH K.)

REGISTRAR

N.I.T.K., SURATHKAL

Sd/-

(PROF. BHALLAMUDI RAVI)

DIRECTOR

N.I.T.K., SURATHKAL

NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA

SURATHKAL, P.O. SRINIVASNAGAR - 575 025

SCHEDULE: 23

SIGNIFICANT ACCOUNTING POLICIES (2022-23)

1. BASIS FOR PREPARATION OF ACCOUNTS

The accounts are prepared under Accrual method of accounting.

2. REVENUE RECOGNITION

Revenues are recognised on accrual basis except for interests on Savings Bank Accounts.

3. FIXED ASSETS AND DEPRECIATION

3.1 Fixed assets are stated at cost of acquisition including inward freight, duties and taxes and incidental and direct expenses related to acquisition, installation and commissioning.

3.2 Fixed assets are valued at cost less accumulated depreciation under different blocks. On fixed assets depreciation is provided under Straight Line method. (Detailed working is given in the Schedule No. 5 to the Balance Sheet). Wherever the asset value is nil due to depreciation, the asset is carried forward at a residual value of Rupee one in the Balance Sheet and will not be further depreciated. Thereafter, depreciation will be calculated on the additions of each year separately at the rate of depreciation applicable for that asset head. Depreciation is provided for the whole year on the new assets added during the year.

3.3 The total value of assets acquired out of the Earmarked fund has been incorporated in the books of accounts and considered as Institute assets. These assets are included in **Schedule 5A and 5C**. The assets acquired from the sponsored projects are held and used by the Institution are included in **Schedule 5D-i**.

3.4 The buildings and related works are capitalized as soon as the asset is handed over by CPWD and put to use by the Institute.

3.5 Intangible Assets: E-Journals and Computer Software are grouped under Intangible Assets.

4. STOCKS:

Expenditure on the purchase of chemicals, glassware, Stationary and other stores is accounted as revenue expenditure.

5. RETIREMENT BENEFITS

Employees Gratuity, Leave Encashment and Pension liability has been valued by the actuaries and the same has been incorporated in the statement of accounts. Ref: **Notes on Accounts Sl. No. 10**.

6. INVESTMENTS

Investments are stated at cost and the same is disclosed in detail as per the standard format.

7. EARMARKED/ENDOWMENT FUNDS

The income from investments is credited on an accrual basis to the respective Funds. The expenditures are debited to the Fund. The assets created out of Earmarked Funds where the ownership vests in the institution, are merged with the assets of the Institution by crediting an equal amount to the Capital Fund. The balance in the respective funds is carried forward and is represented on the assets side by the balance at Bank, Investments and accrued interest.

7.1 NITK CORPUS FUND

The fee received from DASA students, Institution share of Consultancy fees are considered to Corpus fund. Income earned from the investment is added to the Fund. Only the investment Interest earned under the Corpus Fund may be utilised for both Revenue and Capital expenditure based on the guidelines of the Institution. The 44th BOG held on 23-03-2016, it was resolved to remove the upper accumulation ceiling limit for NITK Corpus Fund (FC Item No. 34.3.11 dated 23-03-2016). The interest earned out of the Investment shall be transferred to Institute Revenue account as per the BoG resolution No.53.3 dated 05.10.2018.

7.2 ENDOWMENT FUNDS

Endowment funds are received from various individual donors, Trusts and other organisations for establishing Chairs and for Medals & Prizes as specified by the Donors. The income from the investment of each Endowment Fund is added to the respective Fund. The expenditure on Medals & Prizes is met from the interest earned on the investment of the respective Endowment Funds and the balance is carried forward. The balances are represented by Investment in Fixed Deposits and balance in the Saving Bank Account and Accrued Interest on Investments.

8. GOVERNMENT (MoE) GRANTS

8.1 Government Grants are accounted on sanction/realization basis. However, where a sanction for release of grant pertaining to the financial year is received before 31st March and the grant is actually received in the subsequent financial year, that grant is accounted on accrual basis and an equal amount is shown as receivable from the Government.

8.2 Government Grants utilised towards capital expenditure, (on an accrual basis) is transferred to the Capital Fund to the extent of the amount spent on capital expenditure.

8.3 Government grants for meeting Revenue Expenditure (on an accrual basis) are treated, to the extent utilised, as income of the year in which they are realised.

8.4 Unutilized grants (including advances paid out of such grants) are carried forward and exhibited as a liability in the Balance Sheet.

9. HEFA LOAN

As per the Govt of India policy the financial assistance for creation of educational infrastructure and R&D in India's Premier Educational Institutions is through HEFA. Institute has got sanctioned HEFA loan of Rs.220.64 crores for four major projects. The principal amount will be repayable out of the Internal Revenue Generation of the Institute in 10 years in half yearly instalment (**Schedule 3B**).

10. INVESTMENTS OF EARMARKED FUNDS AND INTEREST INCOME ACCRUED ON SUCH INVESTMENTS:

To the extent not required immediately for expenditure, the amounts available against such funds are invested in Short/Long Term Deposit in Scheduled Nationalized Banks, leaving a balance in Savings Bank Accounts. Interest received, interest accrued and due and interest accrued but not due on such investments are added to the respective funds and not treated as income of the Institution.

11. SPONSORED PROJECTS

11.1 In respect of ongoing Sponsored Projects, the amounts received from sponsors are credited to the head "current liabilities and Provisions - Current Liabilities - Other Liabilities - Receipts against ongoing sponsored projects." As and when expenditure is incurred/advances are paid against such projects, or the concerned project account is debited with allocated overhead charges, the liability account is debited.

11.2 Fellowships and Scholarships sponsored by various organisations are accounted in the same way as sponsored Projects and the expenditure generally for disbursement of Fellowships, Scholarships and contingent expenditure.

11.3 The Institution awards Fellowships and Scholarships to Under Graduate and Post Graduate students, which are accounted as Academic expenses.

12. INCOME TAX

The income of the Institution is exempt from Income Tax under Section 10(23C) of the Income Tax Act. No provision for tax is therefore made in the accounts.

PLACE : SURATHKAL

DATE : 14-07-2023

Sd/-
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NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA

SURATHKAL, P.O. SRINIVASNAGAR - 575 025

SCHEDULE: 25

CONTINGENT LIABILITIES AND NOTES ON ACCOUNTS (2022-23):

A. CONTINGENT LIABILITIES:

1. CONTINGENT LIABILITIES:

1.1 As on 31.03.2023 following arbitration case is pending for decision with regard to the contractor. Construction of Ladies Hostel Rs.29,79,122/-.

1.2 Disputed demands in respect of Service Tax is Rs.22,97,932/-. Presently the appeal is with the Commissioner of Central Excise (Appeals) and we have paid the mandatory pre-deposit of Rs.1,72,345/- being the 7.5% of the service tax demand of Rs.22,97,932/- [Appeal File No. A.No.35/16/MR/ST].

B. NOTES TO ACCOUNTS:

2. FIXED ASSETS:

2.1 Additions in the year to Fixed Assets in Schedule include Assets purchased out of Capital Grant Rs.11,47,301,790/-, IRG Rs. 1,25,11,911/-, Non-Plan Rs. 2,92,80,473, Other designated funds/workshops Rs. 11,25,479/-, Gift Rs. 72,45,01,798/-.

2.2 Assets acquired under Other Research Projects is Rs. 3,45,98,500/-.

2.3 Assets of TEQIP I, II & III Project Scheme of Rs.31,58,47,118/- has been exhibited in Schedule 4 (D-ii).

<u>Project Phase</u>	<u>Start of Proj(Year)</u>	<u>End of Proj(Year)</u>	<u>Total Value of Assets Acquired</u>
TEQIP – I	2003	2009	Rs. 18,42,37,765
TEQIP – II	2011	2017	Rs. 9,70,19,243
TEQIP – III	2017	2022	Rs. 3,45,90,110

2.4 Fixed Assets acquired out of Capital Grant, Revenue Grant and other funds have been exhibited in Sub Schedules A, B & C of the main schedule of Fixed Assets. (Schedule 5).

2.5 Depreciable fixed assets as set out in Schedule 5 do not include assets purchased out of funds of sponsored ongoing projects, as project contracts include stipulations that all such assets purchased out of project funds will remain the property of the sponsors.

2.6 Depreciation has been calculated under straight line method. Under this method the depreciation is calculated on original cost of the asset.

3. **DEPOSIT LIABILITIES** –No deposit liabilities.

4. EXPENDITURE IN FOREIGN CURRENCY:

During the year 2022-23 the Institute has incurred expenditure in foreign currency and remitted the amount as under:

<u>Type of Currency</u>	<u>Amount</u>	<u>Purpose</u>
EURO	4,43,548/-	Procurement

5. CURRENT ASSETS, LOANS, ADVANCES AND DEPOSITS:

In the opinion of the Management, the current assets, Loans, Advances and Deposits have a value on realisation in the ordinary course, equal at least to the aggregate amount shown in the Balance Sheet.

6. The details of balances in Saving Bank Accounts, Current Accounts and Fixed Deposit Accounts with Banks shown in schedule 8 are detailed as below:

<u>Particulars</u>	<u>Amount</u>
I. Savings Bank Accounts:	
1. Institute - Canara Bank	18,60,168
2. Institute - Canara Bank – HEFA-Principal	72,297
3. Institute - Canara Bank – HEFA-Interest	4,85,860
4. SBI SB Account	4,97,04,955
5. SBI-CCE Fund	10,61,999
6. SBI - NITK/KREC Endowment Fund	1,03,56,733
7. SBI-NITK Corpus Fund	66,66,743
8. SBI-Student Activity Council	2,46,28,182
II. Current Account:	
1. Institute - State Bank of India	14,14,34,612
2. Institute - State Bank of India	(67,11,735)
III Term Deposits with Schedule Banks	98,37,99,925

6.1 Balance in Reserve Bank of India TSA-10681301001 account as on 31.03.2023 is NIL after day end system reversal.

6.2 Following Project Bank Accounts are maintained under Zero balance subsidiary accounts.

1. Canara Bank - MPSW-A/C No 110058244692-Canara-9061
2. SBI - MSME-4116-SBI A/C No 41291918931
3. Bank of Maharashtra No 60428193589, BK of Maharashtra, 3237
4. Bank of Maharashtra No 60428981467, BK of Maharashtra -1817

7. Figures in the Final accounts have been rounded off to the nearest rupee.

8. Schedules 1 to 25 are annexed to and form an integral part of the Balance Sheet at 31st March 2023 and the Income & Expenditure account for the year ended on that date.

9. The existing employees' terminal benefit & Pensioners liability as per the requirement under the uniform accounting standards prescribed by the Ministry valued at Rs.598.63 crores, as on 31-03-2023 by actuaries M/s. K.A. PANDIT an approved Consultants and Actuaries, Mumbai. The details are as follows:

Pension Liability	₹ 516.45 Crore
Leave Encashment Liability	₹ 45.72 Crore
Gratuity Liability	₹ 36.46 Crore

10. The General Provident Fund Account is owned by the members of NITK GPF Trust and are maintained separately. A Receipts & Payments Account, Income & Expenditure Account (on Accrual basis) and a Balance Sheet of General Provident Fund Accounts for the year 2022-23 have been attached to the Institute's Accounts. During the year a sum of Rs.4,48,48,900/- has been collected and transferred to the

GPF Trust Account [Investment Pattern: Central Govt. & State Govt. Securities 51.16%, Debt Securities/ Term Deposits/Public Finance Bond Securities 43.96%, Money market instruments including units of money market Mutual Funds 4.88%].

All portion of the New Pension Scheme funds of Rs. 3,71,99,963/- in respect of 185 employees who have been allotted PRA numbers has been transferred to National Securities Depository Limited (NSDL) - Central Record Keeping Agency (CRA).

11. WORKS IN PROGRESS:

Works in Progress is valued at cost incurred basis.

12. HEFA LOAN:

During the year the Institute has availed a new loan of Rs. 54.76 Crores from HEFA for the construction of Lecture Hall Complex "D". During the year interest charged to all the Loans is Rs. 5.45 Crores. The interest on HEFA loans are treated as revenue expenditure and shown under Schedule no.21 of Income & Expenditure Account.

All assets acquired out of HEFA loan are hypothecated to HEFA till the loan is discharged in full.

13. TUITION FEE:

The tuition fee is collected on a semester basis and accounted as per semester fee collection basis even though the period is spread over to two financial years.

14. PATENTS:

Capitalization of patents will be considered for capitalization after evaluation & completion of Licensing & commercialization process.

15. OTHER:

1. Previous year figures have been re-casted and regrouped wherever necessary in conformity with current year presentation.
2. Tuition fee exemption has been extended to all SC/ST students along with other benefits. Hence Tuition Fee is accounted on accrual basis and other benefits such as Laptop, Book allowance, Mess Allowance etc., accounted on claim basis.
3. (i) During the year 2013-14 area of the land measuring 1.40 acres of land acquired by NHAI and compensation for the same is not yet received.
(ii) Land includes measuring 78 cents of book value ₹ 24,014/- which was under dispute. Out of which 62 cents of land was in the revenue court was decreed in favour of the Institute and same is appealed by the party in the tribunal.
4. Accrued interest earned on Investments includes ₹ 8,38,99,461/- in Investments shown under schedule 6.
5. N.I.T.K. Hostel Mess Account is maintained separately. It is a separate entity governed by the NITK Hostel Trust (R).

PLACE : SURATHKAL

DATE : 14-07-2023

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**NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA, SURATHKAL
EMPLOYEES CONTRIBUTORY CUM GENERAL PROVIDENT FUND.**

BALANCE SHEET AS ON 31ST MARCH, 2023

LIABILITIES	Amount in Rupees	ASSETS	Amount in Rupees
GENERAL FUND :		INVESTMENTS :	
Balance as per last Balance Sheet	9695688	Govt. and Other Securities	406563884
Add : Excess of Expenditure over Income	318909	Accrued Interest on Investments	4992083
			411555967
GPF SUBSCRIPTION :		TAX DEDUCTED AT SOURCE:	
Balance as per last Balance Sheet	378290298		31657
Add : GPF Subscription & Interest	72416733	CLOSING BALANCE :	
	450707031	With SBI SB. A/c. No. 1017536747-6	5568324
Less : Final/Partial Settlement	43565681		
	407141350		
	417155947		417155947

As per report of even date.

Place : Mangalore
Date : 06.06.2023

For NITIN J. SHETTY & CO
Chartered Accountants
Firm Reg. No. 008891S

Sd/-
PRESIDENT

Sd/-
SECRETARY

Sd/-
CA. NITIN J. SHETTY, Partner
Membership No. 025990

**NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA, SURATHKAL
EMPLOYEES CONTRIBUTORY CUM GENERAL PROVIDENT FUND.**

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31ST MARCH, 2023

EXPENDITURE	Amount in Rupees	INCOME	Amount in Rupees
To Interest Paid to GPF Members	27567833	By Interest Received :	
		Interest on Investments	28141496
" Interest Paid on Purchase of Investments	1563535	Add : Accrued Int. of Current Year	4992083
			33133579
" Premium Paid on Purchase of Investments	410195	Less : Accrued Int. of Previous Year	4285424
" Audit Fee	21240		28848155
" Professional Fee	7080	Interest on Special Deposit with SBI	540921
" Bank Charges	4352	Interest on SB Account	363301
" Excess of Expenditure over Income	318909	Interest on Income Tax Refund	37768
	<u>29893145</u>	Discount on Purchase of Investments	103000
			<u>29893145</u>

As per report of even date.

Place : Mangalore
Date : 06.06.2023

For NITIN J. SHETTY & CO
Chartered Accountants
Firm Reg. No. 008891S

Sd/-
PRESIDENT

Sd/-
SECRETARY

Sd/-
CA. NITIN J. SHETTY, Partner
Membership No. 025990

**NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA, SURATHKAL
EMPLOYEES CONTRIBUTORY CUM GENERAL PROVIDENT FUND**

RECEIPTS AND PAYMENT ACCOUNT FOR THE YEAR ENDED 31ST MARCH, 2023

RECEIPTS	Amount in Rupees	PAYMENTS	Amount in Rupees
To OPENING BALANCE :		By Interest Paid to GPF Members	27567833
S.B.I., Surathkal, S.B. A/c. No. 1017536747-6	711606	" Interest Paid on Purchase of Investments	1563535
Investments	382863884	" Premium Paid on Purchase of Investments	410195
" INTEREST :			
On Investments	28141496		
On Special Deposit with S.B.I.,	540921	" Final/Partial Settlement to GPF Members	435656681
Mangalore A/C No.4	363301		
On Bank Balance	29045718	" Audit Fee	21240
" GPF Subscription & Interest	72416733	" Professional Fee	7080
" Income Tax Refund	125072	" Bank Charges/Demat Account Charges	4352
" Interest on Income Tax Refund	37768	" TDS/TCS	31657
" Discount on Purchase of Investments	103000	" CLOSING BALANCE :	
		S.B.I., Surathkal, S.B. A/c. No. 1017536747-6	5568324
		Investments	406563884
			412132207
			485303781

Place : Mangalore
Date : 06-06-2023

As per report of even date.
For **NITIN J. SHETTY & CO**
Chartered Accountants
Firm Reg. No. 008891S

Sd/-
PRESIDENT

Sd/-
SECRETARY

CA. NITIN J. SHETTY, Partner
Membership No. 025990

GODAVARI U.G - P.G GIRLS HOSTEL



SHIVALIK P.G 11TH BLOCK (EWS)

BRAMHAGIRI P.G BOYS HOSTEL



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