

**Annual Report
&
Audited Accounts
2022-23**



ৰাষ্ট্ৰীয় প্ৰযুক্তিগতী সংস্থান মানিপুর
NATIONAL INSTITUTE OF TECHNOLOGY MANIPUR
এংলো-এসিঅন স্কলোজীজিফুৰ্ম এণ্ড ইংলো-এসিঅন স্কলোজীজিফুৰ্ম

From the Director's Desk



NIT Manipur set up in 2010, is an Institute of National Importance fully funded by Ministry of Education, Government of India. It has come a long way to establish itself as one of the leading technical institute in the region. NIT Manipur has been ranked 95th in the NIRF-2023 (Engineering). The Institute inspite of not receiving any fund under Capital Head since 2017 continues to excel in all fields. The Institute has made considerable improvement in the number of publications in reputed/refereed international journals. A total of 214 papers were published in top refereed Journals in various fields during the year along with 27 PhD degrees being awarded in the last Convocation. The institute now has around 26 ongoing sponsored research projects. The Institute has also filed more than 15 Patents which are under various stages. 4 Patents have already been granted.

The Institute has also been able to successfully tide over the challenges posed by Covid-19 pandemic. Classes were conducted in hybrid mode and even virtual practical classes were conducted. The Institute has also extended its facilities to the State Government during the Covid pandemic. A Boys Hostel was converted into a Covid isolation centre.

The Institute continues to achieve remarkable feat in the placement front with some students drawing the highest pay package in the Institute's history. The Institute has been included as one of the QIP (Minor) Centre by AICTE. The Institute has been successfully executing several flagship and outreach programmes of the Government of India including Unnat Bharat Abhiyan. On the infrastructure front, a Girls Hostel and a Boys Hostel constructed under the funding of Ministry of Social Justice and Empowerment has been made functional in phase wise manner.

The Annual Report provides a glimpse of the various activities conducted by the Institute during the year.

I am pretty confident that with the support of my young dynamic team of faculty, staff, students, other stakeholders, funding agencies and public at large, we will be able to achieve greater heights and reaching newer landmarks in research, innovation and outreach programmes.

**Sd/-
Director i/c, NIT Manipur**

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1.0 INTRODUCTION

1.1 Mission

The Institute being accorded the status of '*An Institute of National Importance*' aspires to be a knowledge hub for the region. The Institute through its academic and research activities would act as incubation centre for aspiring 'Technopreneurs'. The Institute provides an ideal platform for national integration through emotional integration as half of the students are from outside the state. It envisions being an Institute producing human resource of world class standard who will contribute significantly in the wellbeing of mankind.

1.2 Vision

The Institute aims to provide the best infrastructure and amenities to the students. The Institute envisions being one of the best technical institutions in South-East Asia. The institute aims to attract students from the neighboring south-east Asian countries in view of the Act -East Policy of the Government of India. The Institute strongly believes that the success of an Institute lies in the faculty and will leave no stone unturned to attract the best faculty available in the country.

1.3 Objectives

- To nurture and develop talented young minds, encouraging creativity with academic excellence.
- To provide a platform to young entrepreneurs and technocrats to fulfill their dreams and aspirations.
- To encourage faculty and students to conduct research of international standard.
- To produce students of international industry standard.
- To set up Laboratories with latest equipment and state of the art facilities.
- To set up international standard infrastructure for extra curricular activities.

2.0 AN OVERVIEW

2.1 Profile

National Institute of Technology Manipur has been set up by the Ministry of Human Resource Development, Govt., of India to cater to the needs of thousands of students from the North East and outside in the field of Science and Technical Education. NIT Manipur started its first session on 2nd August, 2010 in Government Polytechnic, Takyel Campus, Imphal. The National Institute of Technology Act, 2007, amended in 2012 declared 20 existing and 10 new NITs as Institutes of National Importance. The institute is governed by the NIT Act 2007 and its statutes, and functions under the overall guidance of the Board of Governors and the Hon'ble President of India as the Visitor of the Institute.

In status, it is regarded equivalent to a Central University. Half of students admitted to NITs are reserved for the students from the state where they are located and the other 50% is taken from the rest of the country through Central Seat Allocation Board on the basis of their JEE (Main) ranking.

2.2 Temporary Campus

The temporary campus is located at Government Polytechnic Campus, Takyel, Imphal. Since 2015, most of the facilities have been shifted to the permanent campus. As present only one Girls Hostel and few quarters are located in the temporary campus.

2.3 Permanent Campus

The permanent campus is located at the foot hills of the picturesque Langol hills at Lamphelpat in the outskirts of Imphal measuring an area of 341 acres. The permanent campus is hardly 4 km from the main market of Imphal. The Bir Tikendrajit International Airport is located at a distance of 7 km from the campus. It is just 15 minutes' drive from the campus and is well-connected by multiple daily flights with Delhi, Kolkata, Hyderabad, Mumbai and Guwahati.



Imphal can be reached through National Highways No.2 and 37. The nearest railway station is Dimapur in Nagaland. Imphal can also be reached through Silchar Railway Station in Assam and Jiribam in Manipur. It takes around 8 hrs by bus/ Taxi from Dimapur to reach Imphal.

The first Boys Hostel in the permanent campus with a capacity of 150 was inaugurated on 21st Feb 2014 by the Hon'ble Chief Minister of Manipur. The campus has at present three Boys Hostel which could accommodate about 700 boys and one Girls Hostel with a capacity of around 100 and around 10 Staff quarters. The campus has also three workshop blocks, an administrative building and an Academic Block. Except for a Girls Hostel and some staff quarters in the temporary campus, the Institute has completely shifted to its permanent campus.

2.4 Administration

National Institute of Technology is an autonomous Institute under the Ministry of Education (MoE), Govt. of India. The Institute functions under the overall guidance of the Board of Governors. The other statutory bodies are the Finance Committee, Building and Works Committee and the Senate. The Director is the principal academic and executive officer of the Institute.

Administrative Staff (Regular):

Sl. No.	Employee Name	Designation
1.	Prof. (Dr.) Goutam Sutradhar	Director
2.	Prof.Kh.Tomba Singh	Registrar
3.	Samarjit Singh	Executive Engineer
4.	L. Dorendro Singh	Assistant Registrar (Admn & Estt)
5.	Dr. Naorem Vidyavati Devi	Assistant Librarian
6.	Kh. Thangkin	SAS Officer
7.	Th. Robita Devi	Stenographer/ P.S to Registrar
8.	Fanny Khangembam	Junior Assistant (Admn & Estt.)
9.	Md. Amir Hussain	Junior Assistant (Accounts)
10.	Richard Mareem Chothe	Junior Assistant (Admn & Estt.)
11.	Ngaihulun Tonsing	Junior Assistant (Academic)

Administrative Staff (Contractual):

Sl. No.	Employee Name	Designation
1.	Dr. I. Bidhanchandra Singh	Assistant Registrar (Academic)
2.	Kh. Saikya Singh	Technical Officer
3.	L. Ibocha Singh	Internal Audit Officer
4.	Suchitra Wangkhem	Superintendent (Admn & Estt.)
5.	L. Somokanta	Superintendent (Academic)
6.	L. Jenifer	Junior Assistant (Admn & Estt.)
7.	Kh. Narmada Devi	Junior Assistant (Admn & Estt.)
8.	Ng. Binoi Singh	Junior Assistant (Accounts.)
9.	H. Monorama Devi	Accountant
10.	G. Ranita Devi	Store Keeper
11.	Jonita Khwairakpam	PS to the Director
12.	S. Surjit Singh	Hostel Supervisor (utilized at Academic Section)

Deans and other administrative positions held by faculty members:

Sl. No.	Faculty Name	Position held
1	Prof. Rajesh Kumar Bhushan	Dean (Academic Affairs)
2	Dr. P. Albino Kumar	Dean (Planning & Development)
3	Dr. Chandi Charan Malakar	Dean (Research & Consultancy)
4	Dr. Sangeeta Laishram	Dean (Faculty Welfare)
5	Dr. Ashish Ranjan	Dean (Student Welfare)
6	Dr. Khelchandra Thongam	Asst. Registrar i/c (Finance)
7	Dr. Benjamin Shimray	Controller of Examination

2.5 Academic Programmes

The Institute offers four years full time Bachelor of Technology degree courses in Computer Science and Engineering, Electrical Engineering, Electronics and Communication Engineering, Civil Engineering and Mechanical Engineering. In addition, the Institute offers M.Tech and Doctoral programmes in all Engineering branches, Masters and Doctoral degree are also offered in Physics, Chemistry and Mathematics. Doctoral programme is also offered in English Literature. The academic session is divided into two semesters, July-Dec and Jan-May. Five days week period with at least 90 working days in each semester are being followed.

2.6 Admission Procedure

All B.Tech admissions to National Institute of Technology Manipur are through Joint Entrance Examination (JEE) Main. Candidates interested in seeking admission in any NITs have to appear in JEE (Main) conducted by CSAB on behalf of Government of India. Counseling centres are set up throughout the country including NIT Manipur so that every aspirant is provided equal opportunity. The online counseling takes place in a very transparent system. The Government of India has fixed 50% quota of seats for Manipur and 50% quota for other states based on their JEE (Main) ranks.

Admission to M.Tech programmes are through CCMT examination which is followed by counselling conducted by the institute. Admission to M.Sc programmes are through JAM entrance exam which is followed by counselling conducted by CCMN for admission. The Institute conducts its own internal entrance test to fill up vacant seats.

2.7 Examination

The Under graduate examinations of the Institute are conducted centrally by the Examination Cell of the Institute. Students are continuously evaluated through a continuous grading process. The academic performance of a student is assessed in terms of two indices viz; the Semester Performance Index (SPI) for a semester and Cumulative Performance Index (CPI) which is the Grade Point index for all the completed semesters at any point of time.

2.8 Training and Placement

The Institute's Training and Placement Cell (T&P Cell) handles all issues related to students' internship and final placements. The T&P Cell regularly organized industrial tour for the students thereby providing an opportunity to relate classroom teachings with reality. Workshops and motivational talks are also organized on regular basis thereby providing an interface between academia and industry.

2.9 Academic Calendar

The Academic Calendar prepared by the Institute and approved by the Senate and the BOG is notified for the students and staff. The Academic Calendar reflects the timeline of the various activities that are conducted in the Institute in an academic year.

Academic Calendar for 2nd semester B.Tech students**March 2022- July 2022 (on line classes due of Covid-19)**

S.N.	Detail	Date
1	Registration of B Tech 2 nd semester	21 st – 25 th March 2022
2	Starting of B Tech 2 nd semester Online Classes	21 st March 2022
3	Mid Semester Examination (MSE) Theory	9 th – 13 th May 2022
4	Last day of instruction	17 th June 2022
5	Laboratory End Semester Examination	06 th – 10 th June 2022
6	End Semester Examination (ESE) Theory B Tech 2 nd semester	20 th – 24 th June 2022
7	Last date for showing evaluated ESE answer scripts to the B.Tech 2 nd semester Students	04 th July 2022
8	Last date of submission of B Tech 2 nd semester grades to Academic Section	05 th July 2022
9	Declaration of B Tech 2 nd semester result	08 th July 2022
10	Registration for B Tech 3 rd semester	18 th July to 21 st July 2022
11	Starting of B Tech 3 rd semester classes	18 th July 2022 (Monday)



Academic Calendar July - ~~DECEMBER~~ 2022
(Classes may be Online /Offline as per MoE SOPs due to Covid-19)

National Institute of Technology Manipur

SN	Name	Semester (August – December)
1	Registration of all continuing UG, PG & PhD students (except B Tech/M Tech/ MSc 1 st year)	11 th -15 th July 2022(Monday – Friday)
2	Classes started for All continuing students(except B Tech/M Tech/ MSc 1 st year)	11 th July, 2022(Monday)
3	Registration of new BTech students	As per CSAB/JoSAA
4	Registration of new B Tech/MTech/MSc students	As per CCMT/CCMN
5	Registration of new PhD students	05 th – 09 th Aug 2022
6	First instruction day for Fresh B.Tech students	As per CSAB/JoSAA
7	Mid Semester Examination (MSE) Theory	10 th – 14 th October 2022 (Monday – Friday)
8	I- Project/Thesis Review of B Tech/MTech/MSc	On or before 09 th September 2022 Friday
9	Last day of Instruction	04 th November 2022 Friday
10	Laboratory End Semester Examination	31 st Oct– 04 th November 2022 Monday- Friday (in between classes will be there)
11	End Semester Examination (ESE) Theory	07 th Nov– 11 th Nov 2022 Monday- Friday
12	II – Project/Thesis Review of MTech/MSc	On or before 18 th Nov 2022 Friday
	Online submission of feedback by students	21 st Nov 2022, Monday
13	Last date for showing evaluated ESE answer scripts to the BTech students	Before 21 st Nov 2022, Monday
	Declaration of End Semester Result	28 th Nov 2022, Monday
14	Last date of submission of grades to Academic Section	23 rd Nov 2022 Wednesday
15	Winter vacation for continuing students(Except M Tech and PhD)	21 st Nov 2022 to 31 st Dec 2022
16	Even Semester classes all continuing UG, PG & PhD students (except B Tech/M Tech/ MSc 1 st year)	02 nd Jan 2023



ANNEXURE - 2

Academic Calendar September – December 2022
(Classes may be Online /Offline as per MoE SOPs due to Covid-19)
M Tech, MSc & PhD 1st /2nd sem

National Institute of Technology Manipur

SN	Name	Semester (September – December)
1	Classes started for M Tech, MSc 1 st semester & PhD 1 st /2 nd sem	12 th September, 2022(Monday)
2	Mid Semester Examination (MSE) Theory	: 31 st October – 04 th November 2022 (Monday – Friday)
3	Last day of Instruction	09 th December 2022 Friday
4	Laboratory End Semester Examination	05 th – 09 th December 2022 Monday-Friday (in between classes will be there)
5	End Semester Examination (ESE) Theory	12 th – 16 th December 2022 Monday- Friday
6	Online submission of feedback by students	09 th December 2022, Friday
7	Last date for showing evaluated ESE answer scripts to the students	: Before 19 th Dec 2022, Monday
8	Last date of submission of grades to Academic Section	By 26 th Dec 2022, Monday
9	Declaration of End Semester Result	: 09 th Jan 2023, Monday
10	Winter vacation for MSc students	: 17 th Dec 2022 to 15 th Jan 2023(Sat-Sun)
11	Registration of Even Semester by all continuing UG, PG & PhD students (except B Tech 1 st year)	: 10 th -13 th Jan 2023 Tuesday- Friday
12	Even Semester classes all continuing UG, PG & PhD students (except B Tech 1 st year)	16 th Jan 2023 Monday



ANNEXURE - 1

Academic Calendar August – December 2022
(Classes may be Online /Offline as per MoE SOPs due to Covid-19)
B Tech 3rd and 5th semester

National Institute of Technology Manipur

SN	Name	:	Semester (August – December)
1	Classes started for B Tech 3 rd and 5 th semester		16 th August, 2022(Tuesday)
2	Mid Semester Examination (MSE) Theory	:	17 th – 21 st October 2022 (Monday – Friday)
3	Last day of Instruction		25 th November 2022 Friday
4	Laboratory End Semester Examination		21 st - 25 th November 2022 Monday-Friday (in between classes will be there)
5	End Semester Examination (ESE) Theory		28 th Nov-- 02 nd Dec 2022 Monday- Friday
6	Online submission of feedback by students		21 st Nov 2022, Monday
7	Last date for showing evaluated ESE answer scripts to the BTech students	:	Before 09 th Dec 2022, Friday
8	Last date of submission of grades to Academic Section		By 12 th Dec 2022, Monday
9	Declaration of End Semester Result	:	16 th Dec 2022, Friday
10	Winter vacation for continuing students(B Tech 3 rd and 5 th semester)	:	03 Dec 2022 to 15 Jan 2023
11	Registration of Even Semester for all continuing UG, PG & PhD students (except B Tech/M Tech/ MSc 1 st year)	:	10 th -13 th Jan 2023 Tuesday- Friday
12	Even Semester classes all continuing UG, PG & PhD students 1 st /2 nd (except B Tech 1 st year)		16 th Jan 2023 Monday

ANNEXURE: I

Academic Calendar

B.Tech. 1st Year

November 2022- February 2023

Sl. No.	Name	Semester (November-March)
1.	Registration of 1st Semester UG students	7, 8 and 9 November 2022
2.	First instruction day for Fresh B.Tech students	11 th November 2022
3.	Starting of Classes	11 th November 2022
4.	Mid Semester Examination (MSE) Theory	02 nd Jan 23 – 06 th Jan 2023
5.	Last day of Instruction	10 th Feb 23
6.	Laboratory End Semester Examination	06 th Feb - 10 th Feb 2023
7.	End Semester Examination (ESE) Theory	13 th Feb - 17 th Feb 2023
8.	Last date for showing evaluated ESE answer scripts to the B.Tech. students	Before 24 th Feb 2023
9.	Last date of submission of grades to Academic Section	27 th Feb 2023
10.	Semester break for students	18 th Feb - 5 th March 2023
11.	2 ND Semester classes	6 th March 2023

Academic calendar JAN –JUNE2023

BTech/ MTech /MSc continuing students

Sl. No.	Details	Semester (January – June23)
1	Registration of all continuing UG, PG & PhD students except BTech 1 st Year	16 th - 20 th Jan 2023 (Monday - Friday)
2	Starting of classes of all continuing UG, PG & PhD students except BTech 1 st Year	16 th Jan 2023(Monday)
3	First I-Project/Thesis Review of BTech/MTech	On or Before 24 th Feb 2023 (Friday)
4	Mid Semester Examination (MSB) Theory	13 th March - 17 th March 2023 (Monday - Friday)
5	Second I-Project/Thesis Review of BTech/MTech	On or Before 31 th March 2023
6	Laboratory End Semester Examination	01 th - 05 nd May 2023 (Monday - Friday) During Lab Class Hour Only
7	Last Date of submission of Project Work by BTech/ MTech /MSc students	05 th May 2023 (Friday)
8	Online submission of feedback by students	12 th May 2023 (Friday)
9	Last day of Instruction	19 th May 2023 (Friday)
10	End Semester Examination (ESE) Theory	22 th May – 02 June 2023 (Friday)
	Last date of evaluation of BTech/MTech/MSc Project	07 June 2023 (Friday)
11	Last date for showing evaluated ESE answer scripts to the students	07 June 2023 (Friday)
12	Last date for seeking clarification of answer scripts by the students	9 th June 2023 (Friday)
13	Last date for submission of grades to Academic Section	14 th June 2023 (Wednesday)
14	Declaration of End Semester Result	19 th June 2023 (Monday)
15	Summer Vacation for continuing BTech / MTech /MSc students except BTech 1 st Year	10 June – 23 rd July 2023 (Saturday - Thursday) (Summer)
16	Summer Back Course Examination Registration	20 th - 23 th June 2023
17	Finalization of Branch Change(tentative)	30 th June 2023 (Friday)
18	Supplementary Exam	03 th July – 07 th July 2023(Monday - Friday)
19	Registration of <i>All Continuing</i> UG, PG & PhD students	24 th - 28 th July 2023 (Monday - Friday)
20	Starting of classes of all continuing UG, PG & PhD students except BTech/ MTech /MSc 1 st Year	24 th July 2023(Monday)

Academic Calendar for 2nd semester B.Tech students

March 2023- July 2023

S.N.	Detail	Date
1	Registration of B Tech 2 nd semester	6 th – 8 th March 2023
2	Starting of B Tech 2 nd semester Classes	6 th March 2023(Monday)
3	Mid Semester Examination (MSE) Theory	01 st – 05 th May 2023
4	Online submission of feedback by students	20 th June 2023
5	Last day of instruction	23 rd June 2023(Friday)
6	Laboratory End Semester Examination	19 th – 23 rd June 2023
7	End Semester Examination (ESE) Theory B Tech 2 nd semester	26 th – 30 th June 2023
8	Last date for showing evaluated ESE answer scripts to the B.Tech 2 nd semester Students	05 th July 2023
9	Last date of submission of B Tech 2 nd semester grades to Academic Section	06 th July 2023
10	Declaration of B Tech 2 nd semester result	10 th July 2023
11	Finalization of Branch Change(tentative)	20 th July 2023
12	Registration for B Tech 3 rd semester	24 th July to 27 th July 2023
13	Starting of B Tech 3 rd semester classes	24 th July 2023 (Monday)
14	Summer Vacation	01 st July 2023- 23 rd July 2023

Revised-Academic calendar JAN –JUNE2023 dt 09-05-2023

BTech/ MTech /MSc continuing students

Sl. No.	Details	Semester (January – June23)
1	Registration of all continuing UG, PG & PhD students except BTech 1 st Year	16 th - 20 th Jan 2023 (Monday - Friday)
2	Starting of classes of all continuing UG, PG & PhD students except BTech 1 st Year	16 th Jan 2023(Monday)
3	First I-Project/Thesis Review of BTech/MTech	On or Before 24 th Feb 2023 (Friday)
4	Mid Semester Examination (MSB) Theory	13 th March - 17 th March 2023 (Monday - Friday)
5	Second I-Project/Thesis Review of BTech/MTech	On or Before 31 th March 2023
6	Laboratory End Semester Examination	01 th - 05 nd May 2023 (Monday - Friday) During Lab Class Hour Only
7	Last Date of submission of Project Work by BTech/ MTech /MSc students	05 th May 2023 (Friday)
8	Online submission of feedback by students	12 th May 2023 (Friday)
9	Last day of Instruction	02 June (Friday)[B Tech4,6, 8 th sem] 30 June (Friday)[B Tech 2 nd sem]
10	Offline End Semester Examination (ESE) Theory, LAB [B Tech 8 th sem,M Tech and MSc Final year]	05 June 2023 – 10 June 2023 (Saturday)
11	Offline Left over mid Term Exam of B Tech 2 nd	6 th July-7 th July 2023
12	Offline End Semester Examination (ESE) Theory, LAB [B Tech 2 nd , 4 th ,6 th sem, M Tech 2 nd and MSc 2 nd Sem]	10 th July -21 st July 2023(Monday - Friday)
13	Last date of evaluation of BTech/MTech/MSc Project[B Tech 8 th sem,M Tech and MSc Final year]	10 June 2023 (Saturday)
14	Last date for showing evaluated ESE answer scripts to the students[B Tech 8 th sem, MSc Final year]	12 June 2023 (Monday)
15	Last date for seeking clarification of answer scripts by the students[B Tech 8 th sem, MSc Final year]	12 th June 2023 (Monday)
16	Last date for submission of grades to Academic Section[B Tech 8 th sem,M Tech and MSc Final year]	14 th June 2023 (Wednesday)
17	Declaration of End Semester Result[B Tech 8 th sem,M Tech and MSc Final year]	19 th June 2023 (Monday)

18	Summer Vacation for continuing BTech / MTech /MSc students except [B Tech 8 th sem,M Tech and MSc Final year] in view of present situation in Manipur	09 th May – 02 July 2023 (Tuesday - Sunday) (Summer)
19	Last date for showing evaluated ESE answer scripts to the students[B Tech 2 nd , 4 th ,6 th sem, M Tech 2 nd and MSc 2 nd Sem]	24 th July 2023 (Monday)
20	Last date for submission of grades to Academic Section[B Tech 2 nd , 4 th ,6 th sem, M Tech 2 nd and MSc 2 nd Sem]	25 th July 2023 (Tuesday)
21	Declaration of End Semester Result[B Tech 2 nd , 4 th ,6 th sem, M Tech 2 nd and MSc 2 nd Sem]	26 th July 2023 (Tuesday)
22	Summer Back Course Examination Registration	26 th - 27 th July 2023
23	Finalization of Branch Change(tentative)	01 st Aug 2023 (Tuesday)
24	Offline Supplementary Exam	01 st Aug – 04 th Aug 2023 (Monday - Friday)
25	Registration of <i>All Continuing</i> UG, PG & PhD students	27 th - 28 th July 2023 (Thursday - Friday)
26	Starting of classes of all continuing UG, PG & PhD students except BTech/ MTech /MSc 1 st Year	27 th July 2023(Thursday)

2.10 Students

The Institute attracts students from various parts of the country giving it a national character. The Institute encourages students to actively take part in all cultural programmes so that students get exposure to the culture and tradition of other parts of the country. Under **Ek Bharat Shreshtha Bharat**, NIT Manipur and NIT Nagaland have been paired with MANIT, Bhopal. The students also regularly take part in cultural festivals organized by various NITs and IITs.

2.11 Games & Sports

The Institute is keen to provide opportunities to the students for their all-round development. Equal importance is given to overall personality development of the students and sports plays an important role.

The Institute organizes Annual Sports Meet in a grand way. The sports meet is a multi-sporting event where both boys and girls are provided an opportunity to test their mettle in sports. The Institute regularly sent various teams to participate in Inter NITs sports meet held at different NITs.

2.12 Faculty Position

No of Faculty Post Sanctioned		Sanctioned Post of NIT Manipur as on 31-03-2023											
Sl.	Post	Year 2010	Year 2011	Year 2012	Year 2013	Year 2014	Year 2015	Year 2016	Year 2017	Year 2018	Total	Filled Position	Vacant Position
1	Professor	1	1	1	2	1	2	0	0	0	8	5	5
2	Associate Professor	2	2	2	5	1	3	0	0	0	15	18	3
3	Assistant Professor	5	4	4	9	2	7	0	0	0	31	19	4
	Total	8	7	7	16	4	12	0	0	0	54	42	12

*** Faculty promoted/ Appointed through flexible system without sanctioned positions are also included in the filled positions.**

No. of Non-Faculty Post sanctioned		Sanctioned Post of NIT Manipur as on 01-03-2023											
Sl.	Post	Year 2010	Year 2011	Year 2012	Year 2013	Year 2014	Year 2015	Year 2016	Year 2017	Year 2018	Total	Filled Position	Vacant Position
1	Director	1	0	0	0	0	0	0	0	0	1	1	0
2	Registrar	1	0	0	0	0	0	0	0	0	1	1	0
3	Asst. Registrar	1	0	0	0	0	1	0	0	0	2	1	1
4	Deputy Librarian/ Asst. Librarian	0	1	0	0	0	0	0	0	0	1	1	0
5	Library & Informa- tion Assistant	0	1	0	0	0	0	0	0	0	1	0	1
6	Sports Officer	0	1	0	0	0	0	0	0	0	1	1	0

7	Executive Engineer	0	1	0	0	0	0	0	0	0	1	1	0
8	Technical Assistant	1	1	0	0	0	0	0	0	0	2	0	2
9	Technical Assistant (System)	0	1	0	0	0	0	0	0	0	1	0	1
10	Technical Assistant/ Junior Engineer	0	0	1	2	5	5	0	0	0	13	0	13
11	Superintendent/ Accountant/Secretary / Sr. Pharmacist	1	0	1	0	0	2	0	0	0	4	0	4
12	Stenographer	1	0	0	0	0	0	0	0	0	1	1	0
13	Junior Assistant	2	0	2	1	2	0	0	0	0	7	4	3
14	Technician	2	2	0	0	0	0	0	0	0	4	0	4
15	Technician/Laboratory Assistant/ Lab Work Assistant	0	0	1	2	6	3	0	0	0	12	1	11
16	Attendant / Security Guard / Mali / Care Taker / MTS	0	0	2	1	3	2	0	0	0	8	0	8
	Total	10	8	7	6	16	13	0	0	0	60	12	48

3.0 ACADEMIC STATISTICS

3.1 Courses Offered

(i) A four year B.Tech programmes in the following branches of Engineering and Technology are offered during the period:

- Computer Science & Engineering
- Electrical Engineering
- Electronics & Communication Engineering
- Civil Engineering
- Mechanical Engineering

(ii) A two year M.Tech programmes in the following branches of Engineering and Technology are offered:

- Computer Science & Engineering
- Electrical Engineering
- Electronics & Communication Engineering
- Civil Engineering
- Mechanical Engineering

(iii) A two year M.Sc programmes in the following branches of Science are offered:

- Physics
- Chemistry
- Mathematics

(iv) In addition, PhD programmes in English, Chemistry, Physics, Mathematics, Computer Science & Engineering, Electronics and Communication Engineering, Mechanical Engineering, Civil Engineering, Electrical Engineering are also offered.

3.2 Admission Details

Branch-wise Strength:

B. Tech.

Sl.	Batch	CSE	EE	ECE	ME	CE	Total
1	2019-20	62	24	25	23	28	162
2	2020-2021	59	23	24	24	25	155
3	2021-2022	83	31	34	27	32	207
4	2022-23	74	36	34	35	35	214
Grand Total		278	114	117	109	120	738

M. Tech.

Sl.	Batch	CSE	EE	ECE	ME	CE	Total
1	2021-2022	10	8	9	5	14	46
2	2022-2023	4	4	2	3	19	32
Grand Total		14	12	11	8	33	78

M.Sc.

Sl. No.	Batch	Physics	Chemistry	Mathematics	Total
1	2021-2022	9	12	13	34
2	2022-2023	15	17	14	46
Grand Total		24	29	27	80

Ph.D.

Sl.	Batch	CSE	ECE	EE	CE	ME	Physics	Chemistry	Mathematics	English	Total
1	2015-16	2	1	0	6	1	1	8	0	03	22
2	2016-17	3	1	0	4	6	1	3	1	0	19
3	2017-18	8	4	3	4	5	3	1	4	0	32
4	2018-19	2	6	4	3	7	10	5	9	0	46
5	2019-20	1	3	3	4	4	10	4	4	0	33
6	2020-2021	2	01	01	01	08	0	03	0	01	17
7	2021-2022	4	5	4	4	4	9	6	5	0	41
8	2022-23	2	2	2	5	5	3	0	1	3	23
Grand Total		24	23	17	31	40	37	30	24	07	233

4 Departmental Reports

4.1 DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Head of Department

Dr.Khundrakpam Johnson Singh

Brief Introduction of the Department

The department of Computer Science and Engineering was established in the year 2010. The department conserves an excellent teaching and research environment with a team of qualified faculties. The curriculum is regularly updated to be at par with the modern industrial demand and state of the art research. The department since its establishment consistently fulfilled its role of producing IT industry ready engineers.

The departmental research is focused in the areas of Image Processing and Computer Vision, Soft Computing, Intelligent System Design, Speech Processing, IoT, Medical Image Processing, Information Security, Cryptography, Watermarking, Steganography, Cyber Security, Artificial Intelligence & Robotics, Pattern Recognition. The department has state of the art laboratory and research facilities. The department attracts various talented students from all parts of the country. Placements for our graduates are the best sought in the Institute.

Most of the Alumni are pursuing successful career in the industry and some have opted for higher studies. For further development of the department, our alumni remain in constant touch with us and are contributing actively. The department has 11 experienced and sincere faculty members and 4 non faculty members.

Highlight of research activities:

Image Processing, Cryptography, Watermarking, Steganography, Artificial Intelligence, Machine Learning, Speech Processing, Intelligent System Design, soft Computing, Networking, Network Security, Pattern Recognition, NLP, IoT.

Faculty Details (Regular):05

SN	Name of Faculty	Designation	Qualification (With last Institution)	Email
1.	Prof. Khumanthem Manglem Singh	Professor	PhD (IIT Guwahati)	manglem@gmail.com
2.	Dr. Yambem Jina Chanu	Assistant Professor	PhD (NERIST)	jina.yambem@gmail.com
3.	Dr. Khelchandra Thongam	Assistant Professor	PhD (Univ. of AIZU, Japan)	thongam@gmail.com
4.	Dr. Khundrakpam Johnson Singh	Assistant Professor	PhD (NIT Durgapur)	Johnkh34@gmail.com
5.	Dr. Oinam Bidyapati Chanu	Assistant Professor	PhD(NIT Nagaland)	obidyapatichanu@gmail.com

Faculty Details (Contractual):05

SN	Name of Faculty	Designation	Qualification	Email
1.	Dr.Chingakham Neeta Devi	Assistant Professor	PhD, Assam University	neeta.chingakham@gmail.com
2.	Dr.Anuradha Laishram	Assistant Professor	PhD, NIT Manipur	annu0286@gmail.com
3.	Dr. Maibam Mangalleibi Chanu	Assistant Professor	PhD, NIT Manipur	bbrobes.felix@gmail.com
4.	Teressa Longjam	Lecturer	Pursuing PhD, NIT Durgapur	teressalongjam@gmail.com
5.	Sanabam Binesh-wor Singh	Lecturer	Pursuing PhD, NIT Manipur	bineshworsanabam@gmail.com

Staff Details (Contractual): 04

SN	Name of Staff	Designation	Qualification	Email
1.	Khaidem Panthoi Meetei	Technical Assistant (system)	MCA	panthoimeetei@yahoo.co.in
2.	Ksh. Merina Devi	Technical Assistant	Ph.D. Pursuing	merylkshetri@gmail.com
3.	Sanasam Renubala Devi	Technical Assistant	M. Tech	devisanasam@gmail.com
4.	Nirvana Thokchom	Technical Assistant	M. Tech	nirvana.thokchom@gmail.com

Teacher Trainees' Details: 01

SN	Name of staff	Designation	Qualification	Email
1.	Susma Thiyam	Teacher Trainee	Pursuing PhD, IIT Guwahati	thiyamsusma@gmail.com

Academic Activities

(i) Students Enrollment

Programme	1 st year	2 nd year	3 rd year	4 th year	Total
B.Tech.	74	83	59	62	278
M.Tech.	04	10	...	...	14

(ii) PhD Program

	2022-23
No.of Full Time	21
No.of Part Time	3
Total	24
Degree Awarded During 2022-23	02

(iii) Research Information

(A) Sponsored Research Project from Govt./ Semi Govt

Sl. No.	Name of the Project	Funding Agency	Project Amount	Project PI
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1.	Development of AI Translation Software from English to Meitei Mayek(script) and Roman Alphabet	High Court of Manipur	16,52,000	Dr. Khelchandra Thongam
2.	Identifying the best practices for the High Court and District Court functioning, technical, technical evaluation and training of IT team	High Court of Manipur		Dr. Khelchandra Thongam

(B) Patent Details if any:

(C) Publication in Journals

1.	Chanu, T.R., Singh, T.R. & Singh, K.M. A new algorithm for removing salt and pepper noise from color medical images. <i>Multimed Tools Appl</i> 82, 24991–25013 (2023). https://doi.org/10.1007/s11042-023-14378-1
2.	Bhagat, P.K., Choudhary, P. & Singh, K.M. A study on zero-shot learning from semantic view-point. <i>Vis Comput</i> 39, 2149–2163 (2023). https://doi.org/10.1007/s00371-022-02470-w
3	Anuradha Laishram & Khelchandra Thongam (2022) A Deep Learning Approach based on Faster R-CNN for Automatic Detection and Classification of Teeth in Orthopantomogram Radiography Images, <i>IETE Journal of Research</i> , DOI: 10.1080/03772063.2022.2154283
4	Ngangbam Herojit Singh, Anuradha Laishram, Khelchandra Thongam, Optimal Path Planning for Mobile Robot Navigation Using FA-TPM in Cluttered Dynamic Environments, <i>Procedia Computer Science</i> , Volume 218, 2023, Pages 612-620, ISSN 1877-0509, https://doi.org/10.1016/j.procs.2023.01.043 .
5	Anuradha Laishram and Khelchandra Thongam, Automatic Classification of Oral Pathologies using Orthopantomogram Radiography Images based on Convolutional Neural Network, <i>International Journal of Interactive Multimedia and Artificial Intelligence (IJIMAI)</i> , http://dx.doi.org/10.9781/ijimai.2022.10.009 ,
6	Anuradha Laishram, Khelchandra Thongam, “Kidney diseases classification based on SONN and MLP-GA in ultrasound radiography images”, <i>International Journal of Computational Science and Engineering</i> , June 2022. https://www.inderscience.com/info/ingeneral/forthcoming.php?jcode=ijcse
7	Huidrom, R., Chanu, Y.J. & Singh, K.M. Neuro-evolutional based computer aided detection system on computed tomography for the early detection of lung cancer. <i>Multimed Tools Appl</i> 81, 32661–32673 (2022). https://doi.org/10.1007/s11042-022-12722-5
8	Usham Sanjota Chanu, Khundrakpam Johnson Singh, Yambem Jina Chanu “An ensemble method for feature selection and an integrated approach for mitigation of distributed denial of service attacks”, <i>Concurrency Computat Pract Exper</i> . 2022; 34(13):e6919.doi: 10.1002/cpe.6919
9	Usham Sanjota Chanu, Khundrakpam Johnson Singh, Yambem Jina Chanu, “A dynamic feature selection technique to detect DDoS attack”, <i>Journal of Information Security and Applications</i> , Volume 74, 2023, 103445, ISSN 2214-2126, /10.1016/j.jisa.2023.103445.
10	Khundrakpam Johnson Singh, Debabrata Maisnam, Usham Sanjota Chanu, “ Intrusion Detection System with SVM and Ensemble Learning Algorithms ”, <i>SN COMPUT. SCI.</i> 4, 517 (2023). https://doi.org/10.1007/s42979-023-01954-3 .

11	A. Buboo Singh, Kh Manglem Singh, Y. Jina Chanu, Khelchandra Thongam, Kh Johnson Singh, "An Improved Image Spam Classification Model Based on Deep Learning Techniques", Security and Communication Networks, vol. 2022, Article ID 8905424, 11 pages, 2022. https://doi.org/10.1155/2022/8905424 .
12	Wangkheirakpam Reema Devi, Sudipta Roy, Khelchandra Thongam, Chiranjiv Chingambam, "MDCNet: A Multiple Dilated Convolution Network for Cell Nuclei Segmentation", to International Journal of Recent Technology and Engineering (IJRTE) (accepted) (Scopus), 2023.
13	M. Mangalleibi Chanu, Nganbam Herojit Singh, Dr. Khelchandra Thongam, "An Automatic Epileptic Seizure Detection using Optimized Neural Network from EEG signals", Expert Systems, https://doi.org/10.1111/exsy.13260 , February 2023 (SCI).
14	Wangkheirakpam Reema Devi, Sudipta Roy, Khelchandra Thongam, Chiranjiv Chingambam, "DenseRes-Net: An architecture for gland segmentation", SN Computer Science, Springer Nature (Springer), 2023.
15	Teressa Longjam, Dakshina Ranjan Kisku, Phalguni Gupta, "Writer independent handwritten signature verification on multi-scripted signatures using hybrid CNN-BiLSTM: A novel approach", Expert Systems with Applications, Volume 214, 119111, Issue C Mar 2023 https://doi.org/10.1016/j.eswa.2022.119111 .
16	Teressa Longjam, Dakshina Ranjan Kisku, Phalguni Gupta, "Multi-scripted Writer Independent Off-line Signature Verification using Convolutional Neural Network", Multimedia Tools and Applications, Volume 82 (4), page 5839-5856, (2023). https://doi.org/10.1007/s11042-022-13392-z .
17	Chingakham Neeta Devi, Meetei Mayek Natural Scene Character Recognition Using CNN. In: Patel, K.K., Santosh, K.C., Patel, A., Ghosh, A. (eds) Soft Computing and Its Engineering Applications. icSoftComp 2022. Communications in Computer and Information Science, vol 1788. Springer, Cham. https://doi.org/10.1007/978-3-031-27609-5_33 .
18	Maibam Mangalleibi Chanu , Ngangbam Herojit Singh , Chiranjeevi Muppala , R. Thandaiah Prabu , Ngangbam Phalguni Singh , Khelchandra Thongam "Computer-aided detection and classification of brain tumor using YOLOv3 and deep learning". <i>Soft Comput</i> 27 , 9927–9940 (2023). https://doi.org/10.1007/s00500-023-08343-1
19	Kshetrimayum Merina Devi, Maibam Mangalleibi Chanu, Ngangbam Herojit Singh, Khumanthem Manglem Singh, "Classification of unsegmented Phonocardiogram Signal using Scalogram and Deep Learning", <i>Soft Computing</i> 27 , 12677–12689 (2023). https://doi.org/10.1007/s00500-023-08834-1 .
20	Diana Laishram, N. Tutaraja Singh & Khumanthem Manglem Singh (2023) Protection of COVID-19 images using multiple elliptic curve cryptography, The Imaging Science Journal, DOI: 10.1080/13682199.2023.2229698

(D) Publication in Conferences (2022-23)

1	Kshetrimayum Merina Devi, Kh Manglem Singh, Khelchandra Thongam, Maibam Mangalleibi Chanu and Sanabam Bineshwor Singh 'A novel approach for the classification of unsegmented Phonocardiogram signal using Convolutional neural network', International Conference on innovations in electronics and communication systems (ICIECS 2022), 24-26 November, Chennai.
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2	Maibam Mangalleibi Chanu, Kharibam Jilenkumari Devi, Sanabam Bineshwor Singh, Kshetrimayum Merina Devi and Khelchandra Thongam, 'Detection of Alzheimers Disease from MRI images using multiclassifier ', International Conference on innovations in electronics and communication systems (ICIECS 2022), 24-26 November, Chennai.
3	Sanabam Bineshwor Singh, Kh Manglem Singh, Maibam Mangalleibi Chanu and Kshetrimayum Merina Devi, 'A Novel Deep-Learning Model for Automatic Detection and Classification of Lung Cancer Using the Transfer-Learning Technique', International Conference on Advances in Science, Engineering and Management (ICASEM 2022) pp. 30, ISBN : 978-93-92105-31-9, 18-19 October, Hyderabad.

(E) Publication in books/ book chapters (2022-23)

1.	Raja, N.T., Singh, K.M. (2022). Secure and Efficient Text Encryption Using Elliptic Curve Cryptography. In: Bhateja, V., Tang, J., Satapathy, S.C., Peer, P., Das, R. (eds) Evolution in Computational Intelligence. Smart Innovation, Systems and Technologies, vol 267. Springer, Singapore. https://doi.org/10.1007/978-981-16-6616-2_51
2	Usham Sanjota Chanu, Khundrakpam Johnson Singh and Yambem Jina Chanu, "A Novel Approach for Classification of DDoS Attacks using Naive Bayes", In: Saroj Hiranwal and Garima Mathur (eds), Artificial Intelligence and Communication Technologies, SCRS, India, 2022, pp. 429-436. https://doi.org/10.52458/978-81-955020-5-9-40
3	Hidangmayum Satyajeet Sharma and Khundrakpam Johnson Singh, "A Comprehensive survey on Various Machine Learning Models for Anomaly-Based Intrusion Detection System", In: Saroj Hiranwal and Garima Mathur (eds), Artificial Intelligence and Communication Technologies, SCRS, India, 2022, pp. 393-408. https://doi.org/10.52458/978-81-955020-5-9-38

(F) Short Term Course/ Workshop/ Seminar/ Conference Conducted by the Department:

1.	1st International Conference on Science, Technology and Engineering (ICSTE-2023)_during 17-18 Feb. 2023, NIT Manipur, Imphal
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(G) Internship or Industrial Visits:

List of Companies providing Internship to CSE students for 2022-23 are:

Sl.No.	Enrolment No	Name Of The Student	Company
1.	19103008	Dayasagar Khongbantabam	Globiz Pvt Ltd.
2.	19103009	Swetha Bukke	Tata Elxsi
3.	19103010	Valluru Yaswanth Kumar Reddy	Trellix
4.	19103011	Chaitanya Agrawal	Increff
5.	19103015	Deepak Kumar	Tata Elxsi
6.	19103018	Huidrom Abhishek Singh	Globiz
7.	19103022	Jackson Koijam	Globiz
8.	19103026	Levisha Nungchim	Globiz

9.	19103028	Lungoulen Lupho	Globizs Web Solutions Pvt. Ltd.
10.	19103036	Moirangthem Vivan Singh	Intellipaart
11.	19103038	Naorem Hemlet Singh	Globizs Web Solutions Pvt. Ltd.
12.	19103051	Srishti Katiyar	Loyalty Juggernaut Inc
13.	19103054	Warepam Mangalsana	Tata Elxsi
14.	19103055	V Aravind Reddy	Devtron Labs(Kubernetes Technologies)
15.	19103056	Abhishek Tiwari	Thoughtspot
16.	19103057	Vishal Jaiswal	Trellix
17.	19103058	Saumya Anand	Trellix
18.	19103059	Krishna Nand Jaiswal	Tata Elxsi
19.	19103062	Karri Laxmi Narayana	Nagarro

Name of BTech students who graduated in (2022-2023):

Sl. No.	Enrolment No	Name Of The Student	FinalCPI
1.	19103001	Abhijeet Anand	9.19
2.	19103002	Akash Angom	8.46
3.	19103003	Atul Sharma	7.56
4.	19103004	A R Sorinchui	8.01
5.	19103005	Bokka Purna Manikanta	8.03
6.	19103006	Chitheimi A Shimray	7.6
7.	19103007	Borusu Satyanarayana	7.34
8.	19103008	Dayasagar Khongbantabam	8.62
9.	19103009	Bukke Swetha	8.17
10.	19103010	Valluru Yaswanth Kumar Reddy	8.79
11.	19103011	Chaitanya Agrawal	8.92
12.	19103012	Harishkumar Khundrakpam	6.8

13.	19103013	Chavatapalli Devi Sri Shankar	7.42
14.	19103014	Helenba Longjam	8.59
15.	19103015	Deepak Kumar	8.79
16.	19103016	Herojit Kharibam	8.35
17.	19103017	Gyanendra	7.8
18.	19103018	Huidrom Abhishek Singh	8.57
19.	19103019	Jagdev Singh	8.6
20.	19103020	Immanuel Kamginlian Samte	7.1
21.	19103021	Keshav Kumar	7.69
22.	19103022	Jackson Koijam	8.47
23.	19103023	K Praveen	7.05
24.	19103024	Khwairakpam Nishita Devi	7.99
25.	19103025	Kosanam Ganapathi	7.7
26.	19103026	Levisha Nungchim	8.19
27.	19103027	Manjeet	8.35
28.	19103028	Lungoulen Lupho	8.18
29.	19103029	Mayank Raj	8.39
30.	19103030	Magdalene P	7.76
31.	19103031	Motha Ysaswini Sai Sree	7.96
32.	19103032	Mangalsana Rajkumari	8
33.	19103033	Nella Kartheek	8.68
34.	19103034	Moirangthem Suchitra Devi	8.53
35.	19103035	Niket Kumar Singh	8.07
36.	19103036	Moirangthem Vivan Singh	8.47
37.	19103037	R Vishnu Nayak	7.28

38.	19103038	Naorem Hemlet Singh	8.88
39.	19103039	Raj Gupta	8.52
40.	19103040	Phaorei Kashung	7.63
41.	19103041	Riti Agarwal	8.77
42.	19103042	Rengshai R Lungleng	7.4
43.	19103043	Saket Kumar Ray	8.81
44.	19103044	Robinson Khwairakpam	8.68
45.	19103045	Satyam Sachan	7.6
46.	19103046	Siddharth Sinam	7.99
47.	19103047	Shubham Kumar Gond	8.02
48.	19103048	Somipem Chamroy	8.03
49.	19103049	Siddharth Singh	7.98
50.	19103050	Thangsuanlian Ngaihte	8.19
51.	19103051	Srishti Katiyar	9.09
52.	19103052	Wangkhem Rakesh Singh	7.75
53.	19103053	Sweta Chaudhary	8.07
54.	19103054	Warepam Mangalsana	8.53
55.	19103055	V Aravind Reddy	8.84
56.	19103056	Abhishek Tiwari	8.82
57.	19103057	Vishal Jaiswal	8.01
58.	19103058	Saumya Anand	8.88
59.	19103059	Krishna Nand Jaiswal	8.56
60.	19103060	Akhilesh Chauhan	8.35
61.	19103061	D Vishwaksena Vishnu Simha	8.63
62.	19103062	Karri Laxmi Narayana	8.85

Name of MTech students who graduated in (2022-2023):

Sl. No.	Enrolment No	Name Of The Student	FinalCPI
1	21203001	Aheibam Benson Singh	8.65
2	21203002	Km Shivani Singh	8.19
3	21203003	Kongbrailatpam Salina Devi	8.65
4	21203004	Jodhachan Tongbram	8.25
5	21203005	Banesori Ayekpam	8.25
6	21203006	Chandam Naoba Singh	8.13
7	21203007	Nirupama Thoudam	8.37
8	21203008	Mohit Kumar	7.71
9	21203009	Khumanthem Chanchanbi	8.6

Name of PhD students who graduated in (2022-2023) :

Sl. No.	Enroll-ment No.	Name of the Student	Thesis Name	Name of the Supervisor/ Co-Supervisor	Date of Defence
1	14PCS005	Maibam Mangalleibi Chanu	Automatic Detection of Brain Diseases from Electroencephalogram Signals and Magnetic Resonance Images Using Optimized Neural Network and Deep Learning	Dr,Khelchandra Thongam	22 August 2022

Name of GATE/NET qualified students in (2022-2023):

Sl. No.	Name of student	GATE/NET	Percentile for GATE/GATE Score	Category
1.	KWAIRAKPAM NISHITA DEVI	GATE	254	SC
2	AKASH ANGOM	GATE	239	SC
3	NELLA KARTHEEK	GATE	348	OBC
4	SOMIPEM CHAMROY	GATE	341	ST

No. of students who have enrolled for higher studies (Foreign / National) in 2022-23:

Sl. No.	Name of student	Course/Programme	Name of the Institute	Country
1	Ganapathi Kosanam	Masters in Cyber Security	Applying	Canada

No. of students who have been placed in 2022-23:

SL.No	Company	No. of Students offered	CTC
1.	Amazon	1	47 LPA
2.	Discovery	1	27 LPA

3.	Increff	1	17.9 LPA
4.	Veritas	1	17LPA
5.	Infoedge	1	14.5 LPA
6.	Devtron	1	10 LPA
7.	Loyalty Juggernaut	1	10 LPA
8.	Intellipate	1	9 LPA
9.	CGI	1	7.87 LPA
10.	COMVIVIVA	1	6.5 LPA
11.	Trellix	2	15.8 LPA
12.	NextTurn	2	6 LPA
13.	Nagarro	3	7 LPA
14.	Deloitte	4	7.6 LPA
15.	Vassar Labs	4	(6-9) LPA
16.	PeopleStrong	6	12 LPA
17.	Tata Elxi	6	7 LPA
18.	Globiz	6	4.2 LPA
19.	JIO	7	8.5 LPA
20.	BEL	8	12 LPA
	TOTAL	58	

Other Activities:

1. **Details of NEP Activity conducted by the Department in 2022-23:**
2. **Details of Faculty Achievement in 2022-23:**

Sl.No	Name of the Faculty	Details of Faculty Achievement
1.	Dr.Yambem Jina Chanu	Ratishchandra Huidrom, Ph.D awarded in 2022. Usham Sanjota Chanu, PhD awarded in June 2023
2.	Dr.Yambem Jina Chanu	Principal Investigator, Title of the Project: A Novel TD-NN-LiGRU approach for CS ASR Meiteilon/Manipuri English, Funding Agency-(CRG) SERB, DST (2022-2025).
3.	Dr. Khelchandra Thongam	Anuradha Laishram, Ph.D awarded in 2022. Maibam Mangalleibi Chanu, Ph.D awarded in 2022.
4.	Dr. Khelchandra Thongam	Project: Development of AI translation Software from English to Meitei Mayek (Script) and Roman alphabet Project: Identifying the best practices for the High Court and District Court functioning, technical specification, technical evaluation and training of IT team.

3. Details of Student Achievement in 2022-23:

Sl.No	Name of the Student	Details of Student Achievement
1.	Neeraj Kumar Gupta	Foundation for Excellence Scholarship, 40K per year (2020-2024).
2.	Hemant Patidar	Kimo Tech Competition, Winner, 25K Cash Prize

3.	Shakshi Bhakhar	Course Certificate, HTML Course Certificate, Python
4.	Aditya Gajbhiye	Course Certificate, Front End Development – CSS; TCS iON Career Edge – Young Professional; Cyber Security and digital forensics; Responsive Design
5.	Lakshmi Pragna	Advanced Software Engineering Virtual Experience Program; Winner in Spelling Bee Competition

4. Details of Awards/ Recognition received by Faculty/Staff/Students in 2022-2023:

Sl.No	Name of the Faculty/ Staffs/Student	Details of Awards/ Recognition
1.	Dr.Maibam Mangalleibi Chanu	Best Paper Award on 2 nd International Conference on Innovations in Electronics and Communications System 2022, Paper Title: Identification of Insect Pests and Prediction of Pesticides using YOLOv4 Deploying onto UBIOPS.

5. Steps taken for popularisation of Science and Technology among the students of Manipur:

Identification of potential schools, colleges, Universities, etc and share the benefits of current technologies. The knowledge is basically for lifestyle improvement designed to satisfy real needs through the use of science and technology. Few of the knowledge may range from basic computer knowledge to face recognition, cyber security, cyber crimes, artificial

4.2 DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

Head of Department

Dr. Aheibam Dinamani Singh

Brief Introduction of the Department

The Department of Electronics and Communication Engineering was established in the year 2010. It is a full-fledged academic department for emerging ECE engineers. The Department provides outstanding teaching and research environment. The syllabi of the courses are continuously updated and the laboratories modernized to reflect the rapid changes in technology. The Department has simulation software and laboratories for the welfare of the students and the society in the field of Electronics and communication. At present, the department is running B.Tech. M.Tech in Communication and Signal Processing, M.Tech. in VLSI and Embedded System and Ph.D. programs.

AIMS: The Department has an aim to produce quality Engineer to meet the sustainable developmental goal to the nation.

OBJECTIVES: The Department has an objective to produce quality engineers to meet the ever growing demand for technical manpower in the communication technology and in the industrial arena.

Highlight of Research Activities

The faculty members of the department are actively involved in research activities. The broad areas of research being carried out in the department are listed below:-

1. Wireless communication, Fading Channels, Image Processing, Fuzzy Logic, Signal Processing, Antennas array, and Millimeter-wave antennas.
2. Embedded systems, Semiconductor nanotechnology
3. Analog Circuit Design
4. VLSI design, VLSI-DSP, Digital Electronics and Communications, and
5. Microstrip Antenna Design and Frequency Selective Surface (FSS)

Faculty Members (Regular): 5

Sl No.	Name of the Faculty	Designation	Qualification (With last Institution)	Email
1	Dr. Aheibam Dinamani Singh	Associate Professor	Ph.D (NERIST)	aheibamdina@yahoo.co.in
2	Dr. Ashish Ranjan	Associate Professor	Ph.D (IIT Dhanbad)	ashish.ism@rediffmail.com, ashish.ece@nitmanipur.ac.
3	Dr. Manoj Kumar	Assistant Professor	Ph.D (NIT Manipur)	manojara400@gmail.com
4	Dr. Loitongbam Surajkumar Singh	Assistant Professor	Ph.D (NIT Manipur)	surajloi@yahoo.co.in
5	Dr. Kalyan Mondal	Assistant Professor	Ph.D (Kalyani University)	kalyankgec@gmail.com

Faculty Members (Contractual): 8

Sl No.	Name of the Faculty	Designation	Qualification (With last Institution)	Email
1	Dr. Keisham Pritamdas	Assistant Professor	Ph.D (NIT Manipur)	das1948@gmail.com, connect2tarunh@gmail.com
2	Dr. Chitralekha Ngangbam	Assistant Professor	Ph.D (NIT Agartala)	ng.chitra@gmail.com
3	Dr. Kharibam Jilenkumari Devi	Assistant Professor	Ph.D (NIT Manipur)	Jilenkumari@gmail.com, jilenkumari@nitmanipur.ac.in
4	Dr. Huiem Tarunkumar	Assistant Professor	Ph.D (NIT Manipur)	tarun_huiem@nitmanipur.ac.in, connect2tarunh@gmail.com
5	Mr. Thingujam Churchill Singh	Lecturer	Ph.D (Pursuing at NIT Manipur)	churchil.khumancha@gmail.co
6	Mr. Samom Jayananda Singh	Lecturer	Ph.D (Pursuing at NERIST)	jayanandmetal.inc@gmail.com, jayananda@nitmanipur.ac.in
7	Ms. Salam Devayani Devi	Lecturer	Ph.D (Pursuing at NIT Manipur)	devu2.sd@gmail.com

8	Mr.Richard Ningthoujaam	Lecturer	Ph.D (Pursuing at NIT Manipur)	richard.ningthoujam@gmail.com
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Non Teaching Staff (Regular/Contractual):6

Sl No.	Name of the Staff	Designation	Qualification	Email
1	Dr.Yumnam Shantikumar	Technical Assistant	Ph.D.	yshantikumar99@gmail.com
2	Ms. Anupa Hijam	Technical Assistant	M.Tech	anupahijam@gmail.com
3	Mr.Salam Nonglenkhomba	Technical Assistant	M.Tech	Khomba.salam@gmail.com
4	Ms.Debala Nameirakpam	Technical Assistant	B. Tech	debala0103@gmail.com
5	Mr.Robert Okram	Technician	B.Tech	robertsinghokram@gmail.com
6	N.BobbyChand	Lab. Attendant	B.Tech	Bobbychand26@gmail.com

Trainee Teachers (if any): **NIL**

Academic Activities

Students Enrolment

Name of the Course	1 st Year	2 nd Year	3 rd Year	4 th Year	Total
B.Tech	34	34	24	25	117
M.Tech	02	09			11

PhD Program.

	2022-23
No. of Full Time	23
No. of Part Time	0
Total	23
Degree Awarded during 2022-23	02

Research Information

Sponsored Research Projects form Govt./Semi Govt.

Sl. No.	Name of the Project	Funding Agency	Project Amount	Project PI
1	“Behavioral Changes of Oral Mucosa in Oral Squamous Cell Carcinoma (OSCS) Progression: An Electrical Characterization”.	DST-SERB	Rs. 40,73,740/- (Forty Lakh seventy three Thousand seven hundred forty only)	Dr. Ashish Ranjan

Patent Details if any:

Sl. No.	Inventor(s)	Patent Title	Date of Granted/ Published
1	Dr.Loitongbam Surajkumar Singh	“A method for Studying the compositional dependency on physical and optical properties of multi-component chalcogenide glassy systems”	29/03/2023
2	Dr.Loitongbam Surajkumar Singh	“A system for synthesizing Se ₅₀ -XTe ₃₀ SbX Chalcogenide Glass”	22/08/2022
3	Dr Ashish Ranjan	“Design procedure for modeling of MEMINDUCTOR and a layout design thereof”	02/08/2022

Publications in Journals (2022-23)

Sl no.	Author names	Publication in Journals
1	Dr. Aheibam Dinamani Singh	1. Laishram Mona Devi, Aheibam Dinamani Singh*, "Different Power Adaptive Transmission Schemes Over Alternate Rician Shadowed Fading Channels" IETE Journal of Research, DOI: 10.1080/03772063.2022.2163926, Jan 2023. *Supervisor 2.Kanan Wahengbam, Kshetrimayum Linthoinganbi Devi, and Aheibam Dinamani Singh*, "Fortifying brain signals for robust interpretation" in IEEE Transactions on Network Science and Engineering, 2022, doi: 10.1109/TNSE.2022.3222362. *Supervisor 3.Laishram Mona Devi, Aheibam Dinamani Singh*, "Channel Capacity Analysis of Various Adaptive Transmission Schemes and BER Performance at Beaulieu-Xie Fading" Radioelectronics and Communications Systems, Vol. 65, No. 1, pp. 18–26, Aug 2022. *Supervisor 4.Sisira Hawaibam, Aheibam Dinamani Singh*, "Error Rate Analysis of Different Modulation Schemes Over Shadowed Beaulieu-Xie Fading Channels." IETE Journal of Research, (https://doi.org/10.1080/03772063.2022.2069604), May 2022. *Supervisor

2.	Dr. Ashish Ranjan	1. Vivek Bhatt, Ashish Ranjan and Yumnam Shantikumar Singh, “Resistorless Chua's Diode Implementation for Chaotic Oscillation Employing Single EXCCCII”, AEU-International Journal of Electronics and Communications, 2022. 2. Yumnam Shantikumar Singh, Ashish Ranjan, Shuma Adhikari and Benjamin A Shimray, “A Modern VDCCTA Active Element and Its Electronic Application”, Journal of Circuits, Systems and Computers, August 2022. 3. Mourina Ghosh, Ankur Singh, Shekhar S Borah, John Vista, Ashish Ranjan and Santosh Kumar, “MOSFET-Based Memristor for High-Frequency Signal Processing”, IEEE Transactions on Electron Devices, IEEE Transactions on Electron Devices, Vol. 69(5), pp. 2248-2255, 2022. 4. Manoj Joshi and Ashish Ranjan. “Low power chaotic oscillator employing CMOS”, Integration, Vol. 85, pp. 57-62, 2022. 5. Shekhar Suman Borah, Mourina Ghosh and Ashish Ranjan, “Higher order multifunction filter using current differencing buffered amplifier (CDBA)”, Revue Roumaine des Sciences Techniques—Série Électrotechnique et Énergétique, Vol. 1(67), pp. 59-64, 2022 6. Subhasish Banerjee, Mourina Ghosh, Pulak Mondal and Ashish Ranjan, “Third order inverse multifunction filter employing MOS resistors and capacitors”, International Journal of Numerical Modelling: Electronic Networks, Devices and Fields, 2022. 7. Yumnam Shantikumar Singh, Ashish Ranjan, Shuma Adhikari & Benjamin A. Shimray A Lossless Active Inductor Design Using Single ZC-VDCC: Grounded and Floating Mode, ,Published online: 19 Oct 2022 https://doi.org/10.1080/03772063.2022.2130828
3.	Dr. Loitongbam Suraj Kumar Singh	1. Study of mixed modifier effect on dielectric and optical properties of zinc-phosphate based ternary and quaternary nanocomposite systems, Accepted 15 May 2022, Available online 27 May 2022, Volume 591. 2. Effect of Ag₂S on electrical conductivity and dielectric relaxation in Ag₂OMoO₃-P₂O₅ ionic glassy systems, https://doi.org/10.1016/j.jnoncrysol.2022.121893

4.	Dr. Manoj Kumar	1.Thingujam Churchil, Manoj Kumar,” Design and implementation of two- dimensional digital finite impulse response filter using very high speed Integrated circuit hardware description language”,IJECE,pp.3684-3691,vol.12(4),Aug.2022. (SCOPUS) 2.Bankuru Sai Bhavana, Gundeti Mounika, Dr. Manoj Kumar and Jadhav Akshaya,” Interfacing Of PS/2 Mouse and VGA Monitor Using FPGA”, International Journal of Applied Engineering Research ISSN 0973-4562 Volume 18, Number 2,PP-83-87, 2023. 3.Shougaijam Chinglemba Singh and Manoj Kumar,” Design And Implementation Of Secured Wireless Communication Based Fire Detection System”, International Journal of Early Childhood Special Education (INT-JECSE)DOI:10.9756/INTJECSE/V14I8.63 ISSN: 1308-5581 Vol 14, Issue 08 2022. 4. Naorem Bhabini Devi and Manoj Kumar,” FPGA Implementation Of Four-Lift Control System With Smoke Detection”, International Journal of Early Childhood Special Education (INTJECSE)DOI:10.9756/INTJECSE/V14I8.63 ISSN: 1308-5581 Vol 14, Issue 08 2022. 5.Bharat Huirem and Manoj Kumar,” Implementation of a secure wireless communication system using true random number generator for internet of things”, Indonesian Journal of Electrical Engineering and Computer Science,Vol. 30, No. 2, May 2023, pp. 982~992.
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5.	Dr. Kalyan Mondal	1.Kalyan Mondal, Biplab Bag, Lakhindar Murmu and Tapan Mandal , Dual Band, Reduced Size, "Enhanced Gain Frequency Selective Surface Based Monopole Antenna for Wireless Communications,"International journal of Wireless Personal Communications, Vol. pp. , 2023 2.Biplab Bag, Kalyan Mondal, Snehasish Saha & Partha Pratim Sarkar, "Wideband monopole antenna: enhanced gain and circular polarization for satellite communication,"International Journal of Wireless Networks, 2023. https://link.springer.com/article/10.1007/s11276-023-03338-0 3.Deepak Kumar Barik, Kalyan Mondal and Mohd Azharuddin, "A Broad Axial Ratio Bandwidth and Wide Angle Coverage Circularly Polarized Monopole Antenna for Wireless Communication,"Microwave and Optical Technology Letters, Vol. 65, pp. 2384 - 2391, 2023,https://onlinelibrary.wiley.com/doi/10.1002/mop.33707 4.Deepak Kumar Barik, Kalyan Mondal, Mohd Azharuddin, "Broad Axial Ratio Bandwidth Circularly Polarized with Wide Angle Coverage Planar Monopole Antenna," International Journal of Electronics and Communication, VOL. 164, ID: 154627, 2023, https://doi.org/10.1016/j.aeue.2023.154627 5.Nilesh Mukherjee, Kalyan Mondal, Lakhindar Murmu and Biplab Bag, P.Soni. Reddy and P.P. Sarkar, "Dual Broad Band-Stop Polarization-Insensitive and Scanning Angle Stability Frequency Selective Surface," International Journal of Electronics and Communication, Vol. 160, ID: 154496, 2022, ISSN 1434-8411, https://doi.org/10.1016/j.aeue.2022.154496. 6.B. Bag, Kalyan Mondal and P.P. Sarkar, "Dual-Band Dual-Sense Broadband Circularly Polarized Parasitic Ring Loaded Monopole Antenna for Satellite Applications" International Journal of Communication Systems, Vol. 35, ID. e5258,2022.ISSN: 1099-1131.https://doi.org/10.1002/dac.5258 7.Umesh Singh, Kalyan Mondal, Rajesh Mishra, "A Study on Dual-Sense Broadband Enhanced Axial Ratio Bandwidth Circularly Polarized Monopole Antenna for UWB Applications," International Journal of Wireless and Mobile Computing, Vol. pp. 2022. ISSN: 1741-1092 Accepted (SCOPUS)
6.	Dr.Kharibam Jilenkumari Devi	1.Roy Bappa, ShumaAdhikari, SubirDatta, Kh. Jilenkumari Devi, A. Deleena Devi, Faisal Alsaif, Sager Alsulamy, and TahaSelimUstun. "Deep Learning based Relay for Online Fault detection, classification, and fault location in a grid-connected Microgrid." <i>IEEE Access</i> (2023). DOI:10.1109/ACCESS.2023.3285768, vol. 11, 2023(SCI-E). 2. SinghSanasamPremananda, KeishamPritamdas, Kharibam Jilenkumari Devi, and Salam Devayani Devi. "Custom Convolutional Neural Network for Detection and Classification of Rice Plant Diseases." <i>Procedia Computer Science</i> 218 (2023): 2026-2040.(Scopus index journal)

7	Mr.Samom Jayananda Singh	1. Samom Jayananda Singh , Rajesh Kumar, M.M Dixit, "Parametric Study of the Modified Ground Plane on Co-Planar Waveguide-Fed Printed Monopole Antenna for Ultra-Wideband Technology," International Journal of Engineering Trends and Technology, vol. 71, no. 2, pp. 98-103, 2023. (Scopus indexed)
8	Dr.Keisham Pritamdas	1. S. Premananda Singh, K. Pritamdas , Kh. Jilenkumari Devi, S. Devayani Devi, "Custom Convolutional Neural Network for Detection and Classification of Rice Plant Diseases", <i>Procedia Computer Science</i> , 218, Pages 2026-2040, 2023. (Journal)

Publication in Conferences (2022-23)

1. **Samom Jayananda Singh**, Rajesh Kumar, M.M Dixit," Study analysis of Printed monopole antenna for C and X band Application",*Proceedings of CECNet 2022* (pp.112-118),IOS Press. **(Scopus indexed)**
2. **Richard N., K. Pritamdas , L. Surajkumar Singh**, "Comparative study on YOLOv2 object detection based on various pretrained networks", *1st International Conference on SCI/Tech and Engineering, 2023*.
3. Bappa Roy, Shuma Adhikari, Aribam Deelena Devi and **Kharibam Jilenkumari Devi**"Real time simulation of Islanded mode Solar PV system with New Elman NN-based MPPT" 1st International Conference on SCI/ Tech and Engineering (ICSTE-2023) .(scopus index)
4. **Kharibam JilenkumariDevi** , M. mangalleibiChanu, ShumaAdhikari " Identification of insect Pests and Prediction of Pesticides using YOLO v4 deploying on UBIOPS." 2nd International conference on innovations in electronics and communication system (ICIECS-2022) (scopus index).
5. **Kharibam Jilenkumari Devi**, DivyaN,AhmedAlkhayyat, "Artificial Intelligence in Healthcare: Diagnosis, Treatment, and Prediction" International Conference On Newer Engineering Concepts And Technology (ICONNECT-2023) "E3S Web of Conferences". **(Scopus index)**
6. Prerna Rana and **Ashish Ranjan** "Wave Active Low Pass Filter Employing Modern Active Block VDDIBA", Journal of Physics: Conference Series, Volume 2335, International (Virtual) Conference on Recent Advances in Electrical, Electronics, Ubiquitous Communication and Computational Intelligence 2022 21/04/2022 - 24/04/2022 Online Citation Prerna Rana and Ashish Ranjan 2022 J. Phys.: Conf. Ser. 2335 012037 DOI 10.1088/1742-6596/2335/1/012037

Publication in books/book Chapters (2022-23)

1. **Yumnam Shantikumar Singh, Ashish Ranjan**, Shuma Adhikari & Benjamin A. Shimray "A Tunable Resistorless Floating Inductance Simulator Using MO-DXCCTA", , https://doi.org/10.1007/978-981-19-0312-0_9,Published 04 September 2022
2. Rajkumar Mumusana, **Yumnam Shantikumar Singh& Ashish Ranjan** "An Implementation of Tunable All-Pass Filter Employing CCDDCC", ,https://doi.org/10.1007/978-981-19-0312-0_13, Published04 September 2022

Short Term Course/ Workshop/ Seminar/ Conference Conducted by the Department:

SL No.	Short Term Course/ Workshop/ Seminar/ Conference	Coordinator
1.	One Week Online Short Term Course On“ Digital Electronics Circuits ”18th –24th July, 2022	Dr. Manoj Kumar Assistant Professor, Department of Electronics & Communication Engineering National Institute of Technology, Manipur

Internship or Industrial Visits:

Sl No.	Enrollment Number	Name of the Student	Company/ Internship / Industrial Visits
1	19105008	Rohith Chimpiri	Number Theory
2	19105013	Gundeti Mounika	Tata elxsi
3	19105026	Yurembam Ellison Singh	NexTurn
4	19105006	Banoth Pavan Naik	Tata Elxsi
5	19105025	Pranay Prasad Tivanani	Tata Elxsi
6	19105023	Shivam nagar	Devtron
7	19105021	Rohit kumar	Vassar labs
8	19105003	Ashish Kumar	Devtron.inc
9	19105020	Prashant Singh	Nagarro
10	19105012	Dosilhenbi Yumnam	Tata Elxsi
11	19105002	Ankur	Trellix

Name of B.Tech Students who graduated in 2022-23:

Sl. No.	Enrolment No.	Name of the Student	Final CPI
1	18105015	Maibam Anash Khan	6.74
2	19105002	Ankur	8.37
3	19105003	Ashish Kumar	8.21
4	19105004	Bankuru Sai Bhavana	8.43
5	19105005	Banoth Nagaraju	7.14
6	19105006	Banoth Pavan Naik	7.88
7	19105007	Chappa Likhith	7.98
8	19105008	Chimpiri Rohith	8.43
9	19105009	Deepanshu	7.95
10	19105010	Dhanraj	7.46
11	19105011	Dharmpal Kumar	7.3
12	19105012	Dosilhenbi Yumnam	8.13
13	19105013	Gundeti Mounika	8.32
14	19105014	Jadhav Akshaya	7.42
15	19105015	Johnson K	8.3
16	19105016	Munavath Praveen	7.67
17	19105017	Nakkina Venkat Kushwanth	7.83
18	19105018	Paras Kumar Singh	7.81
19	19105020	Prashant Singh	7.96

20	19105021	Rohit Kumar	8.27
21	19105023	Shivam Nagar	8.94
22	19105024	V Sai Chakradhar	7.53
23	19105025	Tivanani Pranay Prasad	8.11
24	19105026	Yurembam Ellison Singh	8.13

Name of M.Tech Students who graduated in 2022-23

Sl. No.	Enrolment No.	Name of the Student	Final CPI
1	21205002	Pheiroijam Robin Luwang	8.69
2	21205003	Tongbram Bidyasagar Singh	7.94
3	21205004	Tongbram Arpan Meitei	8.83
4	21205005	Shougaijam Chinglemba Singh	7.94
5	21205006	Naorem Bhabini Devi	8.19
6	21205007	Moirangthem Rushdie Devi	8.89
7	21205009	Ruskin Potsangbam	8.17
8	21205010	Moirangthem Raju Singh	8.22

Name of PhD Students who graduated in 2022-23: NIL

No. of GATE/NET Qualified students in 2022-23:

Sl. No.	Name of the Student	GATE/NET	Percentile for GATE	Category
1	LIKHITH CHAPPA	GATE	28	OBC
2	KARTHIK AYYALA	GATE	38	GENERAL

No. of Students who have enrolled for higher studies (Foreign/National)

Sl. No.	Name of the Student	Course/Programme	Name of the Institute	Country
1	NIL			

No. of Students who have been placed in 2022-23: 18 Nos. (Eighteen)

Other Activities:

Details of NEP Activity conducted by the Department in 2022-23

1. New Syllabus is being framed based on the guidelines of NEP.
2. Attended NEP related workshops.

Details of Faculty Achievements in 2022-23.

Sl. No.	Name of the Faculty/ Staff/students	Title of Award	Awarding body	Date of Award
1	Dr. Manoj Kumar	Best Researcher award	INSO	16/03/2023

Details of Students Achievement in 2022-23:

Sl. No.	Name of the students	Title of Award	Paper ID	Date of Award
1	Huirem Bharat Meitei	Best Paper award(FPGA Implementation of TRNG Architecture using ADPLL Base on Gated Clock Loop Filter	MCM122105	17 th - 18 th sept. 2022

Details of Awards/ Recognition received by Faculty/Staff/Students in 2022-23

Sl. No.	Name of the Faculty/ Staff/students	Awards/ Recognition	Awarding body	Date of Award
1	Dr. Ashish Ranjan	Delivering Expert Lecture	NIT Delhi	24/04/2023
2	Dr. Ashish Ranjan	Certificate of Appreciation	UEM Kolkata	01/02/2023

Details of contribution to the society:

1. Organized Science Exhibition
2. JNV school students LAB visits.
3. Students interaction program conducted

Steps take for Popularisation of Science and Technology among the Students of Manipur.

Sl. No.	Name of the Faculty	Purpose of visit	Place of Visit
1	Dr.Aheibam Dinamani Singh	(1) National Children's Science Congress (2) DDK Imphal Interview on 5G	(A) GUJCOST, Ahmedabad (B) DDK Imphal
2	Dr.Huirem Tarunkumar	Role Model for STEM	JNV Chandel, Manipur
3	Dr. L. Surajkumar	Resource Person on Information technology and Communication System for Youths	Thoubal Khangabok, Manipur

4.3 DEPARTMENT OF ELECTRICAL ENGINEERING

Head of Department

Dr. Benjamin A. Shimray

Brief Introduction of the Department

The Department of Electrical Engineering is established as one of the major departments of the National Institute of Technology Manipur (NITMN). NIT Manipur started its first session on 2nd August, 2010.

Since its inception in 2010, the Department of Electrical Engineering has been actively engaged in teaching and research in diverse fields of Electrical Engineering. The Department offers undergraduate (B.Tech) in Electrical Engineering, post graduate (M.Tech) in Power & Control and research (Ph.D) programmes.

Highlight of Research Activities

Control Systems & its application, Renewable energy, Energy planning, soft computing applications, cyber physical systems, Power System Dynamics and Control; Power Electronics and Drives, Signal, Image and Video Processing, electric vehicles,

Faculty Details (Regular):04

SN	Name of the faculty	Designation	Qualification (With last Institution)	Email
1	Dr. Benjamin A Shimray	Assistant Professor	Ph.D. (NIT Manipur)	benjaminshimray@gmail.com
2	Dr. Shuma Adhikari	Assistant Professor	Ph.D. (NIT Manipur)	mom_shu@yahoo.co.in
3	Dr. Kundan Kumar	Assistant Professor	Ph.D. (Univ. of Pavoda, Italy)	kundankumar@nitmanipur.ac.in
4	Dr. Manash Kumar Mishra	Assistant Professor	Ph.D (IIT, BHU)	Manashmishra.electrical@gmail.com

Faculty Details (Contractual):06

SN	Name of the faculty	Designation	Qualification	Email
1.	Dr. Ingudam Chitrassen Meitei	Asst. Professor	Ph.D. (NIT Arunachal Pradesh)	alwayschitrassen@gmail.com
2	Devakishore Phurailatpam	Lecturer	M.Tech	bungcha@gmail.com
3.	Lukram Dhanachandra Singh	Lecturer	M.Tech (pursuing Ph.D)	dhana.lukram0@gmail.com
4.	Simon Tongbram	Lecturer	M.Tech (pursuing Ph.D)	simontongbram@gmail.com
5.	Laishram Khumanleima Chanu	Lecturer	M.Tech (pursuing Ph.D)	khumanleimac@gmail.com
6	Rajkumari Malemnganbi Devi	Lecturer	M.Tech (pursuing Ph.D)	rajkumarimalemnganbi@gmail.com

Staff Details:04

SN	Name of the Staff	Designation	Qualification	Email
1	Paonam Shantibala Devi	Technical Assistant	M. Tech.	sarjoo.09@gmail.com
2	Anjali Chongtham	Technical Assistant	B.Tech	leechongtham@gmail.com
3	Linthoi RK	Multitasking	B.A SC.	Linthoirk9514@gmail.com
4	Chingangbam Rashpal Singh	Technician	ITI	Chingangbamrashpalsingh5@gmail.com

Teacher Trainees' Details: NIL

ACADEMIC ACTIVITIES:

Student enrolment

Number of Students (2022-23) in BTech/MTech/PhD

Program	1 st year	2 nd year	3 rd year	4 th year	Total
B.Tech.	36	31	23	24	114
M.Tech.	04	08	...	...	12

Ph.D Program 2022-23

	2022-2023
No.of full time	13
No.of part time	4
Total	17
Degree awarded during 2022-23	02

Research information

Sponsored Research Projects from Govt./Semi Govt

SN	Title of the project	Duration	Funding Agency	Amount in Lakh (Rs)	Name of PI/Co-PI
1	Tele Medicine Health pilot project for Kamjong District Manipur	1 year	TIFACT	8.0/-	Dr. Benjamin A Shimray (PI)
2	“Smart Energy Meter with IoT capabilities and localized power conditioning”	5 year	MeitY	109.5	Dr. Benjamin A Shimray (Co-PI)

Patent Details if any : NIL

Publications in Journals (April 2022-March 23)

Authors' names, Name of paper, Publisher, Volume (Issue), Pages, Year (SCI/SCIE/Scopus/Others – Specify)

Sl	Authors' names, Title of the paper, Name of the journal, Vol (issue), pages, years, SCI/Scopus/others
1	TSD Singh, Benjamin A Shimray , AB Singh, SN Meitei, “ Performance measurement of 5 kWp rooftop grid-connected SPV system in moderate climatic region of Imphal, Manipur, India ”, Energy for Sustainable Development, Energy for Sustainable Development, Volume-73, Pages 292-302, (2023), Elsevier (SCIE)
2	Bhushana Samyuel Neelam, Benjamin A Shimray , Improved network performance in CPS communication with distributed IPC mechanisms of recursive internetworking architecture (RINA)., Journal-International Journal of Internet Protocol Technology, Volume-16, Issue-1, Pages-68-74, (2023), Inderscience Publishers (SCOPUS)

3	Yumnam Shantikumar Singh, Ashish Ranjan, Shuma Adhikari & Benjamin A. Shimray ,” “A Modern VDCCTA Active Element and Its Electronic Application”, Journal of Circuits, Systems and Computers Vol. 32, No. 03, 2350053, (2023) (SCIE)
4	Yumnam Shantikumar Singh, Ashish Ranjan, Shuma Adhikari & Benjamin A. Shimray A Lossless Active Inductor Design Using Single ZC-VDCC: Grounded and Floating Mode, IETE Journal of Research, DOI: 10.1080/03772063.2022.2130828(2022) (SCIE)
5	Malemnganbi, Rajkumari, and Benjamin A. Shimray , An integrated multiple layer perceptron-genetic algorithm decision support system for photovoltaic power plant site selection- International Journal of Electrical and Computer Engineering, Vol. 12, No. 2, April (2022), pp. 1965~1972 DOI: 10.11591/ijece.v12i2.pp1965-1972(SCOPUS)
6	Neelam Samyuel Bhushana, Shimray A. Benjamin , Architecture, Ability, and Adaptability of Recursive Internetworking Architecture - A Review, Recent Advances in Computer Science and Communications (2022); 15(7) (SCOPUS)
7	Bappa Roy, Shuma Adhikari , Subir Datta, Samuel Lalngaihawma, SoumyaSamanta , Real-Time Simulation of a Wind-Solar-Battery Based Microgrid System, Journal of Electrical Engineering & Technology, Volume 18, Issue 3, Pages2087-2102, Publication date-26th October 2022. (SCIE)
8	Khaidem Bidyanath, Sanasam Dhanabanta Singh, Shuma Adhikari , Implementation of genetic and particle swarm optimization algorithm for voltage profile improvement and loss reduction using capacitors in 132 kV Manipur transmission system, Energy Reports, Volume 9, Supplement 1, March 2023, Pages 738-746, March 2023. (SCIE)
9	Bidyut Kumar Ghosh, Shuma Adhikari , Bijan Deb, Rittwick Mondal, Anindya Sundar Das, Soumyajyoti Kabi, Loitongbam Surajkumar Singh, Chiranjib Chakrabarti, Dipankar Biswas, Effect of Ag ₂ S on electrical conductivity and dielectric relaxation in Ag ₂ O-MoO ₃ -P ₂ O ₅ ionic glassy systems, Volume 597, Pages 121893, December 2022. (SCI)
10	R.R. Kumar, P. Devi, C.Chetri, A. Kumari, P.M. Saikia, R.K. Saket, K. Kumar , B.Khan, “Performance Analysis of Dual Stator Six-Phase Embedded-Pole Permanent Magnet Synchronous Motor for Electric Vehicle Application,” IET Electrical System in Transportation , Wiley Publisher, pp.1-13, Nov. 2022. DOI: 10.1049/els2.12063
11	M. K. Mishra and V. N. Lal, “A Multi-objective Control Strategy for Harmonic Current Mitigation with Enhanced LVRT Operation of a Grid-Tied PV System Without PLL Under Abnormal Grid Conditions,” IEEE Journal of Emerging and Selected Topics in Power Electronics , vol. 11, no. 2, pp. 2164-2177, April 2023.

Publications in Conferences (April 2022- March 2023)

Authors’ names, Name of paper, Name of the conference, Volume (Issue), Pages, Year (Scopus index/ Others – Specify)

Sl	Authors’ names, Title of the paper, Name of the conference, Vol (issue), pages, years, SCI/ Scopus indexed
1	Takhellambam Chingkheinganba, Ingudam Chitrashaen Meitei , Benjamin A Shimray Optimization of Hybrid Renewable Energy System using Homer-Pro in both Standalone and Grid systems., IEEE Calcutta Conference (CALCON), Pages233-237, 2022

2	Samuel Lalngaihawma, SubirDatta, Subhasish Deb, Sumana Das, Robert Singh, Shuma Adhikari , S Mayanglambam, ‘Load frequency control of a photovoltaic-biogas-bio biodiesel-battery based micro-grid system’, 2022 4th International Conference on Energy, Power and Environment (ICEPE), Pages 1-6, Publication date 2022/4/29. (SCOPUS)
3	L. K. Chanu and R. Pudur, “Real-Time Simulation of Frequency Control of 2.2 kW SEIG using Generalized Impedance Controller,” 2022 IEEE 2nd International Symposium on Sustainable Energy, Signal Processing and Cyber Security (iSSSC), pp. 1–6, Dec. 2022, doi: 10.1109/iSSSC56467.2022.10051306
4	K. Kumar , K.V.V.S.R. Chowdary, B. K. Nayak, andV. Mali, “ Performance Evaluation of Dynamic Wireless Charging System with the Speed of Electric Vehicles,” in Proc. ofIEEE Indian Council International conference (INDICON-2022),Kochi, India, 24-26 November, 2022, pp. 1-6.
5	K.V.V.S.R. Chowdaryand K. Kumar , “Assessment of Dynamic Wireless Charging System with the Variation in Mutual Inductance,”in Proc. ofIEEE Indian Council International conference(INDICON-2022), Kochi, India, 24-26 November, 2022, pp. 1-6.
6	K. Kumar and V. Badugu , “Reverse Mode Analysis of Coupled-Inductor Based Dual Active Bridge Converter for Electric Vehicles,”in Proc. ofIEEE Indian Council International conference(INDICON-2022),Kochi, India, 24-26 November, 2022, pp. 1-6.
7	V. Mali, B.Tripathi, K. Kumar , S. Dwivedi, and R.Behera, “Exploring various Topology using DC-DC Converter in Hybrid Energy Storage System for Electric Vehicles,”in Proc. ofIEEE Industrial Electronics Society Conf. (IECON-2022), 17-20, Oct. 2022, Brussels, Belgium, pp. 1-6
8	K. Kumar , V.Badugu, A. Devanshu, A. Kumar, T. R. Choudhury, “Power Loss Estimation of Isolated Coupled Inductor based Dual Active Bridge Converter using GaN Devices,” IEEE International Conference on Industrial Electronics: Developments & Applications (ICIDeA-2022), Bhubaneswar, 15-16 Oct. 2022, pp.242-247
9	K. Kumar , M. Sanasam, V Mali, S. K. Dwivedi, and R. K. Behera, “Analysis of Current in CCM-DCM Modes for Hybridization of Multiple Energy Sources for Electric Vehicles Charging,” in Proc. of IEEE International Conference on Computing, Power and Communication Technologies (GLOBCONPT-2022), September 23-25, 2022, New Delhi, India, pp. 1-6.
10	K. Kumar and V. K. Saxena, “LTspice Simulation Analysis for Loss Estimation of GaN MOS-FET based Class E Resonant Inverter,” in Proc. ofIEEE International Conference on Computing, Power and Communication Technologies (GLOBCONPT -2022), September 23-25, 2022, New Delhi, India, pp. 1-6.
11	K. Kumar and V.P. Srivastava, V. Mali, and A. Devanshu, “Modelling and Analysis of Three-Phase Charging System from Five-Phase Integrated Charger for Electric Vehicle Applications,” in Proc. ofInternational Conference on Sustainable Energy and Clean Technologies (IC-SECT-2022), September 2-4, 2022 at PDEU, Gandhinagar, Gujrat, India, pp.1-6.
12	K. Kumar and V. Badugu,” Analysis of Isolated DC-DC Coupled-Inductor Based Dual Active Bridge Converter for EV Charging Systems,” in Proc. ofIEEE International Conference on Sustainable Energy and Future Transportation (SeFeT-2022), 04th -06th Aug., 2022, GRIET, Hyderabad, India pp. 1-6.

Publications in Books/Book Chapters (April 2022- March 23)

Authors' names, Name of paper, Publisher's Name, Volume (Issue), Pages, Year (SCI/SCIE/Scopus/ Others – Specify)

Sl.	Authors' names, Title of the book/book chapter, Name of the publisher, Vol (issue), pages, years
1	Shaik, N., Shimray, B. (2023). Load Frequency Control in Three-Area Interconnected Power System Using PID Tuning Based on Artificial Bee Colony Optimization. In: Edwin Geo, V., Aloui, F. (eds) Energy and Exergy for Sustainable and Clean Environment, Volume 2. Green Energy and Technology. Springer, Singapore. https://doi.org/10.1007/978-981-16-8274-2_12
	Thiyam Vikas, Rajkumari Malemnganbi, Benjamin A Shimray , MLP-BP Based Optimal Ranking of Solar Power Plant Site., Publication date-2022/7/17,Source-Energy and Exergy for Sustainable and Clean Environment, Volume 1,Pages33-42,Publisher-Springer Nature Singapore
2	Irungbam, A.K., Meitei, I.C., Shimray, B.A. (2022). Planning and Design of an Optimal Hybrid Renewable Energy System for Porompat Area of Manipur in North East India. In: Edwin Geo, V., Aloui, F. (eds) Energy and Exergy for Sustainable and Clean Environment, Volume 1. Green Energy and Technology. Springer, Singapore. https://doi.org/10.1007/978-981-16-8278-0_27
3	Singh, Y.S., Ranjan, A., Adhikari, S., Shimray, B.A. (2023). A Tunable Resistorless Floating Inductance Simulator Using MO-DXCCTA. In: Mishra, B., Tiwari, M. (eds) VLSI, Microwave and Wireless Technologies. Lecture Notes in Electrical Engineering, vol 877. Springer, Singapore. https://doi.org/10.1007/978-981-19-0312-0_9
4	Singh, Y.S., Ranjan, A., Adhikari, S., Shimray, B.A. (2022). Lossless Grounded Resistorless Active Inductor Using FTFNTA, Proceedings of the 3rd International Conference on Communication, Devices and Computing. Springer, Singapore. https://doi.org/10.1007/978-981-16-9154-6_26
5	N. Rana, S. Banerjee, and K. Kumar , “High Gain Buck-Boost Converter for Solar Photovoltaic (PV) System,” in Proc. of the Springer book “DC-DC Converters for Future Renewable Energy Systems”, Book Series: Energy Systems in Electrical Engineering, Springer 2022.ISBN: 978-981-16-4388-0, https://www.springerprofessional.de/en/high-gain-buck-boost-converter-for-solar-photovoltaic-pv-system/19703246

Short Term Course/ Workshop/Seminar/ Conference Conducted by the Department:
NIL

Internship or Industrial Visits: NIL

Name of B-Tech students who graduated in 2022-23*

Sl. No.	Enrolment No.	Name of the Student	CPI
1	19104002	Khanrinchan Luithui Shimrei	7.56
2	19104003	Angothu Chitti Sravani	7.52
3	19104004	Kshetrimayum Pushpa Devi	8.93
4	19104005	Ankit Yadav	8.25
5	19104006	Laishram Venkat Singh	8.44
6	19104007	Badri Teja Aishwarya	7.75
7	19104008	Lisham Shahul	8.26

8	19104010	Longjam Somorjit Singh	7.89
9	19104011	Kattiri Akhil	7.15
10	19104012	Mohd Sartaj Ahmed Sheikh	7.81
11	19104013	Salam Imerson Singh	9.2
12	19104014	Naorem Rudra	8.2
13	19104015	Mohit Kumar	8.34
14	19104016	Pukhrambam Akash Singh	9.38
15	19104017	Nitish Kumar	8.36
16	19104018	S William Kom	7.71
17	19104019	Rahul Kumar	7.54
18	19104020	Sharninda Laishram	8.35
19	19104021	Ravindra Kumar Voonna	8.82
20	19104022	Shidarth Rajkumar	7.87
21	19104023	Saifatullah	8.01
22	19104024	V Kungsuanlian	8.59
23	19104025	Zingso Marchang	7.56
24	19104026	Dasari Yaditya Paul	7.41

Name of M.Tech students who graduated in 2022-23*

Sl. No.	Enrolment No.	Name of the student	CPI
1.	21204001	HORMI KASHUNG	9
2.	21204002	MARIA LOUKRAKAM	8.89
3.	21204003	KAMEI AMBROSE	8.82
4.	21204004	MAYANGLAMBAM SHARDALAKSHMI DEVI	8.68
5.	21204005	NGANGOIBA MAISNAM	9.34
6.	21204006	JOSHIBALA HEISNAM	9.16
7.	21204007	ORISON WAIKHOM	8.53
8.	21204009	KHUNDRAKAM SOLACE SINGH	8.16

Name of M-Tech Part Time students who graduated in 2022-23:NIL

Name of Ph.D. students who graduated in 2022-23

Sl.	Enrolment No	Student Name	Thesis Name	Name of the supervisor/Co-supervisor	Date of defense
1	17404003	SUMANT ANAND	Frequency Restoration of Networked Multi-Area Power System : An Event - Triggered Control Approach	Dr. Mrinal Kanti Sarkar	19th Sept. 2022

2	17404002	BADAL KUMAR	Load Frequency Control of Multisource Microgrid System Using AI Technique	Dr. Shuma Adhikari	9 th DEC 2022
3	18404002	BHUSHANA SAMYUEL N	Secure and Efficient SCADA Communication with Recursive Internet-working Architecture (RINA)	Dr. Benjamin A Shimray. ..	19 th DEC 2022

Name of GATE/NET qualified students in 2022-23

SN	Name of the student	GATE or NET	GATE marks	Gen/OBC/SC/ST
1	SALAM IMERSON SINGH	GATE	22.5	OBC

Name of the students (2022-23), who have been placed

SL. No	Name of the student	Enrolment No.	Name of the company/institution	Designation	Package
1	Salam Imerson Singh	19104013	Alstom	Full-Time GET	6.8 LPA
			SAMSUNG DISPLAY	Full-Time	10 LPA
2	Pukhrambam Akash Singh	19104016	Alstom	Full-Time GET	6.8 LPA
			SAMSUNG DISPLAY	Full-Time	10 LPA
3	RAVINDRA VOONNA	19104021	Deloitte	Intern + PPO Analyst	7.6 LPA
4	AKHIL KATTIRI	19104011	Deloitte	Intern + PPO Analyst	7.6 LPA
5	Mohit Kumar	19104015	Tata Elxi	Intern + PPO R&D Engineer	7 LPA
			SAMSUNG DISPLAY	Full-Time	10 LPA
6	Saifatullah	19104023	CGI	Full-Time	7.87 LPA
7	Nitishkumar	19104017	SAMSUNG DISPLAY	Full-Time	10 LPA

No. of students who have enrolled for higher studies (Foreign/National)

Sl. No	Name of the Student	Course/Programme	Name of the Institute	Country
1	Salam Athoibi Devi	Ph.D	IIT Guwahati	India
2	Malemnganba Sanasam	Ph.D	NIT Rourkela	India
3	Badugu Varshini	Ph.D	Texas A&M	US

Other Activities

Expert/Technical Talk/Conference organized/ contribution to the society etc.

1. **Dr. Kundan Kumar** delivered an expert talk in a Two-day Awareness-cum-Workshop Programme on “Electric Vehicles, Charging Infrastructure and Renewable Hybrid

Energy in North East India”, on a topic on **Dynamic Wireless Charging Systems for EVs**, Organized by CSIR-Indian Institute of Petroleum (CSIR-IIP), Dehradun CSIR-North East Institute of Science and Technology (CSIR-NEIST), City Convention Centre, Imphal, during 9-10th November, 2022.

2. **Dr. Kundan Kumar** delivered an expert talk in a three days GUJCOST sponsored short term training program (STTP) on “Electric Vehicles Technology” on a topic entitled **Renewable Energy Integration and Charging Infrastructure for EVs** organized by the Department of Electrical Engineering, School of Technology, Pandit Deendayal Energy University during 8th -10th April, 2022.
3. **Dr. Kundan Kumar** worked as **Organizing Secretary** for 1st International Conference on Sci/Tech. and Engineering (ICSTE-23), 17th -18th February 2023, NIT Manipur, India.
4. **Dr. Benjamin A Shimray, Dr. Ingudam Chitrasen Meitei and Mr. T. Simon** has served as reviewer of innovative ideas received under the INSPIRE Awards-MANAK for the year 2021-22

4.4 DEPARTMENT OF CIVIL ENGINEERING

Head of Department

Prof. Bakimchandra Oinam

Brief Introduction of the Department

The Department of Civil Engineering was established in the year 2013. It is a full-fledged academic department for emerging Civil Engineers. The Department provides outstanding teaching and research environment. The Department offers for Admission in 4 years B.Tech. course with an intake of 30 students. The Department has an objective to produce quality engineers to meet the ever-growing demand for technical manpower in the Civil Engineering arena. The Ministry of Human Resources Development India recognized the department and funded NIT Manipur.

Highlight of Research Activities

The faculties of Department of Civil Engg, NIT Manipur has been conducting sponsored project from Govt./Semi Govt such as DST, NECTAR, ISRO, SERB, PHRI etc from the year 2015 till date.

Faculty Details (Regular): 06

SN	Name of the faculty	Designation	Qualification (With last Institution)	Email
1.	Dr. P. Albino Kumar	Professor	PhD (IIT Guwahati)	albino@nitmanipur.ac.in
2.	Dr. Bakimchandra Oinam	Professor	PhD (Stuttgart University, Germany)	bakim@nitmanipur.ac.in
3.	Dr. Thiyam Tamphasana Devi	Associate Professor	PhD (IIT Guwahati)	tamphasana@nitmanipur.ac.in
4.	Dr. Ng. Romeji Singh	Associate Professor	PhD (IIT Roorkee)	romeji@nitmanipur.ac.in
5.	Dr. Adani Azhoni	Associate Professor	PhD (Cranfield University, UK)	azho@iitdalumni.com
6.	Dr. M. Sunil Singh	Assistant Professor	PhD (NIT Silchar)	mayengbamsunil5@gmail.com

7.	Dr. Khwairakpam Sachidananda	Assistant Professor	PhD (IIT Guwahati)	khsachidananda@gmail.com
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Faculty Details (Contractual): 03

SN	Name of the faculty	Designation	Qualification	Email
1.	Dr. Waikhom Victory	Lecturer	PhD	waikhomvictory@gmail.com
2.	Mr. Maisnam Nongthouba	Lecturer	Pursuing PhD	nongthouba@gmail.com
3.	Dr. Pipileima Sarungbam	Lecturer	PhD	spipileima@gmail.com

Non-Teaching Staff (Contractual): 05

SN	Name of the Staff	Designation	Qualification	Email
1.	Ingudam Bigyananda Singh	Technical Assistant	M.Tech	ibigyananda@gmail.com
2.	Koroungamba Laishram	Technical Assistant	Pursuing PhD	koroulai@gmail.com
3.	Plem Jesiada Devi	Technical Assistant	Pursuing M.Tech	jesiadapolem@gmail.com
4.	Nairoibam Bidyamani Chanu	Technical Assistant	Pursuing M.Tech	naoroibambidyamani@gmail.com
5.	Khongbantabam Jayalalita Devi	Technical Assistant	M.Tech	jayakhong@gmail.com
6.	Mr. Ayekpam Bijen Singh	Lab Attendant	Graduate	

Teacher Trainees' Details: 01

SN	Name of staff	Designation	Qualification	Email
1.	Mr. Nabajit Sarkar	Teacher Trainee	Pursuing PhD	nbjt17.11@gmail.com

Academic Activities

Student Enrollment (2022- 2023):

Name of the Course	1st Year	2nd year	3rd year	4th year	Total
B.Tech	35	32	25	28	120
M.Tech	19	14			33

Ph.D. Program:

Details	2022-23
No. of full time	26
No. of part time	05
Total	31
Degree awarded	03

Research Information

Sponsored Research projects from Govt. /Semi. Government Agencies (attached additional sheet giving detailed information):

Sl No.	Title of the Project (Principal Investigator/Focal)	Sanction Amount (Rs)/ Date/Period	Sponsoring Organization / Agency
1	Sedimentation Budgeting & Modelling of Thoubal River, Manipur (for Viable Sand Mining) (PI: Dr.NgangbamRomeji, Asst Professor)	99,94,340 /- 2023→	Water Resources Department (WRD), Govt. of Manipur under National Hydrology Project (NHP) via World Bank
2	Flood Early Warning Systems (FLEWS) Manipur# (PI: Dr.NgangbamRomeji, Asst Professor)	40,00,000 /- 2023→	Indian Space Research Organization (ISRO) – NESAC – North Eastern Council (NEC) Joint Venture
3	Bathymetry Profiling of Loktak Lake, Manipur (Project component of “Study of Temporal Dynamics of Loktak lake with Space based inputs”) (PI: Dr.NgangbamRomeji, Asst Professor)	5,00,000 /- 2023→	North Eastern Space Applications Centre (NESAC), ISRO Unit, Department of Space (DoS), Government of India, Meghalaya
4	Construction of Low Cost Water Treatment Plan based on roughing & Bio-sand filters for Lamsang Villages under, Imphal West (PI: Prof. P Albino kumar, Professor)	17,60,000 /- 2020→2023	North East Centre for Technology Application & Reach (NECTAR), Autonomous Body under the Department of Science & Technology (DST),
5	A geospatial based approach for the identification and assessment of watershed health condition in Loktak Lake, Manipur, India. (PI: Prof.(Dr.-Ing) Bakimchandra Oinam, Professor)	Rs. 35,36,082 2022→	SERB

Patent Details if any : NIL

Publication in Journals (2022-23)

1. Removal of Phenol from Biomedical Waste via an Adsorption Process, Arun Prasun, Anshuman Singh, Potsangbam Albino Kumar, Aftab Alam and Amit Kumar,(2023) Eng. Proc. 2023, 37, 30.
2. Vivek Laishram and Potsangbam Albino Kumar, "Treatment of landfill leachate by H₃PO₄ impregnated *Parkia Speciosa* (Petai) pods activated carbon: characterization, kinetics, thermodynamics and isotherms studies." Carbon Letters"(2023) 33, pages 245–260.
3. Victoria N, Romeji, Ng., and Singh, K.S. (2022)*. “Performance of calibrated SWAT hydrological model of partially-gauged Nambul river urbanized catchment in Manipur IHR, India”, Asia-Pacific Journal of Science and Technology (Asia Pac

- J. Sci. Technol.), APST-D-22-00083, Khon Kaen, Thailand, 40002. [*Accepted for Publication]
4. Nameirakpam Momo Singh and Thiyam Tamphasana Devi (2022). Assessment of land surface temperature and carbon sequestration using remotely sensed satellite data in the Imphal-West district, Manipur, India, *Journal of Earth System Science* (accepted for publication and in press)
 5. Kirpa Hirom and Thiyam Tamphasana Devi (2022). Application of Computational Fluid Dynamics in Sedimentation Tank Design and Its Recent Developments: a Review, *Water, Air & Soil Pollution, Springer Nature* 233, 22: 1-26. <https://doi.org/10.1007/s11270-021-05458-9>
 6. Khwairakpam Sachidananda, “Comparisons of Performance of Building Using Bright New And Old Rusted Rebar”, *Proceedings of 12th Structural Engineering Convention – An International Event (SEC 2022)* Available at <https://asps-journals.com/index.php/acp>; doi:10.38208/acp.v1.511.
 7. Khwairakpam Sachidananda 1, *, Konjengbam Darunkumar Singh 2 “Failure mechanisms and curvature radius effect in fixed ended flat oval LDSS slender column under axial compression” *Proceedings of 12th Structural Engineering Convention-An International Event (SEC 2022)* Available at <https://asps-journals.com/index.php/acp>, doi:10.38208/acp.v1.675.
 8. Victory, W. A review on the utilization of waste material in asphalt pavements. *Environ Sci Pollut Res* 29, 27279–27282 (2022). <https://doi.org/10.1007/s11356-021-18245-0>
 9. N. Bidyarani Chanu and Bakimchandra Oinam (2023). Water footprint perspective assessment toward food sustainability for the valley region of Manipur, India. *Current Science*.
 10. Anand V., Oinam B., and Wieprecht, S. (2022). Assessment and comparison of DEM generated using Cartosat-1 stereo pair data for hydrological application. *Journal of the Indian Society of Remote Sensing (SCIE)*. <https://doi.org/10.1007/s12524-022-01639-z>
 11. Robertson, N.; Oinam, B., (2023). Rice suitability mapping using the analytic hierarchy process approach in a river catchment. *Global J. Environ., Sci. Manage.*, 9(1): 1-16. DOI: 10.22034/gjesm.2023.01.
 12. Vicky Anand, Bakimchandra Oinam. (2022). Future projection and assessment of soil erosion and deposition by water in Manipur River basin using USPED model, *Geocarto International*, 1-15. <https://doi.org/10.1080/10106049.2022.2032385>
 13. Mk Raees, Thiyam Tamphasana Devi, Kirpa Hirom (2023). "Recent Developments on Application of Different Turbulence and Multiphase Models in Sedimentation Tank Modelling - A Review", *Water, Air & Soil Pollution, Springer Nature*, 234, 05. DOI:10.1007/s11270-022-06007-8
 14. Nameirakpam Momo Singh and Thiyam Tamphasana Devi (2022). “Assessment of land surface temperature and carbon sequestration using remotely sensed satellite data in the Imphal-West district, Manipur, India”, *Journal of Earth System Science, Springer Nature*, 131, 229. Kirpa Hirom and Thiyam Tamphasana Devi (2022). “Determining the optimum position and size of lamella packet in an industrial wastewater sedimentation tank: A computational fluid dynamics study”, *Water, Air & Soil Pollution, Springer Nature*, 233: 261. DOI:10.1007/s11270-022-05742-2
 15. Kirpa Hirom and Thiyam Tamphasana Devi (2022). “Application of Computational

Fluid Dynamics in Sedimentation Tank Design and Its Recent Developments: a Review”, Water, Air & Soil Pollution, Springer Nature, 233: 22. <https://doi.org/10.1007/s11270-021-05458-9>

16. Ningombam Bishwajit Singh, Thiyam Tamphasana Devi and Bimlesh Kumar (2022). "The local scour around bridge piers—a review of remedial techniques", ISH Journal of Hydraulic Engineering, Taylor & Francis, 28:sup1, 527-540. DOI: 10.1080/09715010.2020.1752830
17. Nameirakpam Momo Singh and Thiyam Tamphasana Devi (2022). "Regionalization methods in ungauged catchments for flow prediction: review and its recent developments", Arabian Journal of Geosciences, 15:1019, Springer Nature.
18. Arun Kumar, M. Sunil Singh, "Back Analysis of Rock Support and Final-Lining Recommendation for Rock Class C1 of a Tunnel," International Journal of Engineering Trends and Technology, vol. 71, no. 1, pp. 79-93, 2023. Crossref, <https://doi.org/10.14445/22315381/IJETT-V71I1P208>

Publication in Conferences (2022-23) : 20

1. Ngangbam ROMEJI, Mukesh Kumar YADAV, Vicky ANAND, Asanatomba SAPAM, Sweetie YUMNAM, and Irom ROYAL. (2022). “Hydraulic Modelling of Sediment Transport for Environmentally Viable Sand–Gravel Mining in Thoubal River, Manipur IHR”*, Olympic of Civil Engineering–CECAR9 (Civil Engineering Conference in the Asian Region), International Conference of ACECC (Asian Civil Engineering Coordinating Council), ICE(I), September 21 – 23, 2022, Goa, India. [*paper accepted]
2. Victoria Ningthoujam, Romeji, Ng., and L. Bilashini Chanu (2022). “Sediment Yield in an Urbanized River Basin: A Case Study of Nambul River, Manipur, India”, Proceedings, 39th IAHR World Congress (COPE Peer reviewed, SCOPUS indexed), 19→24 June, 2022, Granada, Spain, pp.846–853.
3. Romeji, Ng., Mukesh Kumar Yadav, Gunadas Singh Keisam, Jayalaxmi Ngasepam and KhuraijamSusilchandra (2022). “Adaptive Hydro-Climatic Analysis for Restoration of a Biodiversity Hot Spot Ungauged River System of Manipur IHR, India”, Proceedings, 39th IAHR World Congress (COPE Peer reviewed, SCOPUS indexed), 19→24 June, 2022, Granada, Spain pp.1965–1973.
4. Kumar, R., Singh, M.S. (2022). Effect of Na₂O Content on Ground Granulated Blast Furnace Slag Incorporated Fly Ash-Based Geopolymer Pastes. In: Verma, P., Samuel, O.D., Verma, T.N., Dwivedi, G. (eds) Advancement in Materials, Manufacturing and Energy Engineering, Vol. II. Lecture Notes in Mechanical Engineering. Springer, Singapore.
5. Kumar, R., Singh, M.S. (2022). Effect of Blast-Furnace Slag on Geopolymer Paste accepted in the 1st International Conference on Contemporary Innovations in Mechanical Engineering (CIME) 2022 for publication in AIP Conference Proceedings indexed in Web of Science.
6. Koroungamba Laishram, P. Albino Kumar and ThiyamTamphasana Devi (2022). Effect of channel slope and roughness on hydraulic jump in open channel flow, IOP Conf. Series: Earth and Environmental Science, 958: 012014. IOP Publishing.
7. <https://doi.org/10.1088/1755-1315/958/1/012014>
8. NameirakpamMomo Singh and ThiyamTamphasana Devi (2022).International Conference on Technological Interventions for Sustainability organized by Motilal

Nehru National Institute of Technology Allahabad, Prayagraj-211004 (India) and Universiti Sains Malaysia, April 14-16, 2022, Allahabad. pp. 106

9. Sachidananda Kh (2022). A study on square and rectangular hollow steel section subjected to torsion, 2nd International Conference on emerging global trends in engineering and technology (EGTET), 21-23 April 2022.
10. Sarungbam Pipileima, Potsangbam Albino Kumar and Anuj Kumar Purwar, "Adsorption of Fluoride onto PANI-Cl jute fiber-desinging hogher flow rate and initial concentration column reactor from batch reactor." ATIPC, 21st - 3rd December, 2022, IEST Shipur.
11. Lairenlakpam Helena and Potsangbam Albino Kumar, "Adsorption of methylene blue onto activated carbon developed from phumdi biomass." ATIPC, 21st - 23rd Dec, 2022, IEST, Shipur.
12. Reenarani Wairokpm and Potsangbam Albino Kumar, "Assessment and treatment of Iron from Industrial wastewater using activated carbon derived from Parkia Speciosa pod." ATIPC, 21st - 23rd Dec, 2022.
13. Sarkar, N., Dasgupta, K. (2023). Importance of Epistemic Uncertainty on Seismic Analysis of RC Wall-Frame Buildings. In: Shrikhande, M., Agarwal, P., Kumar, P.C.A. (eds) Proceedings of 17th Symposium on Earthquake Engineering (Vol. 2). SEE 2022. Lecture Notes in Civil Engineering, vol 330. Springer, Singapore. https://doi.org/10.1007/978-981-99-1604-7_46 4.
14. Sarkar, N., Dasgupta, K. (2022). Influence of Structural Parameters on the Buckling of Longitudinal Steel Bar in RC Structural Wall. Proceedings of 12th Structural Engineering Convention - An International Event (SEC 2022). <https://doi.org/10.38208/acp.v1.564>
15. Oinam, B., Anand, V., Sana, R.N., and Wieprecht, S. (2023). Satellite remote sensing based approach for water quality monitoring in a data sparse region, EGU General Assembly 2023, Vienna, Austria, 24–28 Apr 2023, EGU23-15535, <https://doi.org/10.5194/egusphere-egu23-15535>, 2023.
16. Oinam B., Anand V. (2023). Public healthcare infrastructure coverage and scale-up analysis using geospatial techniques. National conference-Transforming India-Risk to Resilience, New Delhi, India, 15-17 March 2023.
17. Oinam B., Anand V., Sana NR. (2023). Hydrological response of Loktak Lake catchment based on ECHAM-GCM using SWAT model., ICSTE-23, NIT Manipur, Imphal, 17-18 February 2023.
18. Oinam B., Anand V., Singh SK. (2022). Calibration of hydrological model in data-scarce region using rating curves based on spatial proximity approach. NZHS-MSNZ 2022 Joint conference, Dunedin, New Zealand, 6-9 December 2022.
19. Bidyarani, N.C., Oinam, B. (2022). Water footprint estimation of kharif paddy by using remote sensing and agro- meteorological techniques: a case study of Bishnupur district Manipur, India. International conference on Geospatial pathways and Big data analytics in Natural Resources Application and Climate change. 16-17 June 2022.
20. Robertson, N., Oinam, B. (2022). Estimation of land surface temperature from Landsat-8 TIRS using NDVI based emissivity method in Imphal-Iril river sub-catchment, Manipur, India. International conference on Geospatial pathways and Big data analytics in Natural Resources Application and Climate change. 16-17 June 2022.
21. Devi, P.S., Oinam, B. (2022). Hydrological output performance comparison of rural and urban sub-catchment of Nambul river basin. International conference on Geospatial

- pathways and Big data analytics in Natural Resources Application and Climate change. 16-17 June 2022.
22. Chongtham, S., Oinam, B. (2022). Assessment of soil loss due to wind-based erosion in Manipur River sub-catchment. International conference on Geospatial pathways and Big data analytics in Natural Resources Application and Climate change. 16-17 June 2022.
 23. Sana, R.K., Oinam, B., Anand, V. (2022). Analyzing the effect of LS-factor obtained from high resolution satellite imagery on soil erosion and deposition. International conference on Geospatial pathways and Big data analytics in Natural Resources Application and Climate change. 16-17 June 2022.
 24. Anand V., Oinam B., and Wieprecht, S. (2022). Multiple techniques for calibration and validation of SWAT model in an ungauged catchment in Inner Himalayan Ranges., EGU General Assembly 2022, Vienna, Austria, 23–27 May 2022, EGU22-11070, <https://doi.org/10.5194/egusphere-egu22-11070>, 2022.

Publication in books/ book chapters (2022-23): 7

1. Anand Vicky, Oinam Bakimchandra. (2022). “Remote Sensing and GIS in Spatial Monitoring of the Wetlands: A Case Study of Loktak Lake Catchment, India.” Application of Remote Sensing and GIS in Natural Resources and Built Infrastructure Management. Eds. Vijay P. Singh, Shalini Yadava, Krishma Kumar Yadav, Gerald Augusto Corzo Perez, Francisco Munoz-Arriol, Ram Narayan Yadava, Springer. <https://doi.org/10.1007/978-3-031-14096-9> (Scopus)
2. Anand Vicky, Oinam Bakimchandra. (2022) “Modeling the potential impact of land use land cover change on the hydrology of Himalayan River Basin: A case study of Manipur River, India.” Handbook of Himalayan Ecosystems and Sustainability, Volume 2: Spatio-Temporal Monitoring of Water Resources and Climate. Eds. Bikash Ranjan Parida, A.C. Pandey, M.D. Behera, Navneet Kumar, Taylor & Francis. <https://www.routledge.com/Handbook-of-Himalayan-Ecosystems-and-Sustainability-Volume-2-Spatio-Temporal/Parida-Pandey-Behera-Kumar/p/book/9781032203157#> (Scopus).
3. Kirpa Hirom, Mk Raeesh and Thiyam Tamphasana Devi (2023). “CFD study on finding optimum number of inclined plates and settling efficiency in a novel sedimentation tank (lamella clarifiers) of wastewater treatment unit”, Fluid Mechanics and Fluid Power (Vol. 1), Lecture Notes in Mechanical Engineering (eds. Bhattacharyya and Chattopadhyay), Springer, Singapore, Chapter 19, pp.111 - 116. DOI:10.1007/978-981-19-7055-9_19
4. Moirangthem Siman Singh and Thiyam Tamphasana Devi (2022). “Field Study on Soil Organic Matter Content in Inundation Areas of Langol Catchment by Loss-On-Ignition” Method”, River Dynamics and Flood Hazards: Studies on Risk and Mitigation, Springer Nature, Chapter 21, pp. 385–409. DOI:10.1007/978-981-19-7100-6_21
5. Sochanphi Kashung and Thiyam Tamphasana Devi (2022). “Field Measurement of Accumulated Surface Water and Infiltration Depth in a Flood-Prone Langol Catchment of Manipur Valley Region”, River Dynamics and Flood Hazards: Studies on Risk and Mitigation, Springer Nature, Chapter 4, pp. 59–83. DOI:10.1007/978-981-19-7100-6_4
6. Nameirakpam Momo Singh and Thiyam Tamphasana Devi (2022). “Identification of Drought Prone Zone using AHP tool and Weighted Overlay Method in a Low Lying

- Area”, Lecture Notes in Civil Engineering, Springer Nature, Chapter 19, Vol.292 pp.245-258. DOI:10.1007/978-981-19-5783-3_19
7. Gopal Krishan, Purnabha Dasgupta, Jay Prakash, Andrew Mackenzie, Thiyam Tamphasana Devi (2022). “Groundwater Salinity- Impacts and Possible Remedial Measures and Management Solution”, Transforming Coastal Zone for Sustainable Food and Income Security (eds. T.D. Lama et al.) Springer Nature, Chapter 52, pp. 697-703. https://doi.org/10.1007/978-3-030-95618-9_52
 8. Nameirakpam Momo Singh, Thronlem Winkangshu, Thiyam Tamphasana Devi (2022) - “Comparison of Simple and Modified SCS-CN in Runoff Prediction in a Highly Flood Prone Zone”, Sustainable Water Resources Management, Advances in Sustainability Science and Technology, (eds. R.K Bhattacharjya et al.), Springer Nature, Singapore, pp.133 – 143.
 9. Yumnam Lanchenba Singh, Nameirakpam Momo Singh, Thiyam Tamphasana Devi – (2022). “Estimation of soil hydraulic properties in flood prone zone of NIT Manipur Campus using Mini Disc Infiltrometer”, Innovative Trends in Hydrological and Environmental Systems, Lecture Notes in Civil Engineering (eds. A.K Dikshit et al.), Springer Nature, Singapore, vol.234, pp.65 – 79. https://doi.org/10.1007/978-981-19-0304-5_6.
 10. Koroungamba Laishram, Thiyam Tamphasana Devi, Ningombam Bishwajit Singh (2022)– “Experimental comparison of Hydraulic Jump characteristics & Energy Dissipation between Sluice gate and Radial gate”, Innovative Trends in Hydrological and Environmental Systems , Lecture Notes in Civil Engineering (eds. A.K Dikshit et al.), Springer Nature, Singapore, vol.234, pp.207 – 218. https://doi.org/10.1007/978-981-19-0304-5_16
 11. Irungbam Jina, Nameirakpam Momo Singh, Thiyam Tamphasana Devi (2022) – “Determination of Infiltration Rate in Imphal West District, Manipur: Field study”, Innovative Trends in Hydrological and Environmental Systems, Lecture Notes in Civil Engineering (eds. A.K Dikshit et al.), Springer Nature, Singapore, vol.234, pp.81 – 93. https://doi.org/10.1007/978-981-19-0304-5_7
 12. Krison Thokchom Singh, Nameirakpam Momo Singh, Thiyam Tamphasana Devi (2022) – “A remote sensing, GIS based study on LULC change detection by different methods of classifiers on Landsat data”, Innovative Trends in Hydrological and Environmental Systems, Lecture Notes in Civil Engineering (eds. A.K Dikshit et al.), Springer Nature, Singapore, vol.234, pp.107 – 117. https://doi.org/10.1007/978-981-19-0304-5_9
 13. Pradyumna Kumar Behera, Thiyam Tampasana Devi (2022) - “Study on Impact of Urbanization by SWAT MODEL in Iril River, North EAST India”, Hydrological Modelling, Water Science and Technology Library (eds. Ramakar Jha et al.), Springer Nature (USA), vol.109, pp.385 - 393. https://doi.org/10.1007/978-3-030-81358-1_29

Short Term Course/ Workshop/Seminar/ Conference Conducted by the Department:

1. Consultation Workshop & Stakeholders Interaction Meet on “State Action Plan on Climate Change of Manipur IHR (SAPCC) Phase-II on Water Resources”, on Tuesday 23rd November, 2021, Sponsored by: Directorate of Environment & Climate Change, Govt of Manipur.
2. Workshop under “Unnat Bharat Abhiyan (UBA)”, at Chandel, Chandel district, Manipur, 01/2022.

3. Workshop under “Unnat Bharat Abhiyan (UBA)”, at Tamenglong, Tamenglong district, Manipur, 9th April, 2022.
4. One week short term course on “Basic Concept of Structural Design & Hands On Training Session For Design Softwares”. October 11–15th 2021.
5. Organized a Five days short term course under national Education Policy on the topic “Technical writing in research & funding opportunities” organized by Department of Civil Engineering, NIT Manipur during October 4-8, 2021
6. Organized a Five days short term course under National Education Policy on the topic “Basic Civil Engineering Laboratory Experiments and its Opportunities in Research” organized by Department of Civil Engineering, NIT Manipur during 23 – 27 August 2021

Internship or Industrial Visits:

1. Industrial visit of Civil Dept students at National Sports University, Koutruk on 3 rd Dec 2022.
2. Industrial visit of NIT Manipur student at Takyel Industrial Estate on 9 th May 2022.

Name of B.Tech students who graduated in 2022-23: 28

Sl No.	Enrolment	Name	CPI
1	19101001	ANIL KUMAR YADAV	7.53
2	19101002	ANGOM AMARJIT SINGH	8.5
3	19101003	ARPIT PRIYADARSHI	8.77
4	19101004	BIDYANANDA LAISHRAM	7.83
5	19101005	DASARI YUVARAJ	7.71
6	19101006	JOICY LAMNEICHING HAOKIP	8.11
7	19101007	GOWRIPATNAM SHYAM KUMAR	7.53
8	19101008	KEISHAM YOIHENBI CHANU	8.58
9	19101009	PRAVIN KUMAR	7.91
10	19101010	Khwairakpam Khoimu Singh	8.94
11	19101011	PREM RANJAN KUMAR	7.93
12	19101012	LINTHOI DEVI TEKCHAM	7.79
13	19101013	PRIYAMVAD JHA	8.19
14	19101014	LINTHOINGANBI HAObIJAM	7.99
15	19101015	RAPUR SASANK SAI	7.75
16	19101016	NG THINGREIPAM	8.08
17	19101017	SHAIK RASHEED	7.53
18	19101018	OBEROI KABRAMBAM	8.66
19	19101019	TARIKA	7.53
20	19101020	OLYMPIA DEVI GURUMAYUM	8.33
21	19101021	DINESH CHANAM	8.68
22	19101022	Sanabam Ishorchandra Singh	8.34

Sl No.	Enrolment	Name	CPI
23	19101023	VELEPARAMPIL LIMIN	8.14
24	19101024	SIDDHARTH CHANAM	9.04
25	19101025	T.Amazon Jangjalal Haokip	7.13
26	19101026	THOUNGAMBA KSHETRIMAYUM	9.14
27	19101027	TONGSIN CHANGHMAN	8.49
28	19101028	Wungramyo Van Yuin Bou	8.52

Name of MTech students who graduated in 2022-2023: 14

Sl No.	Enrolment No.	Name	CPI
1	21201001	PRASHANT KUMAR	8.42
2	21201002	NAMEIRAKPAM KUMARJIT SINGH	9.15
3	21201003	Kaushik Das	8.11
4	21201004	LANNGAMBA SALAM	8.68
5	21201005	GADHA S KUMAR	9.36
6	21201006	Sweety Yumnam	8.75
7	21201007	SHIVANANDA TAKHELLAMBAM	8.57
8	21201008	SOMAYO VARAM	7.7
9	21201009	ASANATOMBA SAPAM	8.08
10	21201010	Haobam Bidyapati	8.23
11	21201012	DENISH OKRAM	8.75
12	21201013	Victor Thokchom	8.83
13	21201014	Jelvis Ayekpam	8.32
14	21201015	Sandhip Khundrakpam	8.42

Name of PhD students who graduated in 2022-23

Sl. No	Enrollment No.	Name	Thesis Name	Name of Supervisor/co-Supervisor	Date of Defence
1.	16PCE004	Malemnganbi Lourembam Chanu	"GIS-based landslide susceptibility assessment and modeling the probability of occurrences of landslides in Manipur, India."	Prof. Bakimchandra Oinam	01/10/ 2022
2	15PCE002	Sarungbam Pipileima	Defluoridization of drinking water by adsorbent chloride doped Polyaniline synthesis on the surface of Jute Fibre.	Prof P. Albino Kumar	(06/03/2023)
3	16401002	Vivek Laishram	Synthesis of activated carbon derived from low-cost agricultural residues – Parkia Speciosa (Petai) pods and Corncob for treatment of leachate from landfill site of Lamdeng Solid Waste Management Plant, Manipur.	Prof P. Albino Kumar	(17/02/2023)
4	17401002	Soibam Sangeeta	Synthesis of Agricultural by products based Activated Carbon for Chromium Adsorption from streams of Phangrei Village, Ukhrul, Manipur	Prof P. Albino Kumar	(29/08/2022)
5	17401001	Nameirakpam Momo	Hydrological modelling and assessment on land surface temperature, carbon stock & Sequestration: A GIS study in Imphal-West, Manipur, India	Dr. Th. Tamphasana	(27/09/2022)

Name of GATE/NET qualified students who graduated in 2022-23:

Sl.No.	Name of the student	GATE/NET	Percentile in GATE	Category
1	Arpit Priyadarshi	GATE (Geomatics)	540	SC
2	Arpit Priyadarshi	GATE (Civil)	521	SC
3	Thoungamba kshetri-mayum	GATE (Civil)	323	OBC
4	Angom Amrajit Singh	GATE (Civil)	319	SC

5	Khwairakpam Khoimu singh	GATE (Civil)	308	SC
6	Ngalung Thingreipam	GATE (Civil)	402	ST
7	Siddarth Chanam	GATE (Civil)	386	OBC

Name of the students who have been enrolled for higher studies (Foreign/National):

Sl. No.	Name of the student	Course/Programme	Name of the Institute	Country
1	Vicky Anand	PhD Sandwich Program	University of Stuttgart	Germany
2	Marina Langhu	PhD Program	University of Tokyo	Japan
3	Arpit Priyadarshi	MTech	IIT Delhi	India
4	Thoungamba kshetri-mayum	MTech	MNIT Jaipur	India
5	Angom Amrajit Singh	MTech	IIT guwahati	India
6	Khwairakpam Khoimu singh	MTech	MNIT jaipur	India
7	Ngalung Thingreipam	MTech	IIT Madras	India
8	Siddarth Chanam	MTech	IIT Tirupati	India

Other Activities:

- Details of NEP Activity conducted by the Department in 2022-23:
- Details of faculty Achievement in 2022-23:
- Details of Students Achievement in 2022-23:
 - Mr. Vicky Anand was awarded best paper award at National conference-Transforming India-Risk to Resilience, New Delhi, India, 15-17 March 2023 for the topic Public healthcare infrastructure coverage and scale-up analysis using geospatial techniques.
- Details of Awards/Recognition received by Faculty/Staff/Students in 2022-23:
 - Mr. Vicky Anand was awarded prestigious the DAAD scholarship in the year 2023 under PhD sandwich program.
- Details of contribution to the society:
- Steps taken for popularization of Science and Technology among the students of Manipur

Any other information:

4.5 DEPARTMENT OF MECHANICAL ENGINEERING

Head of Department

Dr. Anil Kumar Birru

Brief Introduction of the Department

With the aim of catering to the need of the nation in the field of technological advancement, the Department of Mechanical Engineering was established in the year 2013. The department is committed to the development of humankind through scientific and intellectual knowledge. Through reformation and mixing of various culture, race and ethnicity, the department seeks to develop a state of art learning environment for its Undergraduate, Postgraduate and PhD scholars. The mechanical engineering department enjoys the company of highly qualified faculties and state of the art laboratories to foster the need of B. Tech, M. Tech. students and PhD researchers. Several government agencies have sponsored various projects to the department enhancing the academic and research capabilities. Over the years, the department has developed a world-class infrastructure for the study of Thermal Fluid Science, Manufacturing Science, and Design Engineering. The Department offers admission to 4 years B.Tech. Course, 2 years M.Tech course in Thermal & Fluids Engineering and Ph.D Programme.

Highlight of Research Activities

Advanced Machining Processes, Metal Casting, Optimization Technique, Natural Composites, Thermal Engineering, Fuels and combustion, Biodiesel, Biomedical Engineering, CFD, Vibration, Rotor Dynamics, Faults identification and Applications of Active Magnetic Bearings (AMBs) in Rotor System, Foil Bearings.

Faculty Details (Regular): 05

Sl.No.	Name of thaculty	Designation	Qualification	Email
1.	Dr.Rajesh KumarBhushan	Professor	Ph.D.(ShriMata Vaish-noDeviUniversity, Katar, J&K)	rkbnitm@gmail.com
2.	Dr.AnilKumar-Birru	Associate Professor	Ph.D. (IITRoorkee)	anilbirru@gmail.com
3	Dr.Dushyant Singh	Associate Professor	PhD (IIT Delhi)	
4	Dr. HuiремNeer-anjanSingh	AssistantProfessor	Ph.D. (NITDurgapur)	nrjan.h@gmail.com
5	Dr.SabindraK-achhap	Assistant Professor	Ph.D. (NITPatna)	sabindra.05@gmail.com
6	Dr. PrabhatKumar	AssistantProfessor	Ph.D.(IITGuwahati)	ysprabhat.pamho@gmail.com

Faculty Details (Contractual): 03

Sl. No.	Nameofthe Faculty	Designation	Qualification (with lastInstitution)	Email
1.	Dr.Khundrakpam-NimoSingh	AssistantPro-fessor	Ph.D. (IKG PTU)	nimspn@gmail.com

2.	Dr.MaibamBindyaDevi	AssistantProfessor	Ph.D.(NIT Manipur)	maibambindya@gmail.com
3.	Dr. Thokchom-SubhaschandraSingh	AssistantProfessor	Ph.D.(NIT Manipur)	th.subhas143@gmail.com

Non-Teaching Staff (Contractual): 06

Sl. No.	Name of the Staff	Designation	Qualification	Email
1.	Mr. Laishram Birjit Singh	Technical Assistant	Pursuing PhD (NIT Manipur)	birjitlai@gmail.com
2.	Mrs. Thiyam Lakshmi Devi	Technical Assistant	M. Tech. Thermal&Fluids Engineering (NIT Manipur)	laxmidevithiyam@gmail.com
3.	Mr. Oinam Adeep Meitei	Technical Assistant	M. Tech Pursuing	adeepoinam@gmail.com
4.	Mr. Takhellambam Satyajit Singh	Technical Assistant	PhD Pursuing (NIT Manipur)	satyajitsingh558@gmail.com
5.	Mr. Hidangmayum Manorajan Sharma	Lab. Attendant	Diploma in Tools & Die Making (NTTC Nagaland)	bungobi.sharma@gmail.com
6.	Mr. Thokchom Kamaljit Singh	Lab. Attendant	ITI Course (Govt. ITI Takyel)	kamaljitthokchom39@gmail.com

Trainee Teachers: 01

Sl. No.	Name of the Faculty	Designation	Qualification(with last Institution)	Email
1.	Mr. Ashutosh-Kumar Singh	Trainee Teacher	Ph.D.(IIT Guwahati)	ashutosh317singh@gmail.com

ACADEMIC ACTIVITIES

1. Student Enrolment

Program	1 st Year	2 nd Year	3 rd Year	4 th Year	Total
B.Tech.	35	27	24	23	109
M.Tech.	3	5	-	-	08

PhD Programme

	2022-23
No. of Full Time	40
Part Time	00
Total	40
Degree awarded during 2022-23	02

Research Information

Sponsored Research Projects from Govt./Semi Govt. - NIL

Patent Details, if any:

1. Anil Kumar Birru, “Analysis of K-wire and Tension Band wire under various material of Femur Bone” –German Patent Granted-202023100795, IPC: G09B 23/30 dated 29-03-2023

Publication-in Journals (April 2022 –March 2023)

Authors names, Title of the paper, Name of the journal, Vol (issue), Pages, Years, SCI/SCOPUS/ Others

1. Prabhat Kumar and Rajiv Tiwari “A Review: Multiplicative Faults and Model based Condition Monitoring Strategies for Fault Diagnosis in Rotary Machines”, Journal of the Brazilian Society of Mechanical Sciences and Engineering, 45(5), p.282, 2023, Springer, IF - 2.361, SCI.
2. Rajiv Tiwari and Prabhat Kumar “An Innovative Virtual Trial Misalignment Approach for Identification of Unbalance, Sensor and Active Magnetic Bearing Misalignment along with its Stiffness Parameters in a Magnetically Levitated Flexible Rotor System”, Mechanical Systems and Signal Processing, 167, p. 108540, 2022, Elsevier, IF - 8.934, SCI.
3. **Ashutosh Kumar Singh**, Kuldeep Singh, Dushyant Singh & Niranjana Sahoo "Experimental and numerical analysis of film cooling performance of a corrugated surface", *Experimental Heat Transfer* (2022), DOI: 10.1080/08916152.2022.2126031. (SCI)
4. **Ashutosh Kumar Singh**, Kuldeep Singh, Dushyant Singh, and Niranjana Sahoo. "Experimental and Numerical Study of the Effect of Double Row Slot Injection Locations on Film Cooling Performance of a Corrugated Surface." *Experimental Heat Transfer* (2023): 1-27. <https://doi.org/10.1080/08916152.2023.2204338>. (SCI)
5. **Ashutosh Kumar Singh**, Saurabh Kumar, Kuldeep Singh (2023)"Experimental and Numerical Study on the Combined Jet Impingement and Film Cooling of an Aero-Engine AfterburnerSection", *Aerospace* 2023, 10(7), 589; <https://doi.org/10.3390/aerospace10070589>.(SCI)
6. Tourangbam Rahul Singh, **Thokchom Subhaschandra Singh**, Tikendra Nath Verma, Prerana Nashine, Upendra Rajak. Feasibility study of synthesized carbon as catalyst in biodiesel production. Journal of Thermal Engineering. Vol. 8, No. 6, pp. 798–804, November 2022. (SCOPUS)

7. UpendraRajak, **Thokchom Subhaschandra Singh**, Tikendra Nath Verma, Prem Kumar Chaurasiya, Saboor Shaik, Asid Afzal, Erdem Cuce, Ali A Rajhi, C. Ahamed Saleel. Experimental and parametric studies on the effect of waste cooking oil methyl ester with diesel fuel in compression ignition engine. Volume 53, Part C, October 2022, 102705. (SCI)
8. Paras Gupta, Upendra Rajak, Tikendra Nath Verma, Manoj Arya, **Thokchom Subhaschandra Singh**. Impact of fuel injection pressure on the common rail direct fuel injection engine powered by microalgae, kapok oil, and soybean biodiesel blend. Volume 194, April 2023, 116332. (SCI)
9. A. Sibio Anthony, **H. N. Singh**, and T. N. Verma, "Computation of turbulent natural convection in an enclosure with differential flux models," *Int. J. Heat Mass Transf.*, vol. 202, no. 123659, p. 123659, 2023. SCI
10. **Rajesh Kumar Bhushan**, [Effect of SiC particle size and weight percentage on power consumption during turning of AA7075/SiC composite](https://doi.org/10.1016/j.jcomc.2022.100270), Composites Part C, ISSN: 2666-6820, Vol 8, pp 1-18 Apr 2022. <https://doi.org/10.1016/j.jcomc.2022.100270>, (SCIE)
11. **Rajesh Kumar Bhushan**, Quantification of flank and crater wear in turning of AA7075/SiC Composite, *Advances in Materials and Processing Technologies*, Sep2022, ISSN: 2374-0698, **Taylor & Francis**, Impact factor **4.73**, pp1-16. SCI,
12. **Rajesh Kumar Bhushan**, GA Approach for Optimization of Parameters in Machining Al Alloy SiC Particle Composite for Minimum Cutting force, *Journal of Alloys and Metallurgical Systems*, Vol 1, pp 1-23, ISSN:2949-9178 (2023). (SCI)
13. K.S. Pulisheru, **A.K. Birru**, U.S. Dixit, Effect of FeNb on microstructure and mechanical properties of Al-Cu-Ni alloy, *Mater. Res. Express*. 9 (2022) 1–15. DOI: <https://doi.org/10.1088/2053-1591/ac7fe0>. (SCIE)
14. K.S. Pulisheru, P.K. Bannaravuri, B.R. Golla, **A.K. Birru**, Wear and corrosion behaviour of electromagnetic stir casted Al-5Cu-2Ni/(0-5 wt.%) FeNb alloy composites, *Trans. Indian Inst. Met.* (2023) Accepted manuscript (SCIE)
15. K.S. Pulisheru, P.K. Bannaravuri, K.C. Apparao, **A.K. Birru**, Comparative Study on Metallography and Mechanical Properties of Al – Cu – Ni / FeNb Composites Fabricated by Electromagnetic Stir Casting Processes via Sand and Metal Mold System, *J. Inst. Eng. Ser. D*. (2023) 1–11. DOI: <https://doi.org/10.1007/s40033-023-00519-1>. (SCOPUS)
16. Rosang Pongen, **Anil Kumar Birru**, P Parthiban, [Optimal design of die casting process parameters of A713 cast alloy with grain refinement by using genetic algorithm approach for automobile industries](https://doi.org/10.1504/IJHVS.2022.125309), *International Journal of Heavy Vehicle Systems*, Vol.29., pp 197- 211, <https://doi.org/10.1504/IJHVS.2022.125309>, (SCIE)
17. P Vicky Kumar, **Anil Kumar Birru**, Nelson Muthu, Evaluation of Zr, Ni-Cr, And Au-Ag Applied Materials Using FEM on Prosthetic Crowns, *Malaysian Journal of Science*, 42(2), 41–46. <https://doi.org/10.22452/mjs.vol42no2.6>. (Scopus)

Publication in Conference(2022-23)

1. **Sabindra Kachhap**, Pabitra Kumar Sahu and Punyapriya Mishra, 2023 "Investigation and optimization of wire EDM process parameters for Al 5454 alloy machining" Indo-European Conference Advanced Manufacturing and Materials Processing (IEAdvaMap-2023), Department of Mechanical Engineering, Carmel College of Engineering and Technology (Hosting Partner), Punnappra, Alappuzha, Kerala, India 06th -08th Feb 2023.

2. Abishek M S ,**Sabindra Kachhap**and Pukhrambam Sunilkhumar Singh, 2023 “Biodiesel Production by Non-Edible Cascabela Ovata Seeds Through Solvent Methods” International Conference on Sci/Tech and Engineering (ICSTE-23), Mechanical Engineering, National Institute of Technology Manipur, 17th -18th Feb 2023
3. Abishek M S, **Sabindra Kachhap**and Tikendra Nath Verma, 2022 “Validation & optimization of spirulina microalgae biodiesel using different metallic nano-additives numerically” International Conference on Contemporary Innovation in Mechanical Engineering (CIME-2022) RGM College of Engineering & Technology, Nandyal, AP, India, 22nd -23rd April 2022
4. K CH Appa Rao, Praveen Kumar Bannaravuri, **Anil Kumar Birru**, Pulivarti Srinivasa Rao, Gadudasu Babu Rao, D Arulkirubakaran, Influence of Fly Ash and Cement with Molasses Addition on Moulding Properties in Silica Sand: A Comparison, Recent Advances in Materials and Modern Manufacturing: Select Proceedings of ICAMMM 2021, pp. 761-770, Springer Nature Singapore.
5. Sunil Kumar Pulluru, **Anil Kumar Birru**, Goutam Sutradhar, Mechanical and Wear Behavior of A713–Al₂O₃–CaCO₃ Aluminum Hybrid Metal Matrix Composites, International Conference on Science, Technology and Engineering, Springer Nature Singapore, pp. 219-227
6. P Vicky Kumar, **Anil Kumar Birru**, Nelson Muthu, Design and Development of Dental Crown using 3D Printing for patient compatibility, National Conference cum Industry meet on Foundry 4.0 - Opportunities and Challenges, February 24-25, 2022, CMRI-Durgapur-India
7. **Prabhat Kumar**; “Condition Monitoring of Mechanical and Electrical Faults in Stationary and Rotating Equipments: A Review”; 1st International Conference on Sci/ Tech and Engineering; 17th-18th February 2023; (ICSTE-23); National Institute of Technology Manipur, India.
8. **Prabhat Kumar**, Maruvada Sanket, Suyash Srivastva and Tanmay Dinesh Madav; “Vibrational nature of an unbalanced rigid rotor system with three discs secured by two active magnetic bearings”; 1st International Conference on Sci/Tech and Engineering; 17th-18th February 2023; (ICSTE-23); National Institute of Technology Manipur, India.
9. **Prabhat Kumar**, Chingkhomba Arambam, Lourembam Dinesh Singh and Ningthoujam Dingku Singh; “Analyzing the Dynamic Interaction between Unbalance and Crack Responses in a Jeffcott Rotor Supported by Foil Bearings: A Numerical Study”; 5th International Conference on Emerging Trends In Mechanical And Industrial Engineering; 4th-5th March 2022; (ICETMIE-2022); The NorthcapUniversity, Gurgaon, Haryana, India.

Publication in books/book chapters (2022-2023)

1. P.K. Sahu and **S. Kachhap**, 2022. “Powder Mixed Electric Discharge Drilling of Aluminum Based Metal Matrix Composite,” In *Advancement in Materials, Manufacturing and Energy Engineering, Vol. II*, Springer, Singapore, pp. 327-338.
2. Praveen Kumar Bannaravuri, Gadudasu Baburao, K Ch Appa Rao, P Srinivas Rao, **Anil Kumar Birru**, K Samuel Charan Kumar, T Ravi, Agriculture waste composites 6.1 Effect on density and hardness of aluminum metal matrix composite with the addition of bamboo leaf ash, Waste Residue Composites, Walter de Gruyter GmbH & Co KG,

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3. W. Robinson Singh and **H. Neeranjan Singh**, “RSM optimization of biodiesel from waste cooking oil using snail shell derived heterogeneous catalyst,” in Springer Proceedings in Materials, Singapore: Springer Nature Singapore, 2023, pp. 133–144.
4. M. R. Khan and **H. Neeranjan Singh**, “Swan eggshell derived CaO as a heterogeneous catalyst for biodiesel production from castor oil,” in Springer Proceedings in Materials, Singapore: Springer Nature Singapore, 2023, pp. 189–199.
5. Jitendra Rajput, **Rajesh Kumar Bhushan**, Azhar Jamil, [Numerical Simulation of Sandwiched Composite Armor Subjected to Velocity Impact](#), International Conference on Science, Technology and Engineering, Springer Nature Singapore, pp. 347-352
6. Ajeesh M Kurup, **Rajesh Kumar Bhushan**, [Estimation of Life and Wear Rate of Tibial Insert for Total Knee Arthroplasty \(TKA\) Using Finite Element Method Approach](#), International Conference on Science, Technology and Engineering, Springer Nature Singapore, pp. 317-325
7. **Prabhat Kumar**, Chingkhomba Arambam, Lourembam Dinesh Singh and Ningthoujam Dingku Singh; “Analyzing the Dynamic Interaction between Unbalance and Crack Responses in a Jeffcott Rotor Supported by Foil Bearings: A Numerical Study”; *Emerging Trends in Mechanical and Industrial Engineering*, pp. 971-980, 2023, Springer, Singapore.

Short Term Course/Workshops/ Seminar /Conference conducted by the department (April 2021– March 2022)

1. Dr. Prabhat Kumar, organised 1st International Conference on Sci/Tech and Engineering, from 17th Feb to 18th Feb 2023, at NIT Manipur as a Coordinator.
2. Prof Rajesh Kumar Bhushan organised 1st International Conference on Sci/Tech and Engineering (ICSTE-23) as chairman on 17 &18 February 2023.
3. Dr. Maibam Bindya Devi, Co-ordinated organizing International Seminar on “Impact of industry 4.0 in present era” on 16-08-2022
4. Dr. Maibam Bindya Devi, Co-ordinated organizing National Colloquium on “Research Methodologies” on 17-08-2022
5. Dr. Anil Kumar Birru, organised 1st International Conference on Sci/Tech and Engineering, from 17th Feb to 18th Feb 2023, at NIT Manipur as organizing secretary
6. Prof. Rajesh Kumar Bushan, organised 1st International Conference on Sci/Tech and Engineering, from 17th Feb to 18th Feb 2023, at NIT Manipur as Chairman
7. Dr. Anil Kumr Birru, organizing, International Seminar on “Impact of industry 4.0 in present era” on 16-08-2022 as Convenor
8. Dr. Anil Kumar Birru, organizing, National Colloquium on “Research Methodologies” on 17-08-2022 as Secretary

Internship or Industrial Visits:

1. Conducted one month internship (summer training program) from **11th July 2022 to 8th August 2022** in the department of mechanical engineering under the supervision of **Dr. Maibam Bindya Devi, Asst. Professor**, ME Dept. on the topic “Developing a model of an automatic device to clean buoyant and solid waste from standing water bodies”

Name of B.Tech students who graduated in 2022-23:

Sl. No.	Enrolment No.	Name of the Student	Final CPI
1	18107016	Kumam Sanjoy Singh	6.51
2	18107026	Sochui Varah	6.91
3	19107001	Akudari Kiran Raju	7.52
4	19107002	Anurag Kamal	7.62
5	19107003	Asem Vikash Meitei	8.53
6	19107004	Bana Lokanath Reddy	8.48
7	19107005	Gurumayum Dijen Sharma	8.63
8	19107007	Kommu Chandra Venkata Sai Bhagavan	8.16
9	19107008	Makkuva Aravind	7.96
10	19107009	Mallepogu Kumar	8.26
11	19107010	Maruvada Sanket	9.34
12	19107012	Moghal Althaf	8.3
13	19107013	Nitish Kumar	7.84
14	19107014	Paubiaklall Langel	8.03
15	19107015	Penugonda Venkata Neelesh Vardhan	8.09
16	19107016	Prince Kumar	7.9
17	19107017	Ramsem Mashangva	8.62
18	19107019	Sanjenbam Gugu Meetei	7.78
19	19107020	Suyash Srivastav	7.9
20	19107021	Tanmay Dinesh Madav	8.64
21	19107022	Zambiaksang Hauzel	8.11
22	19107023	Indu Murmu	7.97
23	19107024	Tejavath Hanmanth	7.76

Name of M.Tech students who graduated in 2022-23:

Sl. No.	Enrolment No.	Name of the Student	Final CPI
1	21207001	Wahengbam Maniketan Singh	8.85
2	21207002	Silinbounewmai	8.6
3	21207003	Thangjam seemashwori Devi	8.89
4	21207004	Mairembam frankko Singh	8.95
5	21207005	Ganta Venkateswararao	8.19

Name of Ph.D students who graduated in 2022-23:

Sl. No.	Enrolment No.	Name of the student	Thesis name	Name of the Supervisor/co-Supervisors	Date of Defence
1	17407005	Khangembam Chunkyraj	Mist-Jet Impingement Heat Transfer from a heated cylinder	Dr. Dushyant Singh	13/01/2022

2	1640006	Maibam Bindya Devi	Fabrication and Machinability of Al-Zn Based Metal Matrix composite Reinforced with Bamboo Leaf Ash and Alumina	Dr. Anil Kumar Birru	07/07/2023
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No. of GATE/NET qualified students in 2022-23:

Sl. No.	Name of the student	GATE/NET	Percentile for GATE/Marks	Category
1	Thangjamtenzing	GATE	27	OBC-NCL
2	Maruvada	GATE	40	UR

No. of students who have enrolled for higher studies (Foreign/National) : Nil

Sl. No.	Name of the student	Course Programme	Name of the institute	Country

No. of students who have been placed in 2022-23:

Sl. No.	Name of the student	Name of the organization
1	TejavathHanmanth	NextTurn
2	Prince	NextTurn
3	SuyashSrivastav	Deloitte
4	TejavathHanmanth	Alstrom
5	PaubiaklallLangel	Alstrom
6	M.Althaf	L & T
7	Tanmay Dinesh Madav	Tredence
8	BanaLoknath Reddy	JSW
9	GurumayumDijen Sharma	intellipate
10	AsemVikash Meitei	KEC International
11	Mallepogu Kumar	KEC International
12	RamsemMashangva	DENSO
13	InduMurmu	DENSO
14	Gurumayum Dijen Sharma	DENSO

Other Activities:

1. Details of NEP Activity conducted by the Department in 2022-23:
2. Details of faculty Achievements in 2022-23:

Dr. Prabhat Kumar

- a. Delivered a lecture on “Scopes for Higher Technical Educations”, One Day Role Model Interaction for STEM Workshop Programme on 24th March 2023, at Jawahar Navodaya Vidyalaya Chandel, Manipur.

Prof Rajesh Kumar Bhushan

- a. Prof Rajesh Kumar Bhushan delivered expert talk on the topic “Smart Materials and Their Applications on 18 Feb 2023 at Acharya Institute of Technology, Bangalore
- b. Prof Rajesh Kumar Bhushan received, Appreciation from Director NIT Manipur for improving NIRF rank of NIT Manipur from 114 to 108 for year 2022.
- c. Prof Rajesh Kumar Bhushan received, Appreciation from Director NIT Manipur for improving NIRF rank of NIT Manipur from 108 to 95 for year 2023.
- d. Prof Rajesh Kumar Bhushan, Listed among the Top 2% Scientist in The World for year-2022 released by Stanford University, California, and Elsevier BV

3. Details of Students Achievements in 2022-23: NIL

4. Details of Awards/Recognition received by Faculty/Staff/Students in 2022-23:

Prof Rajesh Kumar Bhushan is Reviewer of 37 reputed international Journals.

5. Details of contribution to the society:

- a. Organised Science and Technology Exhibition, from 1st Feb to 2nd Feb 2023, at NIT Manipur as Assistant Coordinator (Database Creation, Documentation and Networking Related).

6. Steps taken for popularisation of Science and Technology among the students of Manipur

Dr. Maibam Bindya Devi

Steps taken for popularisation of Science and Technology among the students of Manipur

Visited JawaharNavodayaVidyalaya, Yaratpat, Imphal East, 795005 on May 10, 2022 and shared knowledge to the science students (11th and 12th class students) of the school about the various projects taken up by our undergraduate students as a part of NEP 2020 program.

Any other information:

Courses Attended

Prof Rajesh Kumar Bhushan attended a course on Management of Digital Hygiene: Staying Secure in Cyber Space from 22-26 Aug 2022 at Centre for Development of Advanced Computing.

4.6 DEPARTMENT OF CHEMISTRY

Head of Department

Dr. NAGARAJAN.S

Brief Introduction of the Department

The Department of Chemistry offers Masters of Science in Chemistry course along with contributing first year B.Tech Engineering Chemistry course.

Highlight of Research Activities: The Department of Chemistry offers Ph.D Program in Organic, Inorganic, Physical, Bio-Chemistry and Materials Chemistry

Faculty Members (Regular): 04

SN	Name of the faculty	Designation	Qualification	Email
1	Dr. Th. David Singh	Associate Professor	M.Sc. Ph.D. (Nagaland University)	davidthiyam@gmail.com
2.	Dr. Mithun Roy	Associate Professor	M.Sc. Ph.D. (IISc, Bangalore)	mithunroy.iisc@gmail.com
3.	Dr. Chandi. C. Malakar	Associate Professor	M.Sc. Ph.D. (Stuttgart University, Germany)	chdeepm@gmail.com
4.	Dr. Nagarajan. S	Assistant Professor	M.Sc. Ph.D. (NCL, Pune)	nagarajan.sankar84@gmail.com

Faculty Members (Contractual): 02

SN	Name of the faculty	Designation	Qualification	Email
1	Dr. Premanda Singh	Assistant Professor (Contractual)	M.Sc. Ph.D.	henam_boynao@yahoo.co.in
2	Dr. W. Sujata	Assistant Professor (Contractual)	M.Sc. Ph.D.	wangkheimayums@yahoo.com

Non Teaching Staff (Regular) / Contractual):01

Sl.No	Name of the Staff	Designation	Qualification	Email
1.	Bhogenjit Ngasepam	Lab Technician	M.Sc	bhogenjitn@yahoo.com

Academic Activities**Students enrolled**

Program	1 st Year	2 nd Year	Total
M.Sc. in Chemistry	17	12	29

(I) PhD Program

	2022-23
No. of Full Time	29
No. of Part Time	1
Total	30
Degree awarded during 2022-23	02

(II) Research Information

(A) Sponsored Research Projects from Govt./Semi Govt

Sl. No	Name of the Project	Funding Agency	Project Amount	Project PI
1	Computational studies on investigation of the potential role of metal-based compounds as the inhibitors of SARS-CoV-2 as well as other aggressive mutant strains of SARS-CoV-2	Science and Engineering Research Board (SERB)	Rs. 20,18,632 /-	Dr. Mithun Roy
2	Novel Cobalt(III)-based bio-reductive prodrug modelling for hypoxia selective chemotherapeutic steering of hypoxia inducible factors (HIF) as an alternative source of treatment stratagem for breast cancer	Indian Council of Medical Research (ICMR)	Rs. 33,50,000 /-	Dr. Mithun Roy
3	Synthesis and Decoration of Drug-like Molecules using Transition Metal-Catalyzed C(sp ²)-H/C(sp ³)-H Bond Activation Approach	SERB, Govt. of India	38.84 Lakhs	Dr. Chandi C. Malakar
4	Investigation on Metal-Free Approaches towards C-C and C-Heteroatom Bond Formation for the Synthesis of Carbocycles and Heterocycles	SERB, Govt. of India	35.77 Lakhs	Dr. Chandi C. Malakar
5	Investigation of Novel Therapeutic Compounds for Inhibitors of the Protein Kinase Family to Treat Cancer: Synthesis and Evaluation of Biological Activity	MoE, Govt. of India Proposal No. 2023-0928 (approved)	20 Lakhs	Dr. Chandi C. Malakar

(B) Patent Details if any :

- (1) **C. C. Malakar**, R. Gujjarappa, N. Vodnala “*Organocatalytic Process for the Synthesis of 2,6-Diaryl/Hetero-Aryl Pyridines*” Indian Patent Application, Number: 202131026450. (**Published** in Indian Patent Office Official Journal, Issue no.30, **2022**, page 47469).
- (2) **C. C. Malakar**, D. Kaldhi, R. Gujjarappa “*A Process for the Synthesis of Azides from Amines under Nitrite Salts-Free Approach*” Indian Patent Application, Number: 202131041413. (**Published** in Indian Patent Office Official Journal, Issue no.30, **2022**, page 47472).
- (3) **C. C. Malakar**, D. Kaldhi, R. Gujjarappa “*Process for the Nitrite Salt Free Preparation of Iodoarenes and Iodoalkanes*” Indian Patent Application, Number: 202131049474 (**Published** in Indian Patent Office Official Journal, Issue no.7, **2022**, page 9480).
- (4) **C. C. Malakar**, D. Kaldhi, R. Gujjarappa “*Nitrite-Salts and Diazonium-Salts Free Process for the Preparation of Aryltriazole Derivatives*” Indian Patent Application, Number: 202231043850. (**Published** in Indian Patent Office Official Journal, Issue no.31, **2022**, page 49246).

Publications:

- 1) R. Gujjarappa, N. Vodnala, D. Musib, and **C. C. Malakar** “Organocatalytic Decarboxylation and Dual C(sp³)-H Bond Functionalization Toward Facile Access to Divergent 2,6-Diarylpyridines” *Asian J. Org. Chem.* **2022**, <https://doi.org/10.1002/ajoc.202100627>
- (2) M. Singh, R. Jamra, A. K. Paul, **C. C. Malakar**, V. Singh “KI-assisted Sulfur Activation/Insertion/Denitration Strategy towards Dual C–S Bond Formation for One-pot Synthesis of β -Carboline-tethered 2-Acylbenzothiophenes” *Asian J. Org. Chem.* **2022**, <https://doi.org/10.1002/ajoc.202100653>
- (3) A. Garg, K. Kant, K. K. Roy, A. Sahoo, **C. C. Malakar**, S. Gupta “Docking-based evaluation against Human Tankyrase-1 and Tankyrase-2 enzyme” *Materialstoday: Proceedings.* **2022**, <https://doi.org/10.1016/j.matpr.2022.03.095>
- (4) R. Reetu, A. Garg, K. K. Roy, A. Roy, S. Gupta, **C. C. Malakar** “In-silico studies for targeting PPAR γ for the Type II Diabetes Mellitus” *Materialstoday: Proceedings.* **2022**, <https://doi.org/10.1016/j.matpr.2022.01.299>
- (5) R. Reetu, R. Gujjarappa, **C. C. Malakar** “Recent Advances in Synthesis and Medicinal Evaluation of 1,2-Benzothiazine Analogues” *Asian J. Org. Chem.* **2022**, <https://doi.org/10.1002/ajoc.202200163>
- (6) A. K. Kabi, M. Pal, R. Gujjarappa, **C. C. Malakar**, Mithun Roy “Overview of Hydroxychloroquine and Remdesivir on severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)” *J. Heterocycl. Chem.* **2022**, <https://onlinelibrary.wiley.com/doi/full/10.1002/jhet.4541>
- (7) E. P. Devi, D. Kaldhi, R. Sengupta, A. Roy, A. Sahoo, I. Saha, **C. C. Malakar** “Catalytic Iodine and Morpholine as Reagent Combination for Hydration of Alkynes via Markovnikov Addition” *Asian J. Chem.* **2022**, DOI: 10.14233/ajchem.2022.23751
- (8) L. S. Singh, A. K. Kabi, R. Sengupta, A. Roy, A. Sahoo, I. Saha, **C. C. Malakar** “C-H Functionalization and C-N Bond Formation Approaches under Catalytic Conditions for the Synthesis of α -Ketoamides and 2,4-Disubstituted-1,3,5-triazines” *Asian J. Chem.* **2022**, DOI: 10.14233/ajchem.2022.23769
- (9) V.P. R. K. Putta, S. Polina, R. Gujjarappa, P. S. Kishore, **C. C. Malakar**, P. P. Pujar “Efficient Synthesis of 4H-3,1-Benzothiazin-4-ones via C-N/C-S Bond Forming Reactions” *Polycyl. Arom. Comp.* **2022**, <https://doi.org/10.1080/10406638.2022.2136220>.
- (10) L. S. Singh, S. Banerjee, I. Saha, **C. C. Malakar** “Organocatalyzed-Aerobic Oxidation of Arylboronic Acids toward the Synthesis of Phenolic Derivatives” *Lett. Org. Chem.* **2022**, <http://dx.doi.org/10.2174/1570178620666221128121925>.
- (11) Vaishali, **C. C. Malakar**, V. Singh “A Cascade A3 Coupling Strategy towards Regioselective Synthesis of β -Carboline N-fused Pyrrole Derivatives with Pyridine Tethers” *New J. Chem.* **2022**, <https://doi.org/10.1039/D2NJ04620B>.
- (12) **C. C. Malakar**, L. Dell'Amico, W. Zhang “Dual Catalysis in Organic Synthesis: Current Challenges and New Trends” *Eur. J. Org. Chem.* **2022**, <https://doi.org/10.1002/ejoc.202201114>.
- (13) S. Sharma, D. Singh, S. Kumar, R. Jamra, N. Banyal, Deepika, **C. C. Malakar**, V. Singh “An Efficient Metal-free and Catalyst-

- free C-S/C-O Bond Formation Strategy: Synthesis of Pyrazole Conjugated Thioamides and Amides* Beilstein J. Org. Chem. **2022**, <https://doi.org/10.3762/bxiv.2022.92.v1>.
- (14) P. S. Kishore, R. Gujjarappa, R. K. Putta, S. Polina, V. Singh, P. P. Pujar, **C. C. Malakar** “Potassium *tert*-Butoxide-Mediated Synthesis of 2-Aminoquinolines from Alkyl nitriles and 2-Aminobenzaldehyde Derivatives” *ChemistrySelect* **2022**, <http://dx.doi.org/10.1002/slct.202204238>.
 - (15) M. Shtaiwi, M. Al-Refa'i, L. Al-Najjar, N. Al-jaar, **C. C. Malakar**, A. Shtaiwi, M. A. Sini “Design, Synthesis, Biological Activity, and Molecular Modeling of Novel Spiroquinazoline Derivatives as Acetylcholinesterase Inhibitors for Alzheimer Disease” *Polycycl. Arom. Comp.* **2022**, <http://dx.doi.org/10.1080/10406638.2022.2144911>.
 - (16) K. Kant, S. Banerjee, C. K. Patel, S. Kalita, N. Al-Jaar, N. Al-Zaqri, I. Warad, R. Sengupta, **C. C. Malakar** “Advances on Catalytic Approaches towards the Synthesis of Quinoline Derivatives using Povarov Reaction” *Heterocycles* **2023**, DOI: 10.3987/REV-23-1004.
 - (17) N. Al-jaar, M. M. Ibrahim, E. A. Younes, M. Al-Noaimi, K. A. Abu-Safieh, B. F. Ali, K. Kant, **C. C. Malakar**, “Strategies towards the Synthesis of 2-Ketoaryl Azole Derivatives using C-H Functionalization Approach and 1,2-Bis-Nucleophile Precursors” *Asian J. Org. Chem.* **2023**, <https://doi.org/10.1002/ajoc.202300036>
 - (18) E. Pinky Devi, S. Polina, K. Kant, A. K. Kabi, N. Al-Zaqri, N. Aljaar, **C. C. Malakar**. “N-Alkylation of Azoles with Enones Assisted by P(III) or Fe₂O₃-nanoparticles as Recyclable Catalyst” *Heterocycles* **2023**, DOI: 10.3987/COM-23-14833.
 - (19) [C. K. Patel](#), [R. Gujjarappa](#), [K. Kant](#), [S. Ghanta](#), V. Singh, A. K. Kabi, N. Al-Zaqri, **C. C. Malakar** “Copper-Catalyzed C(sp³)-Functionalization and Annulation of 2-Bromoaryl Oximes with Active Methylene Compounds towards Synthesis of Isoquinoline N-Oxides” *Adv. Synth. Catal.* **2023**, <https://doi.org/10.1002/adsc.202300217>
 - (20) M. Singh, Deepika, S. Kumar, Jyoti, N. Kumar, B. Bhudalkoti, **C. C. Malakar**, V. Singh “Transition Metal-free Cascade C-N Bond Formation: An Effective Strategy for the Synthesis of β -Carboline N-Fused Imidazolium Acetates and Estimation of their Light Emitting Properties” *Synthesis* **2023**, DOI: SS-2023-04-0193-OP.
 - (21) S. Kumar, R. Kumar, **C. C. Malakar**, V. Singh “Copper catalysed regioselective synthesis of pyrimidine substituted Indolizino[8,7-b]indole derivatives via cascade A3 annulation” *Tetrahedron* **2023**, in press, <https://doi.org/10.1016/j.tet.2023.133547>.
 - (22) D. Dhillon, A. K. Paul, **C. C. Malakar**, A. Bansal, V. Singh “DABCO Mediated Sulfur Activation-Intramolecular De-nitration Strategy for the Synthesis of Novel Dihydrothiochromeno[4,3-c]pyrazoles” *Asian J. Org. Chem.* **2023**, <https://doi.org/10.1002/ajoc.202300289>.
 - (23) C. K. Patel, S. Banerjee, K. Kant, R. Sengupta, N. Aljaar, **C. C. Malakar**, “Roles of Alkali Metals *tert*-Butoxide as Catalysts and Activators in Organic Transformations” *Asian J. Org. Chem.* **2023**, <https://doi.org/10.1002/ajoc.202300311>
 - (24) Luminescence enhancement and tunable colour emission in Eu/Dy/Sm codoped CaW1-xMoxO4 phosphor Dhanapriya Devi Yengkhom, Goutam Singh Ningombam, **Thiyam David Singh**, Francis AS Chipem and Nongmaithem Rajmuhon Singh, *Inorganic Chemistry Communications*, 141(2022)10957

- (25) Optical Absorption, Kinetics and Thermodynamic Studies of Pr(III) and Nd(III) Ions with N-Acetyl L-Cysteine in Presence of Ca(II) ions Thiyaam Samrat Singh and Thiyaam David Singh, *Asian Journal of Chemistry*; 34(2) (2022), 272-278
- (26) Bi³⁺ sensitized Gd₂O₃:Eu³⁺: A potential red phosphor for UV LED pumped white light emission O. Shantajit Singh, Ranjoy Wangkhem, N. Yaiphaba, Th. David Singh, N. Shanta Singh, *Journal of Alloys and Compounds*, 902 (2022) 163831-42
- (27) Dulal Musib, Aarti Upadhyay, Maynak Pal, Md Kausar Raza, Indranil Saha, Amit Kunwar, Mithun Roy*, Red light-activable biotinylated copper (II) complex functionalized gold nanocomposite (Biotin-Cu@AuNP) towards targeted photodynamic therapy, *J. Inorg. Biochem.*, 243, 112183, 2023. (SCI)
- (28) Abhishek Panwar, Maynak Pal, Mithun Roy*, Photo-chemical aspects of iron complexes exhibiting photo-activated chemotherapy (PACT), *J. Inorg. Biochem.*, 2022, 112055. (SCI)
- (29). SAR-based approach to explore in silico ferrocene analogues as the potential inhibitors of major viral proteins of SARS-CoV-2 virus and human Ca²⁺- channel blocker, *Indian journal of chemistry (IJC)*, 61(4), 370-384, 2022. (SCI)
- (30). Dulal Musib, Vanitha Ramu, Md Kausar Raza, Aarti Upadhyay, Maynak Pal, Amit Kunwar*, Mithun Roy*, La (iii) - curcumine-functionalized gold nanocomposite as a red-light activable mitochondria targeting PDT agent, *Inorg. Chem. Front.*, 2022, 9, 686-701. (SCI)
- (31). C.-C.Huang S.V.Selvi, N.Nataraj, T.-W.Chen, S.M.Chen, **S.Nagarajan**, C.S.Ko T.-W. Tseng [In-situ formation of 2H phase MoS₂/cerium-zirconium oxide nanohybrid for potential electrochemical detection of an anticancer drug flutamide](#) *Materials Today Chemistry* 2022, 23, 100749.
- (32). G. Sivakumar & K. Mohanraj J. Henry, **S. Nagarajan** [Fabrication of Vacuum Evaporated \(Cu_{1-x}Ag_x\)₂ZnSnSe₄ Thin-film Photovoltaic Devices and its Photoconversion Efficiency](#) *Arabian Journal for Science and Engineering*, 2022, 48, 291-309.
- (33). P. Amudha R. Vidya, **S. Nagarajan** Toxicity Assessment of Biosynthesized Silver Nanoparticles from Cucumis melo (L) Fruit - In vitro and In vivo Study *Biomaterials Online Conclave* 2022, 228.
- (34) **S. Nagarajan**, N.M.Devi, N. Bhogenjit, H. P. Singh, C. B. Singh Evaluation of potential antioxidant and effect of biomimetic nanoscale silver particles on opportunistic fungi *Journal of Indian Chemical Society* 2023. 100, 2, 1008.
- (35) Durga Malathi, Ajmal Koya Pulikkal, MT Ramesan, **S Nagarajan** [Bio-fiber recovery from industrially discarded shoot waste \(*Cymbopogon nardus*\): a comprehensive study for reinforcement in sustainable composites](#) *Biomass Conversion and Biorefinery* 2023, 1-12
- (36) Ayyar Manikandan S. Saranya, S. Dhanapandian, S. Suthakaran, **S. Nagarajan**, N. Krishnakumar, S. Dinesh, A. Muthukrishnaraj [Nickel-Manganese bimetallic Selenide as an electrode for supercapacitor applications](#) *Sustainable Energy Technologies and Assessments*, 2023, 59, 103376.

Publication in books/ book chapters (2022-23)

- (1) A. K. Kabi, S. Sravani, R. Gujjarappa, A. Garg, N. Vodnala, U. Tyagi, D. Kaldhi, R. Velayutham, S. Gupta, **C. C. Malakar**

- “An Introduction on Evolution of Azole Derivatives in Medicinal Chemistry” Springer Nature, Singapore, 2022, http://dx.doi.org/10.1007/978-981-16-8399-2_4.*
- (2) R. Gujjarappa, A. K. Kabi, S. Sravani, A. Garg, N. Vodnala, U. Tyagi, D. Kaldhi, V. Singh, S. Gupta, **C. C. Malakar**
“Overview on Biological Activities of Thiazole Derivatives” Springer Nature, Singapore, 2022, http://dx.doi.org/10.1007/978-981-16-8399-2_5.
 - (3) R. Gujjarappa, A. K. Kabi, S. Sravani, A. Garg, N. Vodnala, U. Tyagi, D. Kaldhi, R. Velayutham, V. Singh, S. Gupta, **C. C. Malakar**
“Overview on Biological Activities of Imidazole Derivatives” Springer Nature, Singapore, 2022, http://dx.doi.org/10.1007/978-981-16-8399-2_6.
 - (4) A. K. Kabi, S. Sravani, R. Gujjarappa, A. Garg, N. Vodnala, U. Tyagi, D. Kaldhi, V. Singh, S. Gupta, **C. C. Malakar**
“Overview on Biological Activities of Pyrazole Derivatives” Springer Nature, Singapore, 2022, http://dx.doi.org/10.1007/978-981-16-8399-2_7.
 - (5) A. K. Kabi, S. Sravani, R. Gujjarappa, A. Garg, N. Vodnala, U. Tyagi, D. Kaldhi, R. Velayutham, V. Singh, S. Gupta, **C. C. Malakar**
“An Overview on Biological Evaluation of Tetrazole Derivatives” Springer Nature, Singapore, 2022, http://dx.doi.org/10.1007/978-981-16-8399-2_8.
 - (6) A. K. Kabi, S. Sravani, R. Gujjarappa, A. Garg, N. Vodnala, U. Tyagi, D. Kaldhi, V. Singh, S. Gupta, **C. C. Malakar**
“An Overview on Biological Activity of Benzimidazole Derivatives” Springer Nature, Singapore, 2022, http://dx.doi.org/10.1007/978-981-16-8399-2_9.
 - (7) R. Gujjarappa, S. Sravani, A. K. Kabi, A. Garg, N. Vodnala, U. Tyagi, D. Kaldhi, V. Singh, S. Gupta, **C. C. Malakar**
“An overview on Biological Activities of Oxazole, Isoxazoles and 1,2,4-oxadiazoles Derivatives” Springer Nature, Singapore, 2022, http://dx.doi.org/10.1007/978-981-16-8399-2_10.
 - (8) A. K. Kabi, S. Sravani, R. Gujjarappa, A. Garg, N. Vodnala, U. Tyagi, D. Kaldhi, V. Singh, S. Gupta, **C. C. Malakar**
“An Overview on Biological Activities of 1,2,3-Triazole Derivatives” Springer Nature, Singapore, 2022, http://dx.doi.org/10.1007/978-981-16-8399-2_11.
 - (9) A. K. Kabi, R. Gujjarappa, A. Garg, A. Roy, A. Sahoo, S. Gupta, **C. C. Malakar**
“Overview on Medicinal Impacts of 1,2,4-Triazole Derivatives” Springer Proceedings in Materials, 2022, Springer International Publishing, DOI : [10.1007/978-981-19-2572-6_5](https://doi.org/10.1007/978-981-19-2572-6_5)
 - (10) A. K. Kabi, R. Gujjarappa, A. Garg, A. Roy, A. Sahoo, S. Gupta, **C. C. Malakar**
“Overview on Diverse Biological Activities of Benzisoxazole Derivatives” Springer Proceedings in Materials, 2022, Springer International Publishing, DOI: [10.1007/978-981-19-2571-9](https://doi.org/10.1007/978-981-19-2571-9)
 - (11) A. K. Kabi, R. Gujjarappa, A. Garg, A. Roy, A. Sahoo, S. Gupta, **C. C. Malakar**
“Highlights on Biological Activities of 1,3,4-Thiadiazole and Indazole Derivatives” Springer Proceedings in Materials, 2022, Springer International Publishing, DOI: [10.1007/978-981-19-2572-6](https://doi.org/10.1007/978-981-19-2572-6).

- (12) Dulal Musib, Maynak Pal, Uday Sankar Allam, Mithun Roy*, "Brief history, pathophysiology, transmission of SARS-CoV-2 virus, and recent advances on transition metal complexes and nanocomposites as the potent antiviral agents from COVID-19 perspectives" Nanostructured Biomaterials, 2022,1-48.
- (13). Maynak Pal, Sharmila Wahengbam, Mithun Roy*, " Identification of hypoxia-targeting drugs in the tumor microenvironment and prodrug strategies for targeting tumor hypoxia", 2023, pp 369-401.

Internship or Industrial Visits:

M.Sc Chemistry students of NIT Manipur have been selected for Summer Research Internship Program at Indian Academy of Sciences (IAS)

Swati Tibriwala (22302016)

Shivani Tewatia (22302004)

Subham panigrahi (22302008)

Aditya Padhi (22302003)

No. of students who have enrolled for higher studies (Foreign/National)

Sl. No	Name of the Student	Course/Programme	Name of the Institute	Country
1	Ms. YUMNAM NGAN-THOINGANBI	PhD Chemistry	National Taiwan Normal University	Taiwan
2	Mr. SOURAV BANERJEE	PhD Chemistry	Indian Institute of Technology Hyderabad	India
3	Mr. D. S. Prahbu Teja	PhD Chemistry	Indian Institute of Technology Indore	India
4	Moubani Mukherjee	PhD Chemistry	IISER Bhopal	India
5	Deep Lahan	PhD Chemistry	IISER Kolkata	India

Name of PhD students who graduated in 2022-23:

Sl. No	Enrolment No.	Name of the Student	Thesis Name	Name of the Supervisor/ Co-Supervisor	Date of Defence
1.	15PCH002	Longjam Reena Devi	Photo-chemical and photo-cytotoxic evaluation of new copper (II) complexes as the next generation photochemo-therapeutic agents	Dr. Mithun Roy	14.09.2022
2.	15PCH006	Bandana Sanasam	Photo-chemical and photodynamic evaluation of oxidovanadium (IV) complexes in vitro	Dr. Mithun Roy	21.04.2023

4.7 DEPARTMENT OF PHYSICS

Head of Department
Dr. Ibetombi Soibam

Brief Introduction of the Department

The department was started in 2010 and since then the department is actively involved in research activities and teaching at various levels. The department aims to become one of the leading department in terms of research and teaching in physical sciences.

Despite being a new institute, the department has well equipped laboratories (both experimental and computational), and the facilities are constantly being developed to be able to compete in the international arena. Currently, experimental research is carried out in the areas of condensed matter physics, and in theoretical/computational research in a wide area in soft-matter physics. The department promotes research collaboration at the local level as well as national and international levels. The achievements and the potential for excellence in research are recognised in the form of research grants from DST, ISRO, and other funding agencies and awards from DST-INSPIRE Faculty Award to the department's faculty members.

The department has 6 faculties and 2 non-teaching staff, and currently it offers M. Sc. and B. Tech. teaching programme along with PhD programme.

Highlight of Research Activities

Current research in the department :

1. NANOSCIENCE AND NANOTECHNOLOGY

Nanoscience, the behaviour of physical systems when confined to near atomic, nanoscale (< 100 nm) dimensions together with the physical phenomena that occur at the nanoscale, is currently one of the most dynamic and rapidly developing areas of interdisciplinary research in applied physics.

2. SOFT CONDENSED MATTER PHYSICS (THEORY AND EXPERIMENTAL)

The soft condensed matter physics being pursued in our department include: Friction, fracture, adhesion and lubrication, liquid crystals, biological physics, complex fluids, statistical physics, numerical simulations, Study of transport phenomena, thermodynamical measurements, optical / neutron / X-ray scattering.

3. FERROELECTRIC AND FERROMAGNETIC MATERIALS

Ferroelectric materials are a special class of crystals, like barium or lead titanate (BaTiO_3 or PbTiO_3). Lead zirconate titanate (LZT) is another example. These materials are also piezoelectric: when applying some mechanical stress, they will generate some voltage. In fact, the process goes both ways: when applying some voltage to them, it will also create mechanical deformation. We have focused on $\text{BiFe}_{1-x}\text{Zn}_x\text{O}_3$, Li-Ni ferrite, $(\text{Bi,Gd})\text{FeO}_3\text{-Ni}_{0.8}\text{Zn}_{0.2}\text{Fe}_2\text{O}_4$, Li-Mn-Ni Ferrites and $\text{MnLa}_x\text{Fe}_{2-x}\text{O}_4$ etc.

4. NATURAL MAGNETIC MINERALS

The natural minerals of iron hydroxyl phosphates include Barbosalite ($\text{Fe}_3(\text{PO}_4)_2(\text{OH})_2$), rockbridgeite ($\text{Fe}_5(\text{PO}_4)_3(\text{OH})_5$), Beraunite ($\text{Fe}_6(\text{PO}_4)_4(\text{OH})_5 \cdot 6\text{H}_2\text{O}$), and whitmoreite

(Fe₃(PO₄)₂(OH)₂·4H₂O). Barbosalite named by Marie Louise Lindberg (Smith) and William T. Pecora in 1955 in honor of Brazilian geologist Aluizio Licínio de Miranda Barbosa from Minas Gerais, Brazil - is a basic hydroxy-phosphate, with greenish blue to almost black in color and occurs as a hydrothermal product of triphylite Li(Fe(II), Mn(II))PO₄. A crystallo-chemical characterization of barbosalite presents a challenging act because of its fibrous and microcrystalline character. The presence of other transition metal ions alongside iron makes the situation even more complicated to characterize the chemical properties of the crystal.

Faculty Members (Regular):05

Sl. No.	Name of the Faculty	Designation	Qualification (with last institution)	Email
1.	Dr. Ibetombi Soibam	Associate Professor	M.Sc. (Physics)-2003. PhD. (Physics)-Dec. 2009. Manipur University.	ibetombi96@gmail.com
2.	Dr.Bibhu Prasad Swain	Associate Professor	PhD: IIT Bombay Postdoc: NIAIST, Japan, SNU, South Korea, UCT, South Africa	bibhuprasad.swain@gmail.com
3.	Dr. Mamata Maisnam	Associate Professor	PhD(Physics) Manipur University. UGC-Post Doctoral Fellow, UGC Delhi (2012-2014)	m_maisnam@yahoo.co.in
4.	Dr. Loushambam Herojit Singh	Associate Professor	Ph.D. (Homi Bhabha National Institute, IGCAR chapter)	loushambam@gmail.com
5.	Dr. Shagolsem Lenin Singh	Assistant Professor	PhD(Physics): 2013, Leibniz Institute of Polymer Research Dresden, Germany & Technische Universitat Dresden, Germany	lenin.shagolsem@nitmanipur.ac.in

Faculty Members (Contractual):01

Sl. No.	Name of the Faculty	Designation	Qualification (with last institution)	Email
1.	Dr. Thoudam Diana	Assistant Professor	PhD Manipur University	dianathoudam@gmail.com

Non-Teaching Staff (Regular/ Contractual):02

Sl. No.	Name of the Faculty	Designation	Qualification (with last institution)	Email
1.	Mr. Jimpaul Samukcham	Technical Assistant	M.Sc Manipur University (2005)	samukchamjimpaul@gmail.com
2.	Dr. Sujata Tongbarm	Technical Assistant	PhD Assam University	sujata@nitmanipur.ac.in

Teacher Trainees' Details : Nil

Sl. No.	Name of staff	Designation	Qualification	Email

Academic Activities**(I) Students Enrolment**

Name of the Course	1 st Year	2 nd Year	Total
M.Sc	15	9	24

(II) PhD Program.

	2022-2023
No. of full time	35
No. of part time	2
Total	37
Degree awarded during 2022-2023	03

(III) Research information:**(A) Sponsored Research Projects from Govt./Semi Govt**

Sl. No.	Name of the project	Funding agency	Project amount	Project PI
1.	Study of multiferroic nanocomposites with Dy substituted BFO as one of its constituent phase.	UGC-DAE-CRS Kolkata Centre	45000(FY 2022-23)	Dr. Ibetombi Soibam
2.	Carbon decorated mixed metal oxides for photo and electro catalytic degradation of organic dyes and pesticides	SERB, DST, New Delhi Government Of India	Rs. 22,17,355/-	Dr. L. Herojit Singh

3.	<u>Ionic-Copolymer melts: Behaviour near electrified interface, Structural reorganization and response under mechanical shear</u>	SERB-DST (CRG)	Rs. 29,47,975.0/-	Dr. Shagolsem Lenin Singh
4.	Synthesis of spinel structured lithium based ferrimagnets for application in satellite communications	ISRO	Rs. 15.64 lacs	Dr. Mamata Maisnam
5.	Behavioural changes of Oral Mucosa in oral squamous cell carcinoma (OSCS) Progression: An electrical characterization	DST-SERB	Rs. 18.88 lacs	Dr. Mamata Maisnam (Co-PI)
6.	Synthesis of lithium based ferrite nanoparticles for energy storage devices	DST Manipur	Rs. 1.50 Lacs	Dr. Mamata Maisnam (Co-PI)
7.	Ti ₂ C ₂ Tx/Graphene nanocomposites for supercapacitor electrode application, DST Manipur	DST Manipur	Rs. 1.34 Lacs	Dr. Mamata Maisnam (Co-PI)

(B) Patent Details if any: NIL

(C) Publication in Journals (2022-23):

Sl. No.	Author's Name	Title	Journal	Volume	Pages	Year	SCI/ SCIE/ Others
1.	Daniel Cliff Gonmei, Ibetombi Soibam.	A study of structural, electrical and magnetic properties of zinc substituted magnesium ferrite.	Ferroelectrics	601	205-2013	2022	SCIE
2.	Ayekpam Kiranjit Singh & Ibetombi Soibam	Magnetic studies of nanocomposites of La substituted Bismuth ferrite and zinc substituted lithium ferrite,	Iranian Journal of Science and Technology A: Science.	47	979-985	2023	SCIE
3.	Daniel Cliff Gonmei, Ibetombi Soibam	Soaking time effect on the properties of perovskite structure bismuth ferrite.	Indian Journal of Physics	97(8)	2433-2437	2023	SCIE
4.	Ayekpam Kiranjit Singh, Ibetombi Soibam	Ferroelectric and magnetic optimization of A-site La-substitution in Bismuth ferrite.	Integrated Ferroelectrics	231:1	169-176	2023	SCIE

5.	Sinha, S., Andia, K.C., Devi, N.A., Swain, B.P.,	Structural, optical and electrochemical properties of banana, mango leaves and potato extracts reduced graphene oxide.	Bulletin of Materials Science	45 (4)	art. No. 226	2022	SCI
6.	Ishwarchand, W., Sarakar, G., Swain, B.P.,	Investigation of optical properties, chemical network and electronic environments of polycaprolactone/ reduced graphene oxide fiber nanocomposites.	Polymer Bulletin	79 (10)	8437-8453	2022	SCI
7.	Chanu, S.N., Sushma, P., Swain, B.S., Swain, B.P	Optical, chemical bonding and electrochemical properties of vanadium pentoxide/ reduced graphene oxide nanocomposite for supercapacitor electrode material	Journal of Materials Science: Materials in Electronics	33 (26)	20487-20497	2022	SCI
8.	Chanu, S.N., Sinha, S., Devi, P.S., Devi, N.A., Sathe, V., Swain, B.S., Swain, B.P.	Optical, electrochemical and corrosion resistance properties of iron oxide/reduced graphene oxide/ polyvinylpyrrolidone nanocomposite as supercapacitor electrode material	Bulletin of Materials Science	45 (3)	art. No. 122	2022	SCI
9.	Rai, S., Bhujel, R., Mondal, M.K., Biswas, J., Swain, B.P.,	Investigation of optical and electrical properties of graphene oxide/silicon nanowires heterojunction,	Journal of Materials Science: Materials in Electronics	33 (20)	16501-16510	2022	SCI
10.	Nongthombam, S., Sinha, S., Devi, N.A., Laha, S., Swain, B.P.	Synthesis and Characterization of rGO/GaP Nanocomposites Synthesized via Chemical Method Coupled with Investigation of Their Supercapacitive Behavior	Arabian Journal for Science and Engineering	47 (6)	7683-7692	2022	SCI
11.	Swain, B.P.	Process Dependent Strain Behaviour, Fractal Analysis, and Bonding Network of Nc-Si(SiC) Thin Films	Silicon	14 (9)	4523-4533	2022	SCI

12.	Devi, P.S., Chanu, S.N., Dasgupta, P., Swain, B.S., Swain, B.P.,	Structural, optical, thermal and electro- chemical properties of rGO/PEDOT:PSS/ PVP composite for supercapacitor elec- trode application	Applied Physics A: Materials Science and Processing	128 (5)	art. No. 403	2022	SCI
13.	Devi, N.A., Sinha, S., Singh, W.I., Nongthombam, S., Swain, B.P.,	Silver-decorated re- duced graphene oxide nanocomposite for supercapacitor elec- trode application	Bulletin of Materials Science	45 (1)	art. No. 7	2022	SCI
14.	Rai, S., Bhujel, R., Mondal, M.K., Swain, B.P., Biswas, J.	Study of the morpho- logical, optical, struc- tural and electrical properties of silicon nanowires at varying concentrations of the catalyst precursor	Materials Advances	3 (6)	2779- 2785	2022	SCO- PUS
15.	Sinha, S., Singh, W.I., Nongthombam, S., Devi, N.A., Laha, S., Swain, B.S., Swain, B.P.	Optical properties, electrochemical analysis and corrosion resistance studies of polyaniline/reduced graphene Oxide/ZrO ₂ for supercapacitor application	Journal of Physics and Chemistry of Solids	161	art. No. 110478	2022	SCI
16.	Devi, N.A., Sinha, S., Nongthombam, S., Swain, B.P.	Structural, optical, electrochemical and electrical studies of Bi ₂ O ₃ @rGO nano- composite	Materials Science in Semiconduc- tor Process- ing	137	art. No. 106212	2022	SCI
17.	Singh, W.I., Sinha, S., Devi, N.A., Nongthombam, S., Laha, S., Swain, B.P.	Fabrication and Characterization of Reduced Graphene Oxide/Polyaniline/ Poly(Caprolactone) Electrospun Nanofi- ber	Arabian Journal for Science and Engineering	47 (1)	925-934	2022	
18.	Khoisnam Nanaoba Singh, Mamata Mais- nam, Rajkumar Kamaljit Singh, Jayaprasad Pal- lipad, Arundhati Misra and Saroj Maity	Spatio-temporal mon- itoring of the Iceberg D28 using SCAT- SAT-1 Data	Polar records	59(e15)		2023	

19.	Irom Monika Aniz and Mamata Maisnam	Microwave sintering of MnO ₂ added potassium sodium niobate ceramics and studies of their electrical properties	Ferroelectrics		78-87	2022	SCI
20.	. Ningthoujam Joseph Singh, Boris Warepam, Anil Kumar, K. Priyananda Singh, V. K. Garg, A. C. Oliveira, L. Herojit Singh	Zeolite incorporated iron oxide nanoparticle composites for enhanced congo red dye removal	Journal of Materials Research	38(4)	1149-1161	2023	SCIE
21.	Boris Warepam, Ernő Kuzmann, Vijayendra K. Garg, L. Herojit Singh	Mössbauer spectroscopic investigations on iron oxides and modified nanostructures: A review	Journal of Materials Research	38(4)	937-957	2023	SCIE
22.	Urikhinbam, Somas Singh, and <u>Lenin S. Shagolsem</u>	Size-Polydisperse Model Ionic Liquid in Bulk	The Journal of Physical Chemistry B	127.12	2739-2748	2023	SCIE
23.	Singh, Thoudam Vilip, and <u>Lenin S. Shagolsem</u>	Effect of topology on the collapse transition and the instantaneous shape of a model heteropolymer.	Macromolecular Theory and Simulations	32.2	2200074	2023.	SCI
24.	Singh, Thoudam Vilip, and <u>Lenin S. Shagolsem</u>	Universality and Identity Ordering in Heteropolymer Coil–Globule Transition	Macromolecules	55.23	10457-10467	2022	SCI
25.	Thongam, Jenis, and <u>Lenin S. Shagolsem</u>	Effect of Topology on the Statics and Dynamics of a Polymer Chain at the Fluid–Fluid Interface: A Molecular Dynamics Simulation Study	Langmuir	38.20	6330-6342	2022	SCI
26.	<u>Shagolsem, Lenin S</u>	Energy polydisperse 2 d Lennard–Jones fluid in the presence of flow field."	Pramana	96.4	182	2022	SCI

Publication in Conferences (2022-23):

Sl. No.	Author's	Title	Conference Name	Organized by	Date of conference
1.	Sumitra Nongthombam, Naorem Aruna, Sayantan Sinha, W Ishwarchand Singh, Bibhu P. Swain	Analysis of structural defects with the chemical composition of rGO/ GaN nanocomposites using Raman spectroscopy	Recent Advances on Mechanical Engineering Research and Development (ICRAMERD-2022)	Department of Mechanical Engineering, ITER, Siksha 'O' Anusandhan (Deemed to be University),	12th and 13th of August'2022
2.	Sagolsem Nongthombam Chanu, Bibhu P. Swain	Design and Preparation of Reduced Graphene Oxide/Vanadium Pentoxide/ Polycaprolactone Nanofiber as Supercapacitor Electrode Material	National Conference on Advances in Chemical Research	Department of Chemistry, Manipur University	22-03-2022
3.	Sagolsem Nongthombam Chanu, Bibhu P. Swain	Design and Preparation of Reduced Graphene Oxide/Nickel Oxide Nanocomposite as Supercapacitor Electrode Material	National Conference on Emerging Trends of Nanoscience in Modern Technology	Department of Physics and Academic Board of Studies, Ideal Girls' College, Akampat Imphal East)	16-04-2022
4.	Pukhrambam Sushma Devi, Bibhu Prasad Swain	Structural morphology, Chemical and Electrical Properties of Electrospun rGOAg-PCL nanofibers	XII Biennial National Conference of Physics Academy of North East (PANE-2022)	Department of Physics, Manipur University, November	08-10-2022
5.	Bibhu Prasad Swain	Nitrogen flow rate dependent atomic co-ordination, phonon vibration and surface morphology of DC Magnetron sputtered AlN thin films (Invited talk)	XIII Biennial National Conference of Physics Academy of North East (PANE-2022)	Department of Physics, Manipur University, November	8 Nov- 10 Nov, 2022

6. "Effect of sintering on various properties of cobalt ferrite nanoparticles.", Sonica Pukhram, Ibetombi Soibam, [Materials Today: Proceedings Volume 68, Part 2, 2022](#), Pages 190-195
7. "Frequency dependence of dielectric and impedance properties of ZnO and TiO₂ added K_{0.5}Na_{0.5}NbO₃ ceramics", Irom Monika Aniz*, Mamata Maisnam, Haobam Samananda

- Singh, Chiranjit Chaliha, Materials Today: Proceedings, 2023, **SCOPUS** ISSN 2214-7853, <https://doi.org/10.1016/j.matpr.2023.02.299>
8. “Electrical properties of MnO_2 added Potassium Sodium Niobates nano-crystallite dielectrics”, Irom Monika Aniz and Mamata Maisnam, AIP proceedings, 2023 **SCOPUS** (in press)
 9. “Study of structural and electrical properties of $\text{Li}_{0.35+x/2}\text{Zn}_{0.1}\text{Mn}_{0.1}\text{Ti}_x\text{Fe}_{2.35-3x/2}\text{O}_4$ ferrite synthesized by solid-state ceramic technique”, Thongam Ningthouba Singh*, Mamata Maisnam, Materials Today: Proceedings, 2023, **SCOPUS** ISSN 2214-7853, <https://doi.org/10.1016/j.matpr.2023.02.298>
 10. “Frequency dependence studies of dielectric, impedance and permeability properties of Y^{3+} substituted $\text{Li}_{0.5}\text{Zn}_{0.1}\text{Ti}_{0.1}\text{Fe}_{2.3}\text{O}_4$ ferrites”. Athikho Hriishu*, Mamata Maisnam, Materials Today: Proceedings, 2023, **SCOPUS** ISSN 2214-7853. <https://doi.org/10.1016/j.matpr.2023.05.685>
 11. “Observation of the phase evolution and associated dielectric properties of $\text{K}_{0.47}\text{Na}_{0.47}\text{Li}_{0.06}\text{NbO}_3 - x\text{Bi}_{0.5}\text{Na}_{0.5}\text{ZrO}_3$ (where $x = 0.0\text{wt}\%$, $0.1\text{wt}\%$, $0.2\text{wt}\%$, $0.3\text{wt}\%$, $0.4\text{wt}\%$, $0.5\text{wt}\%$) lead free piezoceramic under varying frequency.”, Chiranjit Chaliha*, Mamata Maisnam, Materials Today: Proceedings, 2023, **SCOPUS** ISSN 2214-7853, <https://doi.org/10.1016/j.matpr.2023.02.233>
 12. Ningthoukhongjam Kirtimala Devi, Boris Wareppam, Loushambam Herojit Singh “Effect of sintering temperature on the magnetic properties of ZnFe_2O_4 composite with cobaltic oxide synthesized by chemical co precipitation method” Materials Today Proceedings **68** (2), 196-199 (2022)

Publications in Books/Book Chapters (2022-23):

Sl. No.	Authors'names	Name of paper	Publisher's Name	Volume (Issue)	Pages	Year	SCI/SCIE/Scopus/Others
1	Bibhu Prasad Swain	Advances in Nano-structured Materials (Materials Horizons: From Nature to Nanomaterials)	Springer Nature	1	442	2022	SCOPUS
2	Bibhu Prasad Swain	Nanostructured Biomaterials: Basic Structures and Applications (Materials Horizons: From Nature to Nanomaterials)	Springer Nature	1	454	2022	SCOPUS
3	Bhujel, R., Rai, S., Deka, U., Biswas, J., Swain, B.P.,	Silicon Nanowires: A Magic Material for Hybrid Solar Cells (Materials Horizons: From Nature to Nanomaterials)	Springer Nature	1	21-36	2022	SCOPUS

4	Devi, P.S., Swain, B.P.,	Recent Trends and Research Challenges on Supercapacitor, (Materials Horizons: From Nature to Nanomaterials)	Springer Nature	1	115-127	2022	SCOPUS
5	Devi, N.A., Swain, B.P.,	Graphene-Derived Nanomaterials and Their Application in COVID-19 Related Prevention, Treatment, and Diagnosis (Materials Horizons: From Nature to Nanomaterials)	Springer Nature	1	425-454	2022	SCOPUS
6.	Nongthombam, S., Swain, B.P.,	Chemical Bath Deposited Zinc Oxide Nanostructured Thin Films and Their Applications (Materials Horizons: From Nature to Nanomaterials)	Springer Nature	1	99-113	2022	SCOPUS
7.	Rai, S., Bhujel, R., Biswas, J., Swain, B.P., ,	Reduced Graphene Oxide/Silicon Nanowire Heterojunction-Fabrication and Photovoltaic Application, Materials Horizons: From Nature to Nanomaterials	Springer Nature	1	87-98	2022	SCOPUS
8.	Irom Monika Aniz* and Mamata Maisnam	Polycrystalline alkali niobate piezoelectric ceramics sintered by microwave technique	Springer Nature	Chapter 20	409-428		SCOPUS (in press)
9.	Devishri Kangjam, Rajkumar Kamaljit Singh, Khoisnam Nanaoba Singh, Jayaprasad Pallipad, Maganti Srinivasa Tarun, Deepak Putrevu, Arundhati Misra and Mamata Maisnam	Rathong glacier's Line-Of-Sight (LOS) Velocity Measured Using the Modified Four-Pass DInSAR Technique	Springer Nature			2023	SCOPUS (in press)

10.	Karanjit Leiphrakpam and Mamata Maisnam	Gamma spectroscopy studies of Rice samples Grown in Imphal Valley of Manipur, India	Springer Nature			2022	SCOPUS (in press)
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Short Term Course / Workshops / Seminar / Conference conducted by the department (April 2022 – March 2023):

Sl. No.	Name	Duration		Name of the organizer
		From	To	
1.	An Awareness programme cum one day seminar on “ Safe Working Environment for Women”	9 th December, 2022, NIT Manipur		Dr. Mamata Maisnam

(G) Internship or Industrial Visits: NIL

Name of M.Sc students who graduated in 2022-23:

Sl. No.	Reg. No.	Name of the student	CPI
1	21309002	NIRANJAN KUMAR SINGH	8.38
2	21309004	AKSHAY GUPTA	8.28
3	21309006	AKASH SAINI	8.03
4	21309007	SAMBIT KUMAR SAHOO	8.21
5	21309008	SAJAN	8.77
6	21309009	PIYUSH AHUJA	7.92
7	21309010	NITIN JANGIR	7.75
8	21309011	RAJKUMAR UTOMKUMAR	7.47
9	21309012	ANANNYA SARMAH	8.13

Name of PhD students who graduated in 2022-23:

Sl. No.	Enrolment No.	Name of the student	Thesis Name	Name of the Supervisor/ Co-Supervisor	Date of defence
1.	19409005	W. Iswarchand Singh	Investigation of chemical bonding and electronic network of reduced graphene oxide and polymer electrospun nanofibre	Dr. Bibhu Prasad Swain	10/02/2022
2.	18409011	Sayantan Sinha	Polyaniline/rGo/Metal oxide nanocomposites for supercapacitor applications.	Dr. Bibhu Prasad Swain	29/09/2022

3.	18409006	Naorem Aruna Devi	Metal/Metal-oxide decorated reduced graphene oxide nano-composites for super-capacitor electrode applications.	Dr. Bibhu Prasad Swain	28/09/2022
4.	17409003	Ningthoujam Joseph Singh	Investigations on the Local Structure, magnetism of Fe based ferrites and triphylite with zeolite and its multifunctionality	Dr. L. Herojit Singh	07/11/2022

No. of GATE/NET qualified students in 2022-23: Nil

Sl. No.	Name of the student	GATE/NET	Percentile for GATE	Category

No. of students who have enrolled for higher studies (Foreign/National): Nil

Sl. No.	Name of the student	Course/Programme	Name of the Institute	Country

No. of students who have been placed in 2022-23: NIL

Other Activities:

1. Details of NEP activities conducted by the Department in 2022-23:
NIL
2. Details of Faculty achievement in 2022-23:
NIL
3. Details of Student Achievement in 2022-23:
NIL
4. Details of Award/Recognition received by Faculty/Staff/Students in 2022-23:
NIL
5. Details of contribution to society:
NIL
7. **Steps taken for popularization of Science and Technology among the students of Manipur:**

Dr. Shagolsem Lenin Singh:

Conducted one day interaction program with the students of Imphal College, Manipur on the topic “Career in Science and beyond” on 29th March 2023 (under the scheme Scientific Social Responsibility).

4.8 DEPARTMENT OF MATHEMATICS

Head of Department : Dr. Sanasam Surendra Singh

Brief Introduction of the Department

The Department of Mathematics and Computing came into existence in the year 2014. The Department has qualified and devoted faculty members with specializations in Pure and Applied Mathematics. Presently the department offers M. Sc. and Ph. D. program. M. Sc. program offers Mathematics and Computing. The department aims to become one of the leading Department in research and teaching. The department strongly promotes research collaboration at the local level as well as national and international levels.

Highlight of Research Activities

Most of the research is focused on Applied and Pure Mathematics. Thrust area of research are Cosmology, finite element method, Biomathematics and Cryptography. In Pure Mathematics, research is mainly focus on fixed point theory, Complex Analysis and Numerical Analysis. Many articles are published in highly qualified peer-reviewed Journals.

Faculty Details (Regular): 04

SN	Name of Faculty	Designation	Qualification	Email
1.	Dr. Chanam Barch-and Singh	Professor	Ph. D(Jamia Milia Islamia, New Delhi)	barchand_2004yahoo.com
2.	Dr. Sanasam Surendra Singh	Associate Professor	Ph. D(Manipur University)	ssuren.mu@gmail.com
3.	Dr. Sunil Panday	Assistant Professor	Ph. D (MNIT Bhopal)	sunilpanday@hotmail.co.in
4.	Prof. Yumnam Rohen Singh	Associate Professor (on lien)	Ph D (Manipur University)	ymnehor2008@yahoo.com

Faculty Details (Contractual): Nil

SN	Name of Faculty	Designation	Qualification	Email
1.	Laishram Sanjit Singh	Guest Faculty	Ph D	shanjit2015@yahoo.in
2.	Leishingam Kumrah	Guest Faculty	Ph D	lkumrah@gmail.com
3.	K. Somorjit Singh	Guest Faculty	Ph D	ksomorjitmaths@gmail.com
4.	Prof. N. Ibotombi Singh	Guest Faculty	Ph D	ibotombi.ningombam@gmail.com

Non-Teaching Staff (Contractual): Nil

SN	Name of Staff	Designation	Qualification	Email
1.	Mutum Pritya Devi	Office attendant	12 th Class	soibampriya@gmail.com

Trainee Teachers (if any): Nil

Academic Activities

1. Students Enrolment

Name of the Course	1st Year	2nd year	Total
M.Sc Mathematics and Computing	14	13	27

2. Ph.D. Program

No. of Full Time	24
No. of Part-Time	00
Total	24
Degree awarded in 2022-23	05

(III) Research Information (2022-23)

Sponsored Research Projects from Govt./Semi Govt (2022-23) : Nil

Patent Details if any : (2022-23) : Nil

Publication in Journals (2022-23)

1. L. Anjana Devi, S. Surendra Singh and Leishingham Kumrah, A new class of interacting cosmological models with time varying quadratic deceleration parameter. Indian Journal of Physics (2022). [SCI]
2. Chingtham Sonia and S. Surendra Singh, Dynamical systems of cosmological models for different possibilities of G and Lambda. European Physical Journal C (2022). [SCI]
3. Md Khurshid Alam, S. Surendra Singh and L. Anjana Devi, Erratum `` Interaction of Anisotropic Dark Energy with Generalized Hybrid Expansion Law''. Advances in High Energy Physics (2023). [SCI]
4. Leishingham Kumrah, S. Surendra Singh, L. Anjana Devi and Md. Khurshid Alam, FRW Cosmology with a Varying Cubic Deceleration Parameter Letter in high energy physics (2023). [SCI]
5. L. Anjana Devi, S. Surendra Singh and Md Khurshid Alam, Anisotropic solution in $f(Q)$ gravity with hybrid expansion. Zeitschrift fur Naturforschung a (2023). [SCI]
6. Amit Samaddar and S. Surendra Singh, Qualitative stability analysis of cosmological parameters in $f(T, B)$ gravity. European Physical Journal C (2023). [SCI]
7. New efficient bi-parametric families of iterative methods with engineering applications and their basins of attraction

G Thangkhenpau,; Sunil Panday,; Waikhom Henarita Chanu. Results in Control and Optimization Volume 12, September 2023, 100243

<https://doi.org/10.1016/j.rico.2023.100243> SCOPUS

8. An iterative method of fourth order for multiple roots of nonlinear equations
Waikhom Henarita Chanu.; Sunil Panday
AIP Conference Proceedings 2728, 030012 (2023) **SCOPUS**
9. Efficient optimal eighth order method for solving nonlinear equations
Ravendra Singh.; Sunil Panday
AIP Conference Proceedings 2728, 030013 (2023) **SCOPUS**
10. Novel Parametric Families of with and without Memory Iterative Methods for Multiple Roots of Nonlinear Equations
Thangkhenpau G, Panday S., Mittal S. K. and Jäntschi L.
Mathematics 2023, 11(9), 2036
<https://doi.org/10.3390/math11092036>**SCIE, SCOPUS**
11. Optimal Eight Order Derivative-Free Family of Iterative Methods for Solving Nonlinear Equations
Thangkhenpau G, Panday S.
International Journal of Computer Science, vol. 50, no.1, pp335-341 (2023) **SCOPUS**
12. New Higher Order Iterative Method for Multiple Roots of Nonlinear Equations
Panday, S., Chanu, W.H., Devi, Y.N.
Frontiers in Industrial and Applied Mathematics (2023)
https://doi.org/10.1007/978-981-19-7272-0_40 **SCOPUS**
13. Development of Optimal Iterative Methods with Their Applications and Basins of Attraction
Chanu W.H.;Panday S.;Thangkhenpau G.
Symmetry,
Volume 14, Year 2022
DOI:10.3390/sym14102020 **SCIE,SCOPUS**
14. Optimal fourth and eighth-order iterative methods for non-linear equations
Panday S.;Sharma A.;Thangkhenpau G.
Journal of Applied Mathematics and Computing,
Year 2022
DOI:10.1007/s12190-022-01775-2 **SCIE, SCOPUS**
15. Excellent Higher Order Iterative Scheme for Solving Non-linear Equations
Chanu W.H.;Panday S.
International Journal of Applied Mathematics,
Volume 52, Year 2022 **SCOPUS**
16. Efficient sixth order iterative method free from higher derivatives for nonlinear equations
Ekta Sharma, Sunil Panday
Journal of Mathematical and Computational Science,
Volume 12, Year 2022

17. Reingachan N, Robinson Soraisam, **Barchand Chanam**, Some Inequalities on Polar Derivative of a Polynomial, *Nonlinear functional Analysis and Applications*, 27(4), 797-805, 2022. [SCOPUS]
18. Thangjam Birkramjit Singh, Robinson Soraisam and **Barchand Chanam**, Sharpening of Turan-Type Inequalities for polar derivative of Polynomial, *Complex Analysis and its Synergies*, <https://doi.org/10.1007/s40627-023-00113-x>. [SCOPUS]
19. Maisnam Triveni Devi, Thangjam Birkramjit Singh, **Barchand Chanam**, Improvement and generalization of polynomial inequality of T. J.Rivlin, *Sao Paulo Journal of Mathematical Science*, <https://doi.org/10.1007/s40863-022-00300-4>. [SCOPUS]
20. **Barchand Chanam**, Khangembam Babina Devi, Kshetrimayum Krishnadas, Thangjam Birkramjit Singh, Remark on Some Recent Inequalities of a Polynomial and its Derivative, *Kyungpook Mathematical Journal*, 62, 455-465, 2022. [SCOPUS]
21. Mahajan Pritika, Khangenbam Babina Devi, N. Reingachan and **Barchand Chanam**, Improvement and generalization of a theorem of T.J. Rivlin, *Nonlinear functional Analysis and Applications*, 27,(3), 691-700, 2022. [SCOPUS]
22. N. Reingachan and **Barchand Chanam**, Bernstein and Turan type inequalities for polar derivative of a polynomial, *Nonlinear functional analysis and application*, 28(1), 287-294, 2023. [SCOPUS]
23. N. Reingachan, Nirmal Kumar Singha and **Barchand Chanam**, Some Integral Inequalities for Polynomial; *IAENG International Journal of Applied Mathematics*, 53(1), 202-208, 2023. [SCOPUS]
24. N. Reingachan, Mayanglambam Singhajit Singh and **Barchand Chanam**, Integral inequality for higher derivative versions on theorems of S. Bernstein, *Far East Journal of Mathematical Sciences (FJMS)* 137, 1-9, 2022. <http://dx.doi.org/10.17654/0972087122016>. [Peer Review]
25. N. Reingachan, Maisnam Triveni Devi and **Barchand Chanam**, Inequalities on polar derivative of a polynomial vanishing inside a circle, *Far East Journal of Mathematical Sciences (FJMS)* 136, 17-28, 2022. <http://dx.doi.org/10.17654/0972087122013>. [Peer Review]
26. N. Reingachan and **Barchand Chanam**, Bernstein type inequalities for the polar derivative of a class of polynomials, *Far East Journal of Mathematical Sciences (FJMS)* 140(2), 89-97, 2023. <http://dx.doi.org/10.17654/0972087123006>. [Peer Review]
27. Nirmal Kumar Singha, N. Reingachan and **Barchand Chanam**, A note on polar derivative of polynomials with restricted zeros, *Far East Journal of Mathematical Sciences (FJMS)* 137, 27-37, 2022. <http://dx.doi.org/10.17654/0972087122018>. [Peer Review]
28. Khangembam Babina Devi, Thangjam Birkramjit Singh and **Barchand Chanam**, Inequalities for derivatives of polynomials, *Far East Journal of Mathematical Sciences (FJMS)*, 136, 29-46, 2022, <http://dx.doi.org/10.17654/09720871220184>. [Peer Review]
29. Ningthoujam Priyobarta, Yumnam Rohen, Stephen Thounaojam and Stojan Radenović, Some remarks on α -admissibility in S-metric spaces, *Journal of Inequalities and Applications*, (2022) 2022:34 <https://doi.org/10.1186/s13660-022-02767-3>. (SCIE).
30. Thounaojam Stephen, Yumnam Rohen, M. Kuber Singh and Konthoujam Sangita Devi, Some rational F-contractions in b-metric spaces and fixed points, *Nonlinear Functional Analysis and Applications*, Vol. 27, No. 2 (2022), pp. 309-322. (SCOPUS).

31. Moirangthem Kuber Singh, Thounaojam Stephen, Konthoujam Sangita Devi, Yumnam Rohen, New generalized rational α^* -contraction for multivalued mappings in b-metric space, *J. Math. Comput. Sci.* 2022, 12:87.
32. Tonjam Thaibema, Yumnam Rohen, Thounaojam Stephen, Oinam Budhichandra Singh, Fixed points of rational F-contractions in S-metric spaces, *J. Math. Comput. Sci.* 2022, 12:153.
33. K. Mangijaobi Devi, Yumnam Rohen, K. Anthony Singh, Fixed points of modified F-contractions in S-metric spaces, *J. Math. Comput. Sci.* 2022, 12:197.
34. Alam, K.H.; Rohen, Y.; Saleem, N. Fixed Points of (α, β, F^*) and (α, β, F^{**}) -Weak Geraghty Contractions with an Application. *Symmetry* 2023, 15, 243 (SCIE).
35. Thounaojam Stephen, Yumnam Rohen, Huseyin Isik, Laishram Shanjit, Some best proximity point results for generalized cyclic contraction mappings, *Int. J. Nonlinear Anal.*, <http://dx.doi.org/10.22075/ijnaa.2023.24597.3033> (SCOPUS).

Publication in Conference (2022-23):

1. Khangembam Babina Devi, N Reingachan, Thangjam Birkramjit Singh, Barchand Chanam, Growth of Polynomials Having No Zero Inside a Circle, *Frontiers in Industrial and Applied Mathematics: FIAM-2023*, https://doi.org/10.1007/978-981-19-7272-0_32. [SCOPUS]

Publication in books/ book chapters (2022-23): Nil

Short Term course/ workshop/Seminar/ conference conducted by the Department: Nil

Internship or Industrial Visits: Nil

Name of MSc students who graduated in 2022-23

Sl. No.	Reg. No.	Name of the Student	CPI
1	21308002	Keshav Singh	7.75
2	21308003	Vikas	7.76
3	21308004	Istayan Das	8.37
4	21308005	Sudipta Poria	7.46
5	21308006	Shubham Kumar Mittal	8.33
6	21308007	Rashmi Rekha Sahoo	8.84
7	21308008	Maripi Rajesh Kumar	7.26
8	21308009	Sreelakshmi	8.35
9	21308010	Ankita Waghmore	8.07
10	21308011	Thokchom Mohen Meitei	8.11
11	21308012	Laishram Parisana Singh	7.31
12	21308013	Milan Khongbantabam	7.04
13	21308014	Telem Michael Singh	7.97

Name of PhD students who graduated in 2022-23

SN	Enrolment Number	Name of the Student	Thesis name	Name of the supervisor/ Co-supervisor	Date of Defence
1	14PHM003	Ningthoujam Priyobarta Singh	Study On Fixed Points , Common Fixed Points In Different Spaces	Dr. Y. Rohen Singh	04/04/2022
2.	14PHM001	Laishram Shanjit Singh	Fixed Point and Best Proximity Point in Certain Spaces	Dr. Y. Rohen Singh	04/04/2022
3	17408001	Leishingam Kumrah	A study on dynamical and physical behaviours of some cosmological solutions.	Dr. Sanasam Surendra Singh.	20/12/2022
4	18408006	Waikhom Henarita Chanu	Development and analysis of some new iterative methods for the solutions of nonlinear equations	Dr. Sunil Panday	05/04/2023
5	18408002	Thangjam Birkramjit Singh	Extremal problems for polynomials	Prof. Barchand Chanam	25/10/2022

Name of GATE/NET qualified students in 2022-23

SN	Name of the student	GATE or NET	Percentile for GATE	Gen/OBC/SC/ST
1.	Ishtan Das	NET and GATE-2022		SC
2.	Shubham Kumar Mittal	GATE 2023	23.33	EWS
3.	Keshav Singh	GATE-2023	25.67	GEN

Name of the students (2022-23), who have been placed : Nil

SN	Name of the students	Name of the company	Annual package (Rs)

No. of student who have enrolled for higher studies (Foreign/National)

SN	Name of the students	Course/Programme	Name of the Institute	Country
1.	Vishal Bhardwas	PhD	Louisiana State University	USA

No. of students who have been placed in 2022-23: Nil

Other Activities:

1. Details of NEP Activity conducted by the Department in 2022-23:
2. Details of faculty Achievement in 2022-23:
3. Details of Students Achievement in 2022-23:
4. Details of Awards/ Recognition received by Faculty/staff/Students in 2022-23:
5. Details of contribution to the society:
6. Steps taken for popularisation of Science and Technology among the students of Manipur

4.9 DEPARTMENT OF HUMANITIES AND SOCIAL SCIENCES

Name of the Head of Department

Prof. CHANAM BARCHAND SINGH

Brief introduction of the Department: The Department of HSS offers disciplines in Basic Communication, Economics and Managements. It aims to give a humane touch to technology.

Highlight of Research Activities: The Department of HSS offers Ph.D Program in American Literature, Dalit Literature, Commonwealth Literature and Indian Writings in English.

Faculty Members (Regular): 01

SN	Name of the faculty	Designation	Qualification	Email
1	Dr. Sangeeta Laishram	Associate Professor	Ph.D (Manipur University)	sangeetalaishram7@gmail.com

Faculty Members (Contractual): 02

SN	Name of the faculty	Designation	Qualification	Email
1	H. Soni Devi	Assistant Professor	PhD (Manipur University)	soni_imphal@yahoo.co.in
2	R.K Diana	Assistant Professor	PhD (NIT Silchar)	diana10rkin@gmail.com

(F) Non Teaching Staff (Regular) / Contractual)

Sl. No	Name of the Staff	Designation	Qualification	Email

Academic Activities

Students Enrolment

PhD Program

	2022-23
No. of Full Time	04
No. of Part Time	
Total	04
Degree awarded during 2022-23	02

Post Doctoral Program

	2022-23
No. of Full Time	00
No. of Part Time	01
Total	01

Research Information

Sponsored Research Projects from Govt./ Semi Govt

Sl. No	Name of the Project	Funding Agency	Project Amount	Project PI
1				
2				
3				

Patent Details if any :

Publication in Journals (2022-23)

1	Veronica Yumnam, Dr. Sangeeta Laishram. "History and Truth: Revisiting the past in Chimamanda Ngozi Adichie's <i>Half of A Yellow Sun</i> ", The IIS University Journal of Arts, July 2022. ISSN: 2319-5339 UGC Care Listed (Paper Published)
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Publication in Conferences (2022-23)

1	Veronica Yumnam and Dr.Sangeeta Laishram. "A Study of select stories from Chimamanda Ngozi Adichie's sort story collection <i>The Thing Around Your Neck</i> ". International Conference on ESSM-2022 organised by Sri Balaji College of Engineering & Technology, Jaipur.
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Publication in books/Book Chapters (2022-23)

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Short Term Course/ Workshop/ Seminar/ Conference Conducted by the Department :

Internship or Industrial Visits :

Name of PhD students who graduated in 2022-23 :

Sl. No	Enrolment No.	Name of the Student	Thesis Name	Name of the Supervisor/ Co-Supervisor	Date of Defence
1	15PEN001	Kshetrimayum Momo	The Functions of Myths and Archetypes in the Postcolonial Literature of Africa and India	Dr.Sangeeta Laishram	14/11/2022
2	15PEN003	Khundrakpam Nirupama	Black Feminist Discourse: A Study of Toni Morrison's Selected Novels	Dr.Sangeeta Laishram	21/06/2023

No. of the GATE/NET qualified students in 2022-23: Nil

Sl. No		Name of the student	GATE/NET	Percentile Score for GATE

No. of students who have enrolled for higher studies (Foreign/National): Nil

Sl. No	Name of the Student	Course/Programme	Name of the Institute	Country

No. of students who have been placed in 2022-23 : NIL

Other Activities :

1. Details of NEP Activity conducted by the Department in 2022-23:
2. Details of faculty Achievement in 2022-23:
3. Details of Students Achievement in 2022-23:
4. Details of Awards/Recognition received by Faculty/Staff/Students in 2022-23:
5. Details of contribution to the society :
6. Steps taken for popularisation of Science and Technology among the students of Manipur

5.0 CENTRALIZED SERVICES

5.1 Placement Session 2022-23

Placement Record 2023 Batch (BTech)

Department	Total strength of students	No. of registered students	No. of offers	No. of students Placed (single job offer)	Unplaced students from the registered list	Unplaced students from the total students
Civil	28	21	18	15	6	13
CSE	62	52	63	49	3	13
ECE	24	22	26	21	1	3
EE	24	22	20	16	6	8
ME	23	21	20	17	4	6
Total	161	138	147	118	20	43

1. Highest Package: 47 Lakhs per Annum
2. Average Package: 11.6 Lakhs per Annum
3. Placement Percentage
 - a. From registered students (Placement percentage= $118/138=85.5\%$)
 - b. From total students (Placement percentage= $118/161=73.29\%$)

5.2 Central Library, NIT Manipur

Award Received:

- (i) Highest Usage of Science Direct amongst New NITs (2014)
- (ii) Wiley Library awards for upcoming Academic Library Award, January 20th 2016

ONLINE JOURNALS AND ONLINE BOOKS AVAILABLE IN NITM: -

Elsevier eBooks 2013	
Subject Collection	Number of Journals
Computer Science	415
Engineering	473
Total	888
Springer eBooks 2013	
Computer Science	2645
Engineering	1763
Total	4408
CRC eBooks 2013	
Chemistry netbase	125
Computer Science netbase	85
ENGnetbase	228
Mathematics	98
Physics	114
Total	640
PEARSON eBooks 2014	
Computer Science, Engineering, Mathematics, Physics, General, Environmental studies, Business & Economics	2173
Details of E-Journal under TQUIP-III	
(1) IEEE transaction(2) IEEE ebooks(3) Elsevier/Science Direct e-journals(4) RSC e-journals (5) Springer Nature e-books(6) Elsevier Reaxys scientific database	

- Total number of online Books available in National Institute of Technology Manipur = **8109**
 - Magazines : 24
 - Newspapers : 05(both national and local)
 - Internet connectivity : Available

Staff in position- 07 (1 regular employee and 6 contract employees)

Sl. No.	Name	Designation	Qualification	Remark
1.	Dr. Naorem Vidyavati Devi	Assistant Librarian	BSc, MLIS, C-CCA, PGDCA, Ph.D.	Published work- nearly 30 papers were published in Seminars/ Conference Volumes, Journals (including both national and international), Local and Festschrift volume. Organized- 03 National Workshop Organized-7 Awareness programme(Institutional level)
2.	Moirangthem Rakesh Singh	Library Assistant	MLIS, CCCA	Published Work- 2 papers (01 in bulletin and 01 in Conference Volume)
3.	Chanambam Victoria Devi	Library Attendant	BSC, PGDCA	—
4.	Y.K. Katini	Library Attendant	BA, DCA	—
5.	R.K. Rajeshwori Devi	Library Apprentice	MLIS	Published work- 3 papers
6.	Kh. Hammerjit Singh	Library Apprentice	MLIS, DCA	Published work- 4 papers Organized 01 National Workshop as event Manager
7.	N. Bitankumar Singh	Library Apprentice	MLIS	Published work- 2 papers Organized 01 National Workshop as event Manager

At a Glance

- The Library, under the illuminating guidance of the Competent Authorities in this short period of time, the Library NIT, Manipur has procured most of the basic Library equipments, furniture and stationary items.
- NIT Manipur, Library has organized 2 day National Author Workshop on the theme “**Inside a Publishers’ Mind**”, 3rd & 4th July, 2017.
- Those in the higher authority in the Institute are whole heartedly committed in the development of the Library in all possible ways.
- Library, NIT, Manipur, has a large scope of developing its service and provides the same to the users.
- Though Saturday is a holiday for the Institution, the library functions on Saturday for 2-3 hrs, except 2nd Saturday, in the interest of the institution in general and of the student community in particulars.
- So far, NIT Manipur, Library has organized two days National\ Workshop, 7 User Awareness cum Demonstration Programme on access to e-resources with subject experts from outside the State to enable both faculty and students of the Institution to use this facilities.

- The NITM Library, under the illuminating guidance of the Director, NITM, had organized a “Three Days (3rd to 5th October, 2013) BOOK Exhibition Programme” at NITM campus in which 12 book firms participated.

5.3 Students Residential Facilities

The Institute is a fully residential Institute. NIT Manipur is able to provide hostel accommodation to every student on twin sharing basis. The Institute has 3 (two) Boys Hostels. In addition to a Girls Hostel in the temporary campus, a Girls Hostel is also located inside the Campus. Games and Sports facilities are provided inside the campus.

6.0 BOG, FC, BWC & Senate

6.1 BOARD OF GOVERNORS

1.	Prof. (Dr.) Goutam Sutradhar Director, NIT Manipur	Chairman(Ex-Officio)
2.	Joint Secretary dealing with Technical Education or his representatives, Dept. of Higher Education, Ministry of Education, GoI.	Member
3.	Financial Advisor or his/her representatives, Dept. of Higher Education, Ministry of Education, GoI.	Member
4.	Prof. Uday Shanker Dixit, Mechanical Engineering Deptt., IIT Guwahati	Nominated member Director of IIT Guwahati
5.	Council Nominee	Member (vaccant)
6.	Council Nominee	Member (vaccant)
7.	Government of Manipur Nominee	Member (vaccant)
8.	Government of Manipur Nominee	Member (vaccant)
9.	Prof. P. Albino Kumar, Department of Civil Engineering, NIT Manipur	Member
10.	Dr. Anil Kumar Birru, Associate Professor, Department of Mechanical Engineering, NIT Manipur	Member
11.	Prof. Kh. Tomba Singh, Registrar, NIT Manipur	Secretary

6.2 FINANCE COMMITTEE

1.	Prof. (Dr.) Goutam Sutradhar Director, NIT Manipur	Chairman(Ex-Officio)
2.	Joint Secretary dealing with Technical Education or his representatives, Dept. of Higher Education, Ministry of Education, GoI.	Member
3.	Financial Advisor or his/her representatives, Dept. of Higher Education, Ministry of Education, GoI.	Member
4.	Prof. P. Albino Kumar, Department of Civil Engineering, NIT Manipur	Member
5.	Dr. Anil Kumar Birru, Associate Professor, Department of Mechanical Engineering, NIT Manipur	Member
6.	Prof. Kh. Tomba Singh, Registrar, NIT Manipur	Member Secretary

6.3 BUILDING & WORKS COMMITTEE

1	Prof. (Dr) Goutam Sutradhar Director, NIT Manipur	Chairman
2	Director or Deputy Secretary or his representative dealing with National Institute of Technology in the Ministry of Education, Govt. of India	Member
3	Director or Deputy Secretary or his representative dealing with Financial Dept. of Higher Education, Ministry of Education, Govt. of India	Member
4	Dy. General Manager/Executive Engineer, MSPDCL, Electricity Complex, Keishampat Junction, Imphal	Member
5	Executive Engineer (Civil) or his /her Representative, Manipur Central Division, CPWD, Imphal	Member
6	Prof. P. Albino Kumar, Dean (P & D), NIT Manipur	Member
7.	Prof. Kh. Tomba Singh, Registrar, NIT Manipur	Member Secretary

6.4 SENATE

1.	Prof. (Dr.) Goutam Sutradhar Director, NIT Manipur	Chairman (Ex- Officio)
2.	Prof. Chiranjib Bhattacharjee Jadavpur University	Nominated Member
3.	Prof. L.Memcha Manipur University	Nominated Member
4.	Dr. Debasish Bhattacharjee NIT Agartala	Nominated Member
5.	Dr. Jinsu Basu Saha Institute of Nuclear Physics, Kolkata	Distinguished Invitee
6.	Dr. Prabir Kumar Mukhopadhyay Damodar Valley Corporation	Distinguished Invitee
7.	Prof. Rajesh Kumar Bhushan, Dean (Academic Affairs)	Member
8.	All Professor of NIT Manipur appointed as per Statutes	Member
9.	All Head of Departments of NIT Manipur	Member
10.	Prof. Kh. Tomba Singh, Registrar, NIT Manipur	Secretary

Audited Accounts

2022 - 2023

NATIONAL INSTITUTE OF TECHNOLOGY, MANIPUR

BALANCE SHEET AS AT 31.3.2023

SOURCES OF FUND	Schedule	Current Year	Previous Year
1 CAPITAL FUND	1	2,25,33,51,616.80	2,40,06,70,366.49
2 Designated / Earmarked/ Endowment Funds	2	-	-
3 Current Liabilities & Provisions	3	24,86,24,201.73	24,35,32,759.73
		2,50,19,75,818.53	2,64,42,03,126.22
APPLICATION OF FUNDS			
1 Fixed Assets	4		
a) Tangible Assets		50,89,77,230.13	58,01,59,151.13
b) Intangible assets		75,08,783.00	90,85,483.00
c) Capital Work in Progress		1,78,44,81,017.00	1,76,77,53,597.00
2 Investments from Earmarked/ Endowment Funds	5		
a) Long Term			
b) Short Term			
3 Investments - Others	6	5,04,905.07	5,04,905.07
4 Current Assets	7	19,07,25,975.32	28,02,55,681.01
5 Loans & Advances	8	97,77,908.01	64,44,309.01
		2,50,19,75,818.53	2,64,42,03,126.22

Significant Accounting Policies	24
Contingent liabilities & Notes on Account	25

NATIONAL INSTITUTE OF TECHNOLOGY, MANIPUR

INCOME AND EXPENDITURE FOR THE YEAR 2022-23

INCOME	Schedule	Current Year	Previous Year
1 Academic Receipts	9	2,88,97,326.00	2,00,11,021.60
2 Grant & Subsidies :			
a) Received (less refund)	10		
(i) Maintenance (31)		5,07,92,624.00	21,29,44,000.00
(ii) Salary (36)		11,13,25,109.00	8,73,38,000.00
b) Add : Opening balance available for Revenue Exp			
c) Less : Capital Expenses			
d) Balance available for Revenue Exp		16,21,17,733.00	30,02,82,000.00
3 Income from Investment	11	-	69,485.97
4 Interest Earned	12	39,17,956.00	42,34,004.44
5 Other Income	13	1,40,47,032.00	41,65,607.00
6 Depreciation written back	4	20,70,000.00	
7 Prior Period Adjustments	23	-	-
Total (A)		21,10,50,047.00	32,87,62,119.01
EXPENDITURE			
1 Staff Payment & Benefit (Establishment Exp)	15	12,21,07,489.00	10,71,53,605.00
2 Academic Expenses	16	3,92,79,497.00	3,48,25,742.00
3 Administrative & General Expenses	17	9,02,30,362.00	6,92,85,717.00
4 Transport Expenses	18	21,11,501.00	10,57,175.00
5 Repair & Maintenance	19	2,05,90,092.00	68,75,483.00
6 Finance Cost	20	70,771.69	35,935.44
7 Depreciation			
a) Depreciation for the year (SLM)	4	8,08,68,856.00	8,49,15,209.00
b) Excess Depreciation in the previous years adjusted	4		
8 Other Expenses	21	31,10,228.00	4,83,730.00
9 Prior Period exp	22	-	
Total (B)		35,83,68,796.69	30,46,32,596.44
Balance being excess of income over Expenditure		-14,73,18,749.69	2,41,29,522.57
BALANCE being the excess of expenditure over income			
Transfer to/ from designated Fund			
Others (Specify)			
Balance being Surplus (Deficit) carried to Capital Fund		-14,73,18,749.69	2,41,29,522.57
Significant Accounting Policies	24		
Contingent Liabilities & Notes on Account	25		

NATIONAL INSTITUTE OF TECHNOLOGY, MANIPUR

RECEIPTS		Current year	Previous Year	PAYMENTS	Current year	Previous Year
Opening Balance				I Expenses -		
a) Cash balances i/c DD in hand		4,29,190.00	4,39,190.00	a) Staff Payments & Benefit	12,21,07,489.00	10,71,53,605.00
b) Bank Balances -				b) Academic Expenses	3,92,79,497.00	3,48,25,742.00
i) in Current Account		96,47,514.62	96,47,531.26	c) Administrative Expenses	9,02,30,362.00	6,92,85,717.00
ii) In Deposit Accounts		-	-	d) Transportation Expenses	21,11,501.00	10,57,175.00
iii) In Savings Account		27,01,78,976.39	15,59,18,354.06	e) Repairs & Maintenance	2,05,90,092.00	68,75,483.00
		28,02,55,681.01	16,60,05,075.32	f) Finance Cost	70,771.69	35,935.44
				f) Other Expenses	31,10,228.00	4,83,730.00
Grants Received -				II Payments made against Earmarked/	27,74,99,940.69	21,97,17,387.44
a) From Government of India						
(i) Maintenance (31)		5,07,92,624.00	21,29,44,000.00			
(ii) Salary (36)		11,13,25,109.00	8,73,38,000.00			
b) From State Government				Endowment funds		
(Nominal Value of land)		-	-			
c) From Other sources :				III Payments against Sponsored Projects		
Academic Receipts		2,88,97,326.00	2,00,11,021.60	Projects/ Schemes		
Receipts against Earmarked/				Others	1,76,80,554.70	1,21,18,296.90
Endowment Fund		-	-	CSAB	1,47,31,650.00	1,23,49,000.00
Receipts against Sponsored Projects				IV Payments against Sponsored	-	-
/Schemes				Fellowship/ Scholarship		
Schedule 3(a)		90,96,204.00	1,96,80,713.00	V Investments and Deposits made		
CSAB		1,54,11,450.00	1,31,20,950.00	a) Out of Earmarked/ Endowment		
Income on Investments from				b) Out of own Funds		69,485.97
a) Earmarked /Endowment Fund						
b) Other Investments		-	69,485.97	VI Term Deposits with Schedule Banks		
Interest Received on				VII Expenditure on Fixed Assets		
a) Bank Deposits			-	and Capital Work in Progress		
b) Loans & Advances			-	a) Fixed Assets i/c advance	1,12,65,277.00	53,82,703.00
c) Savings Bank Account		39,17,956.00	42,34,004.44	b) Capital Work in progress	1,67,27,420.00	-
				Other Payments including		
				Statutory payments	21,38,411.00	6,74,684.00
Total Carried over		49,96,96,350.01	52,34,03,250.33	Total Carried over	34,00,43,253.39	25,03,11,557.31

Total Carried forward	49,96,96,350.01	52,34,03,250.33	Total Carried forward	34,00,43,253.39	25,03,11,557.31
IX Investments encashed	-	-	IX Refund of Grants	-	-
X Term Deposits with Scheduled Banks	-	-	X Deposits and Advances	1,17,58,274.00	11,83,251.00
XI Other Income (including Prior period income)	1,40,47,032.00	41,65,607.00	XI Other Payments	1,55,000.00	8,70,000.00
XII Deposits and Advances			a) Refund of Caution Deposit	3,51,67,995.00	2,80,10,066.00
Caution Money	42,75,000.00	15,10,000.00	b) Remittances of deductions	30,27,141.00	3,81,04,278.00
Deduction awaiting remittance	3,27,90,029.50	3,04,78,933.00	c) Payment of sundry creditors	2,89,09,077.20	1,42,17,207.00
Refundable & Payables	19,85,196.00	15,09,500.00	d) Other Current Liabilities	5,36,908.00	10,26,622.00
Recovery of advances	80,58,869.00	18,35,680.00	e) Refundables & Payables	69,100.00	1,23,644.01
XIII Miscellaneous Receipts including			f) Other Receivable		
Statutory Liability Receipts (GST)	21,54,672.00	5,86,084.00	XII Closing balances		
Sundry Creditors	15,92,039.00	3,77,26,763.00	a) Cash in hand i/c fund in transit	2,39,800.00	4,29,190.00
Current Liability & Provisions	4,50,35,003.40	1,23,68,883.00	b) Bank Balances -		
XIV Any Other Receipts			i) in Current Account	77,48,134.18	96,47,514.62
Other Receivables	7,58,533.00	5,17,606.00	ii) in Savings Account	18,27,38,041.14	27,01,78,976.39
Reduction in value of assets on adjustmt	-	-	iii) in Deposit Accounts		-
Prior period Adjustments - Sch 23	-	-			
Total	61,03,92,723.91	61,41,02,306.33	Total	61,03,92,723.91	61,41,02,306.33

NATIONAL INSTITUTE OF TECHNOLOGY, MANIPUR

SCHEDULES FORMING PART OF BALANCE SHEET AS AT 31.3.2023

SCHEDULE -1 : CORPUS/ CAPITAL FUND	Current Year 2022-23	Previous Year 2021-22
1 Balance as at the beginning of the year (from HRD and Others)	2,37,36,69,366.49	2,34,81,48,993.92
Add :During the year for Capital Expenses		-
2 Capital Grant from Other Ministry-MOBC b/fd	2,70,00,000.00	2,70,00,000.00
3 State Govt. - nominal value of land allotted b/fd	1,000.00	1,000.00
TOTAL	2,40,06,70,366.49	2,37,51,49,993.92
4 Add : Assets purchased out of Sponsored Projects where Ownership vests in the Institute capitalised	-	13,90,850.00
5 Add : Assets Donated / Gifts Received in Project		
6 Add : Other Additions		
7 Less : Revenue Expenditure considered out of the Grant		
8 Add/ (Deduct) : Surplus (Deficit) transferred from Income and Expenditure Account	-14,73,18,749.69	2,41,29,522.57
9 Balance at the end of the year	2,25,33,51,616.80	2,40,06,70,366.49

NATIONAL INSTITUTE OF TECHNOLOGY, MANIPUR
Year 2021-22

SCHEDULE - 2 : DESIGNATED / EARMARKED / ENDOWMENT FUNDS

Refer Schedule 3(a)

A	Current Year 2022-23	Previous Year 2021-22
a) Opening Balance of the funds		
b) Additions during the year		
c) Income from Investments made of the the funds		
d) Accrued Interest on Investments/ Advances		
e) Interest on Savings Bank Account		
f) Other Additions (specify)		
(i) Subscriptions & recovery of advance		
(ii) Interest on SB a/c		

TOTAL (A)

B

Utilisation / Expenditure towards objectives of fund

i) Capital Expenditure

ii) Revenue Expenditure

TOTAL (B)

Closing balance at the end of the year (A-B)

Represented by

a) Cash and Bank Balance

b) Investments

c) Interest Accrued but not due

d) Others (Specify)

TOTAL

NATIONAL INSTITUTE OF TECHNOLOGY, MANIPUR

SCHEDULE 2 A

ENDOWMENT FUNDS

Sub- Schedule to support the figures in the column "Endowment Funds" in the Schedule 2 forming part of the Balance Sheet

Sl	Name of the Endowment	Opening Balance		Addition During the Year			Total		Expenditure on the object during the year	Closing Balance		Total
		Endowment	Accumulated Interest	Endowment	Interest		Endowment	Accumulated Interest		Endowment	Accumulated Interest	
1	2	3	4	5	6	7= (3+5)	8= (4+6)	9		10	11 (10+11)	
	NIL	NIL	NIL	NIL	NIL							

6 Supported by

Cash at bank

Investment in Bank STDR

Reinvested Interest

Accrued Interest but not due

Int. Receivable from SBI(TDS)

Receivable -Corpus Fund

Total

Less : Liabilities

NATIONAL INSTITUTE OF TECHNOLOGY, MANIPUR

Year 2022-23

SCHEDULE-3 : CURRENT LIABILITIES & PROVISIONS		Current Year 2022-23	Previous Year 2021-22
A	CURRENT LIABILITIES		
1	Deposit from Staff		-
2	Deposits from Students Caution deposit	1,03,35,000.00	62,15,000.00
3	Sundry Creditors		
	a) For Goods & services	12,76,79,389.00	13,13,12,392.00
	b) Others (CSAB)	35,32,807.00	28,53,007.00
4	Deposit Others (including Earnest Money & Security Deposit)	2,62,08,651.00	2,47,60,363.00
5	Statutory Liabilities remittable deductions (GPF,TDS,WC Tax, GIS, NPS)		
	a) Taxes and others	10,92,787.15	35,47,465.65
	b) Others : NPS	2,27,013.25	2,27,013.25
6	Other Current Liabilities		
	a) Salary/ Pension/ NPS		
	b) Receipts against sponsored projects		
	c) Receipts against sponsored fellowship & scholarships		
	d) Unutilised grants (Sponsored project)	90,21,084.39	1,79,57,808.09
	e) Sponsored Projects TEQIP - Balance	6,86,296.00	10,296.00
	f) Grants in advance		
	g) Stale Cheque A/c	71,49,181.00	44,71,357.00
	h) Other liabilities		
	(i) for Expenses	-	30,27,141.00
	(ii) Other Liabilities	4,76,14,273.94	3,40,73,197.74
	(ii) Other Liability - Grant received for remittance to others		
TOTAL (A)		23,35,46,482.73	22,84,55,040.73
B	PROVISIONS		
1	For Taxation		
2	Gratuity	54,29,530.00	54,29,530.00
3	Superannuation/ Pension		
4	Leave & Pension Contribution	10,28,825.00	10,28,825.00
6	Accumulated Leave Encashment	86,19,364.00	86,19,364.00
7	Trade Warrantees/ Claims		
8	Others (Specify)		
Total (B)		1,50,77,719.00	1,50,77,719.00
Total (A+B)		24,86,24,201.73	24,35,32,759.73

NATIONAL INSTITUTE OF TECHNOLOGY, MANIPUR

SCHEDULE -3 (a) SPONSORED PROJECTS

2022-23

Sl No	Name of the project	Opening balance		Receipts/ Recoveries, Interest during	Total	Expenditure During the year	Closing balance		Previous Year
		Credit	Debit				Credit	Debit	
1	AICTE Project	1,63,223.00			1,63,223.00	1,63,223.00	-		1,63,223.00
2	AICTE ATAL (All)	15,404.00			15,404.00	15,404.00	-		15,404.00
3	Dr Ibetombi UGC Project	45,000.00		75,000.00	1,20,000.00	75,000.00	45,000.00		45,000.00
4	Dr Subhash R & D Project	-			-		-		-
5	SERB -EMRF Dr. Ibetombi	2,06,391.00	-		2,06,391.00		2,06,391.00	-	2,06,391.00
6	ISRO (RAC-S) Ms Mamata	5,12,292.00	-	96,672.00	6,08,964.00	5,67,991.00	40,973.00	-	5,12,292.00
7	DST Land Degradation Risk Assmt - Bankim	-			-		-		-
8	DST Public Health - Bankim	-			-		-		-
9	SERB 2nd Proj DR Chandi	41,237.00		15,92,764.00	16,34,001.00	14,32,770.00	2,01,231.00		41,237.00
10	ISRO Project - Mamata	-			-		-		-
11	SERB 2nd Project Dr Lenin	8,82,915.00	-	44,738.00	9,27,653.00	8,24,965.00	1,02,688.00	-	8,82,915.00
12	R & D Project Dr Shuma	611.00			611.00		611.00		611.00
13	Ms Sharmila Inspire Fellowship	850.00			850.00		-		850.00
14	DST Complex Fluit Flow -Lenin Physics	14,671.00		4,21,760.00	4,22,610.00	4,22,610.00	-		14,671.00
15	Surface Oxygen & its effect- Nagarajan	11,40,065.00		-	11,40,065.00	-	11,40,065.00		11,40,065.00
16	SERB - Modular Approach to DNA- Mithun Roy	-			-		-		-
17	BRNS Project - Mithun Roy	59,483.00		5,06,349.00	5,37,724.00	5,51,188.00	-	-13,464.00	59,483.00
18	DST SERB Dr Tamphasana	31,375.00			31,375.00		-		31,375.00
19	Modelling of Cosmic Acceleration- Surendra	-			-		-		-
20	Dev of New Hybrid- A K Biru	75,000.00	-		75,000.00		75,000.00	-	75,000.00
21	DST project- S Binita Chanu	11,690.00			11,690.00		11,690.00		11,690.00
22	DST- CCP Dr Ng. Romanji	-	-3,04,704.00		-3,04,704.00		-	-3,04,704.00	-3,04,704.00
23	DST Inspire Ng. Joseph Singh	2,442.00		4,78,508.00	4,80,950.00	3,74,702.00	1,06,248.00		2,442.00
24	DST Inspire Dr Birla	1,26,632.00		91,582.00	2,18,214.00	93,372.00	1,24,842.00		1,26,632.00
25	SERB -Priyabrata	-	-3,65,837.00	3,65,837.00	-	-	-		-3,65,837.00
26	ISRO - EOAM Dr Romenji	71,430.00	-		71,430.00		71,430.00	-	71,430.00
27	Improvising stability -L Herojit	2,29,448.00			2,29,448.00		2,29,448.00		2,29,448.00
28	GRIDS ACA Support/ Innovation	2,91,539.00			2,91,539.00		2,91,539.00		2,91,539.00
29	SERB - Premkumar L	12,911.00			12,911.00		12,911.00		12,911.00
30	CMR Proj. Dr Mithun	9,23,536.00		25,074.00	9,48,610.00	5,88,352.00	3,60,258.00		9,23,536.00
31	TIFAC - Dr Munal	28,872.70		762.00	29,634.70	29,634.70	-		28,872.70
32	UBA - 2019	3,35,011.00		8,23,000.00	11,58,011.00	11,58,011.00	-		3,35,011.00
33	SMDP: Suraj	4,94,583.39		35,579.00	5,30,162.39	5,27,619.00	2,543.39		4,94,583.39
34	NECTOR Dr Albino	7,08,144.00		2,88,000.00	9,96,144.00	9,96,144.00	-		7,08,144.00
35	OTP-NIDM Dr Dinamani	36,270.00			36,270.00	34,000.00	2,270.00		36,270.00
36	QIP- AICTE Dr Bankim	73,550.00		1,650.00	75,200.00	49,333.00	25,867.00		73,550.00
Sub-Total carried over		65,34,576.09	-6,70,541.00	48,47,275.00	1,07,11,310.09	79,63,801.70	30,65,676.39	-3,18,168.00	58,64,035.09

SI		Continuation Schedule-3(a)		Opening balance		Receipts/	Total		Expenditure		Closing balance	
No		Credit	Debit	Recoveries,			During the year		Credit	Debit		
	Total Carried forward	65,34,576.09	-6,70,541.00	48,47,275.00		1,07,11,310.09	79,63,801.70		30,65,676.39	-3,18,168.00		58,64,035.09
37	Randum Verification	12,844.00				12,844.00			12,844.00			12,844.00
38	SARS - Project DR Mithun	9,09,648.00		93,673.00		10,03,321.00	6,22,280.00		3,81,041.00			9,09,648.00
39	SERB - Dr Mithun 3rd Project	20,54,222.00		1,16,075.00		21,70,297.00	19,36,199.00		2,34,098.00			20,54,222.00
40	SERB- Dr Dushyant 2nd Project	32,20,414.00		2,21,219.00		34,41,633.00	5,77,335.00		28,64,298.00			32,20,414.00
41	SERB - Dr Herojit 2nd Project	17,34,907.00		73,789.00		18,08,696.00	17,39,891.00		68,805.00			17,34,907.00
42	SERB- Dr Mrinal 2nd Project	14,48,748.00		24,979.00		14,73,727.00	14,73,727.00		-			14,48,748.00
43	SERB - Dr Jina	11,67,763.00		21,144.00		11,88,907.00	10,27,385.00		1,61,522.00			11,67,763.00
44	DST R&D Project - Dr BP Swan	-		1,34,000.00		1,34,000.00	-		1,34,000.00			
45	SERB - Dr Ashish Ranjan	-		8,29,000.00		8,29,000.00			8,29,000.00			
46	MeitY Dr Y. Jina	-		9,22,888.00		9,22,888.00	9,22,888.00		-			
47	DST R & D Dr Th. David			90,000.00		90,000.00			90,000.00			
48	DST R & D Dr Y. Jina			90,000.00		90,000.00			90,000.00			
49	SERB INAE - Dr Bankim			5,04,000.00		5,04,000.00	5,04,000.00		-			
50	TIFAC _ Dr Benjamin A Shimray			8,05,000.00		8,05,000.00	6,42,753.00		1,62,247.00			
51									-			
48	Bank Interest on Project a/c pending allocation	78,087.00		3,23,162.00		4,01,249.00	2,70,295.00		1,30,954.00			78,087.00
	Total (A)	1,71,61,209.09	-6,70,541.00	90,96,204.00		2,55,86,872.09	1,76,80,554.70		82,24,485.39	-3,18,168.00		1,64,90,668.09
1	DASA	6,35,000.00		-		6,35,000.00	-		6,35,000.00			6,35,000.00
2	NMEICT	1,61,599.00				1,61,599.00	-		1,61,599.00			1,61,599.00
	Total (B)	7,96,599.00	-	-		7,96,599.00	-		7,96,599.00	-		7,96,599.00
	Total (A+B)	1,79,57,808.09	-6,70,541	90,96,204.00		2,63,83,471.09	1,76,80,554.70		90,21,084.39	-3,18,168.00		1,72,87,267.09
	Net Balance											

NATIONAL INSTITUTE OF TECHNOLOGY, MANIPUR

2022-23

SCHEDULE -3 (b) SPONSORED FELLOWSHIP AND SCHOLARSHIPS

Name of the project		Opening balance		Receipts/	Total		Expenditure	Closing balance		Previous Year
SI	No	Credit	Debit	Recoveries during the year			During the year	Credit	Debit	
	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL

NATIONAL INSTITUTE OF TECHNOLOGY, MANIPUR

Year 2022-23

SCHEDULE 3 (c) UNUTILISED GRANTS FROM GOVERNMENT OF INDIA AND STATE GOVERNMENTS

A Government of India	A/C -31 (General)	A/C-36(Salary)	A/C- 35 (Capital Exp)	Total 2022-23	Total 2021-22
1 Unutilised Balance brought forward	46,38,32,602.42	24,23,38,743.64	-85,65,94,605.13	-15,04,23,259.07	-22,95,08,423.62
2 Grant Received During the Year	14,95,00,000.00	12,23,00,000.00	-	27,18,00,000.00	30,02,82,000.00
3 Total	61,33,32,602.42	36,46,38,743.64	-85,65,94,605.13	12,13,76,740.93	7,07,73,576.38
4 Less : Refund	9,87,07,376.00	1,09,74,891.00	-	10,96,82,267.00	-
5 Balance to be Utilised :	51,46,25,226.42	35,36,63,852.64	-85,65,94,605.13	1,16,94,473.93	-
5.a Total Expenses as per Income & Exp. /Receipts & Payment A/c	15,53,92,451.69	12,21,07,489.00		27,74,99,940.69	21,97,17,387.44
5.b Decrease (increase) in Liability	14,35,075.00	-		14,35,075.00	22,30,799.00
5.c Increase (Decrease) in Advance	33,33,626.00	-		33,33,626.00	-7,51,350.99
5.d Total Expenses Paid (5a+5b+5c)	16,01,61,152.69	12,21,07,489.00		28,22,68,641.69	22,11,96,835.45
6 Unutilised / overutilised Balance (6a-5d)	35,44,64,073.73	23,15,56,363.64	-85,65,94,605.13	-27,05,74,167.76	-15,04,23,259.07

Note : 1 ** During the year capital expenses for Rs 279.92.697 was incurred. The expenses was paid out of IGR as no grant was received under head -35. Hence the expenditure is not reflected

Note :2 The shortfall in the grant fund is made up from Internal generated Revenue

B Grants from State Government

Balance brought forward	NIL	NIL	NIL	NIL
Add : Receipts during the year	-	-	-	-
Total (c)	-	-	-	-
Less : Refunds	-	-	-	-
Less : Utilised for Revenue Expenditure	-	-	-	-
Less : Utilised for Capital expense	-	-	-	-
Total (d)	-	-	-	-
Unutilised Carried Forward (c-d)	-	-	-	-

Statement of Clear Bank balances owned by NIT

	Current Year 2022-23	Previous Year 2021-22
1 Total Cash & Bank balances -		
Schedule -7	19,07,25,975.32	28,02,55,681.01
Schedule - 6 Investment in ICICI MF	5,04,905.07	5,04,905.07
2 Total	19,12,30,880.39	28,07,60,586.08
3 Other legitimate Refundables and Payables		
Stale Cheque : Sch.3(6d)	71,49,181.00	44,71,357.00
Refundables/ Payables	8,49,25,839.94	6,51,24,214.74
CCB	35,32,807.00	28,53,007.00
Other Earmarked Fund (Projects)	90,21,084.39	1,79,57,808.09
Remittable Deductions	7,92,059.40	32,62,998.90
Total - 3	10,54,20,971.73	9,36,69,385.73
4 Clear Fund of NIT inclusive of IGR (2-3)	8,58,09,908.66	18,70,91,200.35
5 Of the above IGR Cumulative Fund Balance	34,78,84,076.42	32,90,14,459.42
6 MOBC Fund release from IGR	85,00,000.00	85,00,000.00
7 Total Cumulative Deficit under 31,36 and 35 [4-5-6]	-27,05,74,167.76	-15,04,23,259.07

NATIONAL INSTITUTE OF TECHNOLOGY , MANIPUR

2022-23

SCHEDULE - 4A:

		G R O S S V A L U E				D E P R E C I A T I O N				N E T B L O C K		
Sl	ASSETS	Opening Balance 1.4.2022	Additions	sold/ discard/ Transfer/ Adjst - ment	TOTAL 31.3.2023	Rate %	Opening balance	Depreciation for the year	Excess (short) Depreciation adjusted	Total Depreciation	31.3.2023	31.3.2022
4A	Tangible assets											
1	Freehold land	1,000.00	-		1,000.00	0%	-	-	-	-	1,000.00	1,000
2	Land Development	2,66,12,853	35,64,134		3,01,76,987	0	-	-	-	-	3,01,76,987	2,66,12,853
3	Buildings	7,83,69,304			7,83,69,304	2%	86,95,111	15,67,386		1,02,62,497	6,81,06,807	6,96,74,193
4	Playground	2,89,06,367	-		2,89,06,367	2%	17,34,381	5,78,127		23,12,508	2,65,93,859	2,71,71,986
5	Roads, drains & culverts	1,93,12,282	17,72,196		2,10,84,478	2%	21,57,303	4,21,690		25,78,993	1,85,05,485	1,71,54,979
6	Tubewell & Water Supply	43,07,519	-		43,07,519	2%	4,38,278	86,150		5,24,428	37,83,091	38,69,241
7	Electrical Equipment/ Installation	2,49,41,463	-	18,75,121	2,30,66,342	5%	87,37,435	11,53,317	5,62,536	93,28,216	1,37,38,126	1,62,04,028
8	Computers & Peripheral	10,65,33,181			10,65,33,181	20%	10,18,51,938	8,00,924		10,26,52,862	38,80,319	46,81,243
9	General Equipment	1,81,55,740	-		1,81,55,740	7.5%	1,32,57,499	13,61,681		1,46,19,180	35,36,560	48,98,241
10	Audio Visual Equipment	64,59,679	-		64,59,679	7.5%	30,12,752	4,84,476		34,97,228	29,62,451	34,46,927
11	Books	3,23,56,175	-		3,23,56,175	10%	2,64,85,944	23,43,735		2,88,29,679	35,26,496	58,70,231
12	Workshop/ Lab Equipment	70,21,42,174	34,86,864		70,56,29,038	8%	40,08,27,942	5,63,22,150		45,71,50,092	24,84,78,946	30,13,14,232
13	Sports Equipment	7,29,660	-		7,29,660	7.5%	6,03,659	54,725		6,58,384	71,276	1,26,001
14	Furniture & Fixture	10,81,49,530	23,06,358	33,49,921.00	10,71,05,967	7.5%	5,49,64,108	79,50,794	15,07,464	6,14,07,438	4,56,98,529	5,31,85,422
15	Vehicles	48,55,203	-		48,55,203	10%	39,08,491	3,22,989		42,31,480	6,23,723	9,46,712
16	Other Assets	29,01,854	-		29,01,854	7.5%	18,82,931	2,17,639		21,00,570	8,01,284	10,18,923
	Total 4A	1,16,47,33,984	1,11,29,552.00	52,25,042	1,17,06,38,494		62,85,57,772	7,36,65,783	20,70,000	70,01,53,555	47,04,84,939	53,61,76,212
4B	Intangible Assets											
10	Computer Software	21,83,77,358	-		21,83,77,358	40%	21,35,67,559	-		21,35,67,559	48,09,799	48,09,799
11	E- Books & Journal	6,94,69,462	-		6,94,69,462	40%	6,77,32,725	-		6,77,32,725	17,36,737	17,36,737
	Total 4B	28,78,46,820	-	-	28,78,46,820		28,13,00,284	-	-	28,13,00,284	65,46,536	65,46,536
4C	Patent	1,81,220	1,35,725		3,16,945	11%	1,50,586	25,857		1,76,443	1,40,502	30,634
4D	Assets under 100% Depn	9,35,525	-		9,35,525	100%	9,35,525			9,35,525	-	-
	Total carried over	1,45,36,97,549	1,12,65,277	52,25,042	1,45,97,37,784		91,09,44,167	7,36,91,640	20,70,000	98,25,65,807	47,71,71,977	54,27,53,382

Total Carried forward	1,45,36,97,549	1,12,65,277	52,25,042	1,45,97,37,784		91,09,44,167	7,36,91,640	20,70,000	98,25,65,807	47,71,71,977	54,27,53,382
4E Assets under Project											
(a) Tangible Assets											
1 Computer	28,04,270	-		28,04,270	20%	23,79,846	1,23,241		25,03,087	3,01,183	4,24,424
2 Equipment	89,47,152			89,47,152	8%	24,60,819	7,15,772		31,76,591	57,70,561	64,86,333
(b) Intangible Assets											
1 Computer Software	35,93,373	-		35,93,373	40%	35,03,539			35,03,539	89,834	89,834
Total 4E	1,53,44,795	-	-	1,53,44,795		83,44,204	8,39,013	-	91,83,217	61,61,578	70,00,591
4D TEQIP Assets											
(a) Tangible Assets											
1 Equipment	4,62,16,586			4,62,16,586	8%	1,11,04,004	36,97,327		1,48,01,331	3,14,15,255	3,51,12,582
2 Computer	48,31,423			48,31,423	20%	28,71,823	9,54,308		38,26,131	10,05,292	19,59,600
(b) Intangible Assets											
1 e-Books	2,38,69,522			2,38,69,522	40%	2,17,29,285	15,43,499		2,32,72,784	5,96,738	21,40,237
2 Software	32,65,200			32,65,200	40%	29,86,958	1,43,069		31,30,027	1,35,173	2,78,242
Total 4F	7,81,82,731	-	-	7,81,82,731		3,86,92,070	63,38,203	-	4,50,30,273	3,31,52,458	3,94,90,661
Total (4A to 4F)	1,54,72,25,075.13	1,12,65,277.00	52,25,042.00	1,55,32,65,310.13		95,79,80,441.00	8,08,68,856	20,70,000.00	1,03,67,79,297	51,64,86,013.13	58,92,44,634.13
Total Tangible	1,22,84,68,940.13	1,11,29,552.00	52,25,042.00	1,23,43,73,450.13		64,83,09,789.00	7,91,56,431	20,70,000.00	72,53,96,220	50,89,77,230.13	58,01,59,151.13
Total Intangible	31,87,56,135.00	1,36,725.00	-	31,88,91,860.00		30,96,70,652.00	17,12,425	-	31,13,83,077	75,08,783.00	90,85,483.00
Previous Year	1,54,04,51,522	67,73,553		1,54,72,25,075.13		87,30,65,232	8,49,15,209	-	95,79,80,441	58,92,44,634.13	66,73,86,290.13

Residual value has been kept for Computer 2.5% E-books -2.5% , Software 2.2%, Project software -2.5% , Vehicle -5% of the gross value
Depreciation on TEQIP assets is cumulative since 2018-19

SCHEDULE -4 G : CAPITAL WORK IN PROGRESS

	Opening Balance 1.4.2022	Addition during the year	Transfer during the year	Total 31.3.2023
1 Work Deposit with C.P.W.D. for Construction Works	83,50,00,000	-	-	83,50,00,000
2 Education Dept : Engg	90,09,81,412	-	-	90,09,81,412
3 MOBC	2,95,00,000	1,67,27,420	-	4,62,27,420
3 Architect / Consultancy Fee	22,72,185	-	-	22,72,185
Total	1,76,77,53,597	1,67,27,420	-	1,78,44,81,017

NATIONAL INSTITUTE OF TECHNOLOGY, MANIPUR

SCHEDULE -5 : INVESTMENTS FROM EARMARKED / ENDOWMENT FUNDS

Particulars		Current Year 2022-23	Previous Year 2021-22
A	Long Term Investments	-	
1	In Central Government Securities	-	-
2	In State Government Securities	-	-
3	Other Approved Securities	-	-
4	Shares	-	-
5	Debenture & Bonds	-	-
6	Term Deposits with Banks	-	-
7	Others	-	-
Total		-	-

SCHEDULE -5(A) : INVESTMENTS FROM EARMARKED / ENDOWMENT FUNDS (FUNDWISE)

SCHEDULE 6 - INVESTMENT OTHERS		Current Year 2022-23	Previous Year 2021-22
1	In Central Government Securities		
2	In State Government Securities		
3	Other Approved Securities		
4	Shares		
5	Debenture & Bonds		
6	Others (to be specified)		
	Mutual Fund - ICICI Prudential (9842.204 units)	5,04,905.07	5,04,905.07
	NAV as at 31.3.2022	5,04,905.07	5,04,905.07

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SCHEDULE 7- CURRENT ASSETS		Current Year 2022-23	Previous Year 2021-22
1 Stock :			
a) Stores and spares			
b) Loose Tools			
c) Publications			
d) Laboratory Chemicals, Consumables & Glasswares			
e) Building materials			
f) Electrical Materials			
g) Stationery			
h) Water Supply materials			
2 Sundry Debtors			
a) Debts Outstanding for a period exceeding six months			
b) Others			
3 Cash balances in hand(including cheques/ drafts and imprest) and remittance in transit		2,39,800.00	4,29,190.00
4 Bank Balances (to be further classified as pertaining to earmarked fund or otherwise)			
a) With Scheduled Banks			
in Current Accounts		77,48,134.18	96,47,514.62
in Term Deposit Accounts			
in Savings Accounts		18,27,38,041.14	27,01,78,976.39
b) With Non-Scheduled Banks			
in Current Accounts			
in Term Deposit Accounts			
in Savings Accounts			
5 Post Office - Savings Accounts			-
		19,07,25,975.32	28,02,55,681.01

ANNEXURE : Details of Bank Accounts

NATIONAL INSTITUTE OF TECHNOLOGY, MANIPUR

Annexure to Schedule 7 : Details of Bank Balances

2022-23

Sl No.	Name of Bank	Opening Balance 1.4.2022			Closing Balance 31.3.2023	
		Current Account	Savings Bank A/c		Current Account	Savings Bank A/c
1	ICICI Bank Ltd	77,48,134.18			77,48,134.18	
2	PNB	97,854.00			-	
3	SBI 6413		6,43,252.30			1,66,83,474.40
4	SBI	18,01,526.44			-	
5	Bank of India		5,38,646.00			5,56,123.00
6	Canara SB		8,00,986.10			-
7	Central Bank of Ind		5,52,811.00			5,52,752.00
8	Syndicate Bank		9,69,096.96			10,29,546.93
9	Syndicate Project		4,94,583.39			2,543.39
10	Yes Bank		6,00,515.63			6,02,780.81
11	BOB SB21096		6,36,50,945.14			8,20,09,130.74
12	BOB Project A/c		1,25,56,344.25			71,65,507.25
13	BOB DDO		1,66,767.30			75,714.30
14	BOB IRG		7,42,53,967.02			6,52,50,803.02
15	BOB 0319 (Mir Pjt)		51,872.70			-
16	BOB 8412		-			
17	BOB -RD 1		2,30,000.00			2,61,921.00
18	BOB-RD 2		8,10,000.00			11,70,000.00
19	BOB-1062 PMFS		41,76,921.60			16,30,636.10
20	RBI (31)		9,87,07,376.00			33,70,822.00
21	RBI (36)		1,09,74,891.00			15,61,048.00
22	BOB -ICSTE -01432		-			8,15,238.20
		96,47,514.62	27,01,78,976.39		77,48,134.18	18,27,38,041.14

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SCHEDULE 8 - LOANS, ADVANCES & DEPOSITS	Current Year 2022-23	Previous Year 2021-22
Advances to Employees ¹		
a) Salary		
b) Festival		
c) Medical Advance		
d) Others (to be specified)		
(i) LTC		
2 Long Term Advances to Employees (interest bearing)		
a) Vehicle Loan		
b) Home Loan		
c) Others (to be specified)		
3 Advances and other amounts recoverable in cash or in kind or for value to be received		
a) On Capital Account		
b) to Suppliers	3,13,060.00	3,13,060.00
c) Others	87,99,498.00	51,00,093.00
4 Prepaid Expenses		
a) Insurance		
b) Other Expenses		
5 Deposits		
a) Telephone		
b) Lease Rent		
c) Electricity		
d) AICTE (if applicable)		
e) Others (to be specified)		
6 Income Accrued		
a) On investments from Earmarked / Endowment Funds		
b) On Investments Others		
c) Loans & Advances		
d) Interest Accrued on Term Deposits		
d) Others - Student Fees		
includes income due unrealised		
7 Other - Current Assets :		
a) Receivables from Sponsored Projects TEQIP		
b) Debit balances in sponsored Projects	3,18,168.00	6,70,514.00
c) Debit Balances in Fellowship & scholarship		
d) Grants Receivable		
e) Other Receivables & Recoverables	2,52,616.01	2,66,049.01
8 Claims receivable (TDS on Consultancy fee)	94,566.00	94,566.00
Total (1 to 8)	97,77,908.01	64,44,282.01

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SCHEDULE -9 : ACADEMIC RECEIPTS		Current Year 2022-23	Previous Year 2021-22
FEE FROM STUDENTS			
A	Academic		
	1. Tuition Fee	1,84,81,409.00	1,48,30,082.00
	2. Admission fee	3,16,500.00	3,05,000.00
	3. Enrolment Fee	-	-
	4. Library Admission Fee	-	-
	5. Laboratory Fee	91,200.00	3,550.00
	6. Institutional Development Fee	25,75,000.00	19,70,000.00
	7. Registration Fee		
	8. Other Academic Fee	29,13,177.00	7,16,321.60
	Total (A)	2,43,77,286.00	1,78,24,953.60
B	Examinations		
	1. Admission Test Fee	-	-
	2. Annual Examination Fee	11,67,250.00	10,30,750.00
	3. Mark Sheet, Certificate, Migration etc	3,69,080.00	2,62,118.00
	4. Entrance Examination Fee	-	-
	Total (B)	15,36,330.00	12,92,868.00
C	Other Fees		
	1. Identity Card Fee	2,08,860.00	61,000.00
	2. Fine and Misc Fee	84,000.00	44,400.00
	3. Medical & Insurance Fee	-	-
	4. Transportation Fee	-	-
	5. Hostel Admission Fee	2,63,500.00	-
	6. Placement & Training		3,40,000.00
	7. Student activity, Sports, Arts & Culture	19,40,200.00	3,08,000.00
	Total (C)	24,96,560.00	7,53,400.00
D	Sale of University publication etc		
	1. Sale of Admission Forms	37,750.00	74,100.00
	2. Sale of Syllabus & Question Paper	-	-
	3. Sale of Prospectus	63,400.00	62,700.00
	Total (D)	1,01,150.00	1,36,800.00
E	Other Academic Receipts		
	1. Skill Development Fee	3,86,000.00	3,000.00
	2. Registration fee for workshops programmes etc.	-	-
	Total (E)	3,86,000.00	3,000.00
GRAND TOTAL (A+B+C+D+E)		2,88,97,326.00	2,00,11,021.60

Note :

- None of the fees received is in the nature of capital receipts and hence not capitalised
- The academic year / period for which the fees are collected does not coincide to financial year. The income is recognised on actual basis and any fee received for the period covering beyond the financial year is not treated as advance fee received. In other way the outstanding fees i.e. due but not received are not recognised as income.

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2022-23

SCHEDULE -10 : GRANTS /SUBSIDIES (Irrevocable Grants & Subsidies Received)

A	Govt of India	Salary (36)	General (31)	Capital Exp (35)	TOTAL 2022-23	Salary (36)	General (31)	Capital Exp (35)	TOTAL 2020-21
		2022-23	2022-23	2022-23		2021-22	2021-22	2021-22	
1	Opening balance	24,23,38,743.64	46,38,32,602.42	(85,65,94,605.13)	(15,04,23,259.07)	26,21,58,848.64	36,49,27,332.87	(85,65,94,605.13)	(22,95,08,423.62)
2	Grant Received Less Refund	11,13,25,109.00	5,07,92,624.00	-	16,21,17,733.00	8,73,38,000.00	21,29,44,000.00	-	30,02,82,000.00
3	Total	35,36,63,852.64	51,46,25,226.42	(85,65,94,605.13)	1,16,94,473.93	34,94,96,848.64	57,78,71,332.87	(85,65,94,605.13)	7,07,73,576.38
4	Payments as shown below ##	12,21,07,489.00	16,01,61,152.69	-	28,22,68,641.69	10,71,58,105.00	11,40,38,730.45	-	22,11,96,835.45
5	Balance of Fund	23,15,56,363.64	35,44,64,073.73	(85,65,94,605.13)	(27,05,74,167.76)	24,23,38,743.64	46,38,32,602.42	(85,65,94,605.13)	(15,04,23,259.07)
## Payments									
a.	As per Income & Expenditure Account	12,21,07,489.00	15,53,92,451.69	-	27,74,99,940.69	10,71,53,605.00	11,25,63,782.44	-	21,97,17,387.44
b.	Decrease(Increase) in Liabilities	-	14,35,075.00	-	14,35,075.00	4,500.00	22,26,299.00	-	22,30,799.00
c.	Increase(Decrease) in Advances	-	33,33,626.00	-	33,33,626.00	-	(7,51,350.99)	-	(7,51,350.99)
	Cash Payments (a+b+c)	12,21,07,489.00	16,01,61,152.69	-	28,22,68,641.69	10,71,58,105.00	11,40,38,730.45	-	22,11,96,835.45

B State Govt and other Agencies :

MOBC : For Construction of Hostel									2019-20
1 Opening balance	-	-	-	-	-				85,00,000.00
2 Received during the year	-	-	-	-	-				-
3 Payments	-	-	-	-	-				85,00,000.00
4 Balance	-	-	-	-	-				-

Note 1 : No grant has been received from the MHRD under the head -35 : Capital Expenses from the year 2017-18.. Thus the capital expenditure of Rs 53,82,703 has been during the year incurred from Internal Revenue Generated (IRG). Hence the expenditure is not reported.

Note 2 : The balance of fund is supported

A	Cash and Bank balance i/c Mutual Fund Investment	2022-23	2021-22
B	LESS :	19,12,30,880.39	28,07,60,566.08
	1. MOBC Fund included in above balance	85,00,000.00	85,00,000.00
	2. IRG Fund	34,78,84,076.42	32,90,14,459.42
	3. Refutable and Payables	8,49,25,839.94	6,51,24,214.74
	4. Other Restricted Fund of Projects	90,21,084.39	1,79,57,808.09
	5. CCB Fund	35,32,807.00	28,53,007.00
	6. Remittable Deductions	7,92,059.40	32,62,998.90
	7. Stale Cheque Account	71,49,181.00	44,71,357.00
	Total B	46,18,05,048.15	43,11,83,845.15
	Balance of Fund of Grant (A-B)	-27,05,74,167.76	-15,04,23,259.07

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SCHEDULE -11 : INCOME FROM INVESTMENTS	Current Year 2022-23	Previous Year 2021-22
1 Interest		
a) On Govt securities		
b) Other Bonds/ Debenture		
c) Others : Mutual Funds	-	69,485.97
d) Mutual Fund Investments		
Less : transfer to designated fund accounts		
2 Interest on Term deposits	-	-
³ Income accrued but not due on Term Deposits/ Interest bearing		
⁴ advances to employees (where Revolving Fund has been constituted)		
⁵ Others (Specify)		
		69,485.97
SCHEDULE 12 : INTEREST EARNED		
1 On Savings bank Accounts with Schedule Banks	38,29,676.00	42,34,004.44
2 Interest on RD	31,921.00	
3 On Loans		
-a) Employees (if Revolving Funds have not been constituted for such advance)	-	
b) Others		
4 On Debtors and Other Receivables	-	
Total	38,61,597.00	42,34,004.44

Note

SCHEDULE -13 : OTHER INCOME		
A Income from Land & Buildings		
1. Hostel Room Rent	31,55,000.00	69,500.00
2. License and Permit Fee	23,825.00	
3. Hire Charge of Auditorium/Play ground/ Convention Centre etc	-	
4. Electricity & Water Charges recovered	12,56,000.00	13,000.00
5. Quarter Rent	14,73,972.00	14,80,073.00
6. TEQIP 3		
7. Non- IRG :Student Medical & Insurance fee	11,07,000.00	3,50,800.00
8. Guest House Earning	-	-
Total	70,15,797.00	19,13,373.00
B Sale of Institute's Publication (included under schedule 9-D)	-	-
C Income from holding		
1. Gross Receipts from annual functions/ sports carnival		
Less : Direct expenditure incurred on the annual function/ sports carnival		
2. Gross Receipts from fetes		
Less : Direct expenditure incurred on the fetes		
3. Gross Receipts on Educational Tours		
Less : Direct expenditure incurred on the Educational Tours		
4. Others (to be specified and separately disclosed)	-	
Total		

NATIONAL INSTITUTE OF TECHNOLOGY, MANIPUR

D Others	Current Year 2022-23	Previous Year 2021-22
1. Income from Consultancy	61,32,568.00	11,59,414.00
2. RTI fees	-	
3. Income from Royalty	-	
4. Sale of Application Form (recruitment)	-	
5. Misc receipts XRD Sample Charge, (sales of waste paper)	-	
6. Profit on sale/ disposal of Assets	-	
a) Owned Assets	-	
b) Assets acquired out of grants or received free of cost	-	
7. Grants/ Donations from Institutions, Welfare Bodies & International Organisations	-	
8 Others (Specify)		
a) Sale of Tender Form	26,950.00	14,000.00
b) Other Receipts	-	
c) Overhead from Projects (Net)	6,52,717.00	10,78,820.00
d) Staff Recruiting	2,19,000.00	-
c) Donation/ Sponsor	-	-
Total	70,31,235.00	22,52,234.00
GRAND TOTAL (A +B+C+D)	1,40,47,032.00	41,65,607.00

SCHEDULE 14- PRIOR PERIOD INCOME		Disclosed seperately under Schedule 24 Note -9	
	Current Year 2022-23	Previous Year 2021-22	
1 Academic Receipts	-		
2 Income form Investments	-	-	
3 Interest Earned	-	-	
4 Other Income	-	-	
Total	-	-	

Year 2022-23

Actuarial Valuation on the retirement benefits has not been obtained and the capitalised value has not been calculated

NATIONAL INSTITUTE OF TECHNOLOGY, MANIPUR

SCHEDULE -16 : ACADEMIC EXPENSES	Current Year 2022-23	Previous Year 2021-22
1 Laboratory Expenses	2,87,420.00	1,78,648.00
2 Field Work / conference/ Faculty Development/ Training		99,004.00
3 Expenses on Seminar,workshop & short term course	7,580.00	
4 Payments to Visiting Faculty		-
5 Examination		-
6 Student Insurance & Medical		1,372.00
7 Professional Dev Expenses	65,383.00	-
8 Convocation Expenses	16,64,847.00	1,59,350.00
9 Academic Support	1,04,192.00	2,84,131.00
10 Stipend/ Means cum-merit Scholarship, Ph.D Stipend	3,21,62,487.00	2,92,13,613.00
11 Subscription, Periodical Expenses	19,924.00	7,678.00
12 Others (Specify)		-
a) Placement, Career Dev. Exp	-22,000.00	-
b) Sports & Other Activities	1,04,252.00	2,56,389.00
c) M. Tech Scholarship	16,69,455.00	26,72,792.00
d) Hostel Exp	1,69,337.00	14,490.00
e) Festival & Celebrations	17,46,671.00	18,41,399.00
f) Others : Trainee Teacher Scheme	19,159.00	96,876.00
g) Phd Contingency Charges	12,80,790.00	
SCHEDULE -17 : ADMINISTRATIVE AND GENERAL EXPENSES	3,92,79,497.00	3,48,25,742.00
A Infrastructure		
1 Electricity and Power	54,26,604.00	38,65,179.00
2 Water Charges	17,91,345.00	8,98,915.00
3 Insurance	-	-
4 Rates,Service & Other Taxes (including Late fine)	-	-
	72,17,949.00	47,64,094.00
B Communication		
1 Postage & Telegrams	1,95,625.00	82.00
2 Telephone, Fax & Internet Charges	25,51,160.00	52,268.00
	27,46,785.00	52,350.00
C Others		
1 Contract Staff Salary	3,79,60,473.00	3,64,66,730.00
Leave & Pension Contribution	-	8,55,484.00
E.P.F. Employers Contribution	21,20,400.00	18,37,470.00
E.P.F. Administration Charges	1,76,700.00	1,52,550.00
E.P.F. Penalty	12,74,890.00	-
Relocation & Moving Allowance		99,750.00
2 Printing & Stationery	4,83,094.00	6,83,165.00
3 Traveling & Conveyance	33,86,616.30	3,55,232.00
4 Honorarium	29,97,947.00	6,92,983.00
5 Hospitality & Refreshment	4,74,335.70	-
6 Internal Audit +GST		1,18,000.00
7 Professional Charges	7,33,500.00	6,60,000.00
8 Advertisement & Publicity	10,44,437.00	1,38,980.00
9 Others (Specify)		
a) Guest House Exp	3,50,000.00	-
b) Staff Recruiting Expenses	4,36,120.00	-
c) Meeting Expenses	5,08,759.00	38,749.00
d) Security and House Keeping Exp	2,73,21,366.00	2,12,01,782.00
e) Consultancy & Outsource	84,889.00	1,48,671.00
f) Contingency	9,12,101.00	2,93,714.00
g) Functions & Celebration	-	7,26,013.00
Total	8,02,65,628.00	6,44,69,273.00
Total A+B+C	9,02,30,362.00	6,92,85,717.00

NATIONAL INSTITUTE OF TECHNOLOGY, MANIPUR

SCHEDULE-18 : TRANSPORTATION EXPENSES	Current Year 2022-23	Previous Year 2021-22
1 Own Vehicles		
a) Running Expenses	9,50,440.00	2,10,465.00
b) Repairs & Maintenance		-
c) Insurance		-
2 Vehicle taken on rent/ lease		-
a) Rent/ lease expenses		8,46,710.00
3 Vehicle (taxi) hiring Expenses	11,61,061.00	-
	21,11,501.00	10,57,175.00
SCHEDULE-19 : REPAIRS AND MAINTENANCE		
1 Buildings	89,63,889.00	5,65,706.00
2 Furniture & Fixture	88,050.00	-
3 Plant & Machinery	-	1,07,560.00
4 Office Equipments	-	-
5 Computer Maintenance & Accessories	16,47,796.00	5,34,239.00
6 Laboratory & Scientific Equipment	3,67,776.00	-
7 Roads & Bridges	4,75,729.00	92,296.00
8 Cleaning materials & services	3,000.00	
9 System Maintenance	87,48,851.00	54,99,917.00
10 Campus Maintenance	63,160.00	3,000.00
11 Estate Maintenance	-	-
12 Others Assets	24,380.00	-
13 House-Keeping materials	2,07,461.00	72,765.00
Total	2,05,90,092.00	68,75,483.00
SCHEDULE -20 : FINANCE COST		
1 Bank Charges	70,771.00	35,935.44
2 Others (Specify)		
	70,771.00	35,935.44
SCHEDULE -21 : OTHER EXPENSES		
1 Provision for Bad & Doubtful Debts/ Advances		
2 Irrecoverable Balances written off		
3 Grants / Subsidies to Other Institutes/ organisations		
4 Others (specify)		
a) Donation to PM Care fund	-	-
b) Insurance for students (Non IRG)	9,43,150.00	-
c) Share of Consultancy Fee	20,67,078.00	4,83,730.00
d) Donation & Sponsorship	1,00,000.00	-
Total	31,10,228.00	4,83,730.00
SCHEDULE - 22 :PRIOR PERIOD EXPENSES		
1 Student scholarship	-	-
Others	-	-
Misc Debit balances w/o	-	-
Total	-	-

NATIONAL INSTITUTE OF TECHNOLOGY, MANIPUR

SCHEDULE -23 :PRIOR PERIOD ITEMS/ ADJUSTMENTS (Credit)	Current Year 2022-23	Previous Year 2021-22
	-	-
	-	-

NATIONAL INSTITUTE OF TECHNOLOGY, MANIPUR

2022-23

STAFF PROVIDENT FUND ACCOUNT

RECEIPTS AND PAYMENTS ACCOUNT FOR THE YEAR ENDED 31.3.2023

RECEIPTS	Amount (Rs)	PAYMENTS	Amount (Rs)
Contribution to General Provident Fund	77,772.00		-
Receivable contribution for March 2022	6,648.00		-
Interest on Bank Account	7,214.00		-
	<u>91,634.00</u>		
Opening bank balance : BOB 60330100001062	2,30,384.00	Closing bank balance BOB 60330100001062	3,22,018.00
	<u>3,22,018.00</u>		<u>3,22,018.00</u>

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31.3.2023

EXPENDITURE	Amount (Rs)	INCOME	Amount (Rs)
Excess of Income over expenditure - being	7,214.00	Interest on bank account	7,214.00
Interest credited to Fund Account	<u>7,214.00</u>		<u>7,214.00</u>

BALANCE SHEET AS AT 31.3.2023

FUND & LIABILITIES	Amount (Rs)	ASSETS	Amount (Rs)
Provident Fund Account :			
Opening balance	2,37,032.00	Cash at bank BOB 60330100001062	3,22,018.00
Addition during the year by contribution	77,772.00	Receivable from NIT for deduction	
Contribution for the month of March 2023	8,376.00	of March 2022	8,376.00
Add : excess of income over expenditure	<u>7,214.00</u>		
	<u>3,30,394.00</u>		
	<u>3,30,394.00</u>		<u>3,30,394.00</u>

SCHEDULE 24 : SIGNIFICANT ACCOUNTING POLICIES

1. Accounting Convention

- a) The accounts are maintained and financial statements are prepared on the basis of historical cost convention.
- b) Recognition of revenue and related assets and liabilities
The Institute normally follows the cash basis of accounting. However, for presentation of financial statements the liabilities and assets which are ascertained are taken into account.
- c) Retirement Benefits
The liability for expenses on retirement benefit of the staff – gratuity, leave salary estimated on the basis of number of years service and number of days of unavailed leave at the year end is provided and accounted on accrual basis and charged to expenses except as disclosed in the Notes on Account.
- d) Retirement Pension for the staff other than those covered under NPS is to be accounted on accrual basis.
- e) Interest on Special Term Deposits with Bank compounded up to end of the year is accounted on accrual basis.
- f) Fees received from the students are accounted on actual receipt basis. Thus the fees received covering the period beyond the financial year is treated as Income in the year of receipt. However fees short paid by the students at the time of admission is treated as receivable fees
- g) The value of the work bills which have been passed for payment but not paid is recognised as expenses and the related liability thereof is provided.
- h) Works in progress physically measured / unmeasured but not billed is not taken into the statement of account as the realistic value cannot be estimated.
- i) Deposits for the execution of the works made with the executing agencies are treated as work in progress to form part of fixed assets which shall be reversed to works value on the completion of the work.
- j) Security deposit received from the students
The security deposit is treated as current liabilities. Any non-refunded security deposit lying after expiry of three years from the due date of refund is considered as unclaimed liability and accordingly treated as Income of the Institute
- k) Income received for other purpose
Any receipt not relating to normal activity of the Institution obtained from any source which has to be spent for the specific purpose is not treated Income of the Institution but accounted as Current Liability. Accordingly, the expenditure incurred out of such receipts is not treated as normal expenditure of the Institute. The difference between the receipt and expenditure is directly taken in the balance sheet as balance of fund.

2. Apportionment of grant into revenue and capital grant

- a) The grants are treated either revenue receipt or capital receipt according to the direction of the granting authority. The capital grants are directly credited to General (Capital) Fund and the revenue grants are credited to Income and Expenditure Account. However, if such apportionment has not been made by the granting authority the whole amount of grant received is credited to Income and expenditure Account. In case the grant is received in accordance with the proposal initiated by the Institute the amount to the extent of capital expenditure component is treated as capital grant and treated accordingly.
- b) In respect of grants and contribution received under earmarked fund for special purposes or research works by the Departments the whole amount of grant is credited to the fund account and the expenses both revenue and capital are charged to the Fund. However, the value of the assets created out of the grant is treated as the fixed assets by giving corresponding credit to Capital Fund account as these assets acquired out of the grant form part of the assets of the Institute
- c) Other grants which are received other than specific purpose of creating capital assets are directly treated as revenue receipts and capital grants are directly credited to Capital Fund Account

3. Internal Revenue Generated (IRG)

The academic fees received from the students and other income earned by the Institution is treated as revenue receipt and credited to Income and Expenditure Account. Any expenditure of capital nature incurred out of IGR is treated as Assets forming part of fixed assets.

4. Treatment of expenditure renovation of, addition & alteration and extension on existing buildings not owned by the Institute.

A portion of facilities of the Institute is accommodated on the land and buildings owned by the Govt of Manipur with a right to use as a temporary campus. However, to meet its requirements expenses are incurred by way of renovation, partitions, addition & alterations on the existing buildings which result in some cases creation of new immovable asset. However, these assets, being immovable, have to be left behind when the institution shifts to its new campus. Therefore, the expenditure has been treated as revenue expenditure

5. Valuation of Inventory of consumables

The consumable items which are normally purchased for instant use and not intended to carry a substantial quantity thereof regularly are charged in full to the expenditure of the year. However, in case of purchases in bulk for consumption for a significant duration and stock of significant quantity is regularly carried in hand, the balance lying in stock is recognised as inventory under current asset. In such a case the valuation is made at cost or realisable value whichever is less.

6. Fixed assets

- a) Fixed Assets are stated at cost of acquisition inclusive of all direct expenses related to acquisition. In respect of projects involving construction related pre-operative expenses are absorbed into the cost of the assets
- b) Assets received by way of Non- monetary grants are accounted with corresponding

credit to the Corpus (Capital) Fund Account at the value declared by the donor.

- c) The value of the assets created out of the grants under Earmarked Fund/ Restricted Fund (sponsored project) is capitalized with corresponding credit of Corpus (Capital) fund Account.
- d) Where the funding agency reserves, in terms of sanction order of the grant, the right to ownership/ control over the assts like equipment, furniture, books etc. created out of the grant given for research activities the expenses are not taken into in Fixed Assets Group of the Financial Statement. Such assets will be taken into the fixed asset only after grant of the permission of ownership by the funding agency. In such a case the value of the assets is to taken after notional depreciation worked out at the rate applicable to the class of the asset. The assets acquired out of the grant but not capitalized are disclosed separately in the Notes on Account
- e) Where the funding agency has not reserved any right to ownership/ control over the assets created in due course of the research activity, the value of such assets is capitalized and taken in the relevant group of assets in the financial statement
- f) Assets received as gifts are valued at price indicated by the donor and where such price is not indicated the value is assessed on the prevailing market price

7. Fixed Assets and Depreciation

- a) Fixed assets are stated at cost of acquisition/construction less accumulated depreciation. The cost of assets comprises its purchase price and directly attributable cost of bringing the assets to working condition for its intended use i.e. cost of acquisition of assets including inter-alia interest on borrowing and incidental expenditure during construction incurred up to the date of commissioning.
- b) Assets received by way of Non- monetary grants are accounted at the value declared by the donor with corresponding credit to the Capital Fund Account.
- c) Depreciation on the assets is charged at the rate prescribed in the format of accounts issued by Ministry of Human Resource Development. Depreciation for full year is provided on the assets purchased during the year.
- d) A reasonable residual value is kept for assets which is fully depreciated
- e) No depreciation is charged on the assets till the asset is ready for use.
- f) No Depreciation is charged in the year of sale or disposal

f) Change in the Method of Depreciation

Depreciation on fixed assets is provided on written down value method upto 31.3.2014. However from FY 2014-15 onwards, in compliance with the direction of the Ministry of Human Resource Development, the method of depreciation has been changed to Straight Line Method. The excess/ shortfall arising from the change in the method (taking retrospective effect) has been charged to Income and Expenditure Account.

8 Capital Work in Progress

Capital work in progress includes cost of construction expenditure, deposits and advances made for such construction, interest on funds deployed on capital work in progress and other indirect preoperative expenditure incidental and related to acquisition of assets.

9 Restricted Funds [Special Purpose Funds]

- a) Any income by way of grant, donation, contribution, bank interest and income earned from investment is credited directly to the Fund and any outgoing towards revenue or capital expenses is charged to the fund. The net balance is treated as balance of the fund at the end of the year.
- b) Such fund is independently and distinctly shown under a separate head in the balance sheet
- c) The non-recurring expenses are treated in the fund account as expended and the value of the assets is taken in the general account under the group head of Fixed Assets with corresponding credit to Corpus/ Capital Fund.

10 Staff Retirement Benefits

The present retirement benefits are gratuity, leave encashment and pension. The benefits are worked out on the assumption:

- a) The members of the staff shall continue in the services of the Institution to be eligible for retirement benefits.
- b) With the number of years service earned the staff retires on the last date of the accounting year.
- c) The provision so made is to be reversed on the actual payments

11 Loans & Advances for expenses

- a) The payments in the nature of advance for meeting expenses are booked under the head “Advances”. These advances are charged to expenses only when the activity for which the advance is drawn is accomplished and the related documents have been approved and passed by the competent authority
- b) The loans and advances as shown in the statement of account are considered good and recoverable by way of expenses or otherwise and as such no provision for loss is made in the accounts

12 Foreign Exchange Transaction

The transactions involving foreign exchange directly entered into by the Institute or foreign exchange earned is disclosed separately under Notes on Account.

13 Capital Commitment

The ascertained capital commitment in respect of capital works contracts but not completed is disclosed separately under Notes on Account

14 Contingent Liability

It is disclosed separately under Notes on Account

SCHEDULE -25 : Contingent Liabilities and Notes on Account

1. There is contingent liability for about of Rs 3.00 lakh arising from claims made by a consultant firm
2. The financial statements are presented on the format prescribed by Ministry of Human Resource Development, Govt. of India.
3. The Government of Manipur has allotted 341 acres of land at Langol in favour of the Institute free of cost. The value of land has been recognised in financial statement at a nominal amount of Rs 1000.00
4. Loans & Advances
The loans and advances as shown in the statement of account are considered good and recoverable by way of expenses or otherwise and as such no provision for loss is made in the accounts
5. The residual value of the assets after expiry of usable life in respect Computer & Peripheral, e- books, Intangible assets are taken at 2.5% of the original cost and vehicles at 5%.
6. Other receipts/grants
The institute received grants for conducting research activities the project-wise funds received and expenditure incurred are reflected in Schedule 3(a). The unspent balance (Rs 90,21,084.39) is shown under Current Liability (Schedule 3) and the debit balance in the fund (3,18,168.00) under current assets in the Balance Sheet (Schedule 8).
- 7 At the year-end there was no significant stock of inventory of lab. consumables and hence in accordance with para 5 of the Significant Accounting Policies the value of the inventory is not considered as current asset.
- 8 Stale Cheque Account – under current liability Rs 71,49,181 (Prev. year 44,71,357.00)
The amount pertains to 42 cheques issued on or before 31.3.2020 whose validity has already expired. Value of two more cheques of the same nature amounting to Rs 26,77,824.00 was added during the year.
- 9 Deposit works with CPWD, Education Department, MOBC, Govt of Manipur
The amount deposited with the agencies has been treated as Capital Work in Process under the head ‘Fixed Assets’. Value of the work completed has to be finalised with the executing agencies. In respect of MOBC works – construction of 2 hostels the construction has reportedly been completed but the final settlement of actual expenditure has not been made the liability has not been provided on the works. The value of the work to the extent paid / deposited is placed under work in progress.
- 12 Retirement benefits
 - a) The provision for gratuity was made by applying a formula of 15 days salary for every year of service completed – over six months period rounding up to 1 year. Provision was made upto the year 2017-18
 - b) Provision for leave encashment is worked out on the basis of unavailed leave remaining outstanding at the end of the year 2017-18. The provision after that year has not been made.

- c) Payment for leave, pension contribution and gratuity of the staff has been made according to claims raised by the respective parent department in respect of staff on deputation and thus provision has not been made for the year towards pension and leave contribution.
- d) The staff on regular appointment has joined the NPS and the contributions of the Institute along with the subscription of the staff are remitted regularly
- e) For the contract staff the Institute has participated the scheme of Employees Provident Fund under The Employees Provident Fund and Miscellaneous Provisions Act, 1952 and both the employees subscriptions and Institute's contributions are remitted regularly
- f) No plan assets are funded or maintained to meet future leave encashment/ gratuity obligations. As the Institution has not engaged the services of Actuarial Valuer provision for gratuity and leave encashment has not been made after 2017-18.

13. Equipment purchased under project accounts and capitalisation

During the year capital expenses amounting to Rs 51,22,403 out of project grants. There is no reservation of the project funders for retrieving the capital assets purchased out of the grants. However as the projects are not yet completed the assets have not been brought to general account of the Institute. On the completion of the projects the assets shall be transferred to the general account.

ISRO – Dr Mamata	189,000
MeitY – Dr Y. Jina	922,888
SARS Dr Mithun	224,957
SARS Dr Bankim	1287,500
SERB Dr Herojit	1430,778
SERB Dr Lenin	625,380
SERB DR Y. Jina	441,900

14 Foreign Exchange Transaction

There is no foreign exchange transaction during the year

15 The facility of General Provident Fund contribution is not applicable to the employees of the Institute except one member of staff. The statement of affairs of General Provident Fund account of the staff is separately presented.

15. The quantitative information as on 31.3.2023 is furnished as under

a) Number of students including Ph D	1106
b) Number of students passed out	288
c) Number of scholars completed Ph.D.	27
d) Number of Faculty	72 [Regular 42 + Contract 30]
e) Number of Non- Faculty	73 [Regular 11 + Contract 62]
f) Number of hostel	6 [Boys - 4 + Girls -2]



PRINCIPAL ACCOUNTANT GENERAL (AUDIT), MANIPUR
प्रधान महालेखाकार (लेखापरीक्षा), मणिपुर
Babupara Imphal West
agaumanipur@cag.gov.in



Ltr No: Audit Management Group-I/2024-2025/DIS-1639661
Date: 08 Apr 2024

To,

The Addl. Secretary and Financial Advisor,
Department of Higher Education,
Ministry of Human Resource Development,
Shastri Bhavan, New Delhi – 110 001.

Subject: Separate Audit Report on the accounts of the National Institute of Technology, Manipur for the year 2022-23 : PR-98528

Sir/Madam,

I am directed to forward herewith the Separate Audit Report on the Accounts of the National Institute of Technology, Manipur, Imphal for the year 2022-23 and to request the Government to make necessary arrangements to place the Audit Report before the Parliament.

The Report may be kept confidential till it is placed before the Parliament.

Yours faithfully,

Encls: As above

A. Tarun Sharma
Aribam Tarun Sharma
SAO-AMG-I

Copy to:-

Ltr No : Audit Management Group-I/2024-2025/DIS-1639661/C1

1 The Principal Director (AB), Office of the Comptroller and Auditor General of India, 9, Deen Dayal Upadhyay Marg, New Delhi-110124.

Ltr No : Audit Management Group-I/2024-2025/DIS-1639661/C2

2 The Director, National Institute of Technology, Manipur, Langol, Imphal West - 795004 with a copy of the Separate Audit Report (SAR) on the Accounts.

[He is requested to make necessary arrangements to submit the Report to the concerned Ministry of Government of India under section 22(4) of the National Institute of Technology Act, 2007. He is further requested to intimate to this Office the date of placing of the SAR before the Parliament. Arrangements may please be made to translate the Report in Hindi and place before the Parliament through the concerned Ministry. 10 (ten) copies of the printed SAR placed before the Parliament may be forwarded to this Office. The Report may be kept confidential till it is placed before the Parliament.]



**Separate Audit Report on the Accounts of the
National Institute of Technology, Manipur for the year ended
31 March 2023**

1. We have audited the attached Balance Sheet of National Institute of Technology (NIT), Manipur as of 31 March 2023 and the Income & Expenditure 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 (DPC) Act, 1971 read with Section 22(2) of the NIT Act, 2007. 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 & Auditor General of India (CAG) on the accounting treatment only with regard to classification, conformity with the best accounting practices, accounting standards, disclosure norms, *etc.* Audit observations on financial transactions with regard to compliance with the Law, Rules & Regulations (Propriety and Regularity) and efficiency-cum-performance aspects, *etc.*, if any, are reported through 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. The audit includes examining, on a test basis, evidences supporting the amounts and disclosure in the financial statements. The 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 beliefs were necessary for the purpose of our audit;
- ii. The Balance Sheet, Income & Expenditure Account and Receipts & Payments Account dealt with by this report have been drawn up in the format prescribed by the Ministry of Education;
- iii. In our opinion, proper books of accounts and other relevant records have been maintained by the NIT, Manipur, as required under the Rules in so far as it appears from our examination of such books.
- iv. We further report that:

A. BALANCE SHEET

A.1 Balance Sheet as on 31 March 2023

Sources of Funds

Current Liabilities & Provisions: ₹ 24.86 crore {Schedules 3 & 3(c)}

Schedule 3(c) of the Annual Accounts depicts details of grants received from the Government, viz., opening grant balance at the beginning of the year, grants received during the year, refunds for the year, grants utilized and closing balance of grants at the end of the year. Grants-in-Aid received by the Institute are maintained in two types of accounts, namely, (i) Treasury Single Account (TSA) maintained with RBI and (ii) Non-TSA account with SBI. Scrutiny of records revealed the following:

- Refund of ₹ 10.97 crore during the current year (2022-23) as shown in Schedule – 3(c) of the Accounts was the refund pertaining to the previous year 2021-22 (unutilized balance of grants lying in TSA account as on 31 March 2022). Thus, the same amount should have been shown as the opening balance of unutilized grants (TSA account) as on 01 April 2022.
- Internal Revenue Generation (IRG) utilized for Capital expenditure during the years has been brought down and adjusted with grants received by the Institute over the years giving rise to in correct negative balance of grants.
- The details of grants to be shown in Schedule 3(c) as worked out in audit are as follows:

(Amount in ₹)

Sl. No.	Grants	Opening Balance of unutilized grants B/F	Received during the year	Total available	Utilized	Refunds	Closing Balance of unutilized grants C/F
A Treasury Single Account (TSA)							
1	General (OH-31)	9,87,07,376	14,95,00,000	24,82,07,376	14,61,29,178	9,87,07,376	33,70,822
2	Salary (OH-36)	1,09,74,891	12,23,00,000	13,32,74,891	12,07,38,952	1,09,74,891	15,61,048
3	Sub-total (A)	10,96,82,267	27,18,00,000	38,14,82,267	26,68,68,130	10,96,82,267	49,31,870
B Non-TSA							
1	General (OH-31)	20,46,095	–	20,46,095	19,93,150	–	52,945
2	Salary (OH-36)	6,43,022	–	6,43,022	6,43,022	–	–
3	Sub-total (B)	26,89,117	–	26,89,117	26,36,172	–	52,945
	Grand total (A+B)	11,23,71,384	27,18,00,000	38,41,71,384	26,95,04,302	10,96,82,267	49,84,815*

* Unutilized grants are to be represented on the Assets side by Bank balances, Short-term Deposits with Banks and Advances.

The unutilized grants amounting ₹ 0.50 crore which consist of unutilized grants from General (OH-31) amounting to ₹ 0.34 crore and balance of grants towards Salary (OH-36) amounting to ₹ 0.16 crore as arrived at in the above table should have been reflected under the head Current Liabilities (Schedule 3) in the Balance Sheet. However, the unutilized grants are not included in Current Liabilities.

This has resulted in understatement of Current Liabilities by ₹ 0.50 crore and understatement of Current Assets to the same extent.

A.2 Balance Sheet as on 31 March 2023

Application of Funds

Investment – Others: ₹ 0.05 crore (Schedule 6)

The above depicts the investment of the Institute in ICICI Mutual Prudential Fund as on 31 March 2023. As per Accounting Standard 13, the carrying amount for a long-term investment to be stated in the Balance sheet is the cost of the investment. Scrutiny of records revealed that the cost of investment was ₹ 0.025 crore. However, the investment is reflected in the Balance Sheet (Schedule 6) at its Net Asset Value amounting to ₹ 0.05 crore which is inclusive of returns of the investment over the years.

This has resulted in overstatement of 'Investment' by ₹ 0.025 crore (₹ 0.05 crore - ₹ 0.025 crore) and understatement of 'Current Assets' to the same extent.

B. General

B.1 General Comment

The Institute has not yet carried out actuarial valuation for retirement benefits of its employees, such as gratuity, leave encashment, *etc.* The Institute has also not made any provision on its own for the liability in the Income & Expenditure Account for the year 2022-23.

C. Grants-in-Aid

The total fund available during the year 2022-23 amounting to ₹ 27.45 crore comprises of opening balance (Non-TSA) of ₹ 0.27 crore and total grants-in-aid of ₹ 27.18 crore received from the Government of India during the year. Out of the total funds available, National Institute of Technology, Manipur, could utilize a sum of ₹ 26.95 crore leaving a balance of ₹ 0.50 crore.

The closing balance of grants amounting to ₹ 10.97 crore for the previous year 2021-22 under Treasury Single Account (TSA) maintained with Reserve Bank of India was refunded during the current year 2022-23.

- v. Subject to our observations in the preceding paragraphs, we report that the Balance Sheet and Income & Expenditure Account dealt with by this Report are in agreement with the books of accounts.
- vi. In our opinion and to the best of our information and according to the explanations given to us, the said financial statements read together with the Accounting Policies and Notes on Accounts, and subject to the significant matters stated above and other matters mentioned in *Annexure* to this Audit Report give 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, Manipur 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.

**For and on behalf of the
Comptroller & Auditor General of India**



**Principal Accountant General (Audit),
Manipur**

**Place: Imphal
Date: 08.04.2024**

Annexure to Audit Report

Internal Checks and Internal Controls Mechanism

GENERAL

1. Adequacy of Internal Audit

Internal audit, as an independent entity, examines and evaluates the level of compliance of the organization with financial rules and regulations thereby ensuring effectiveness in implementation of various programmes, projects or any activities and providing assurance to the management on the adequacy or otherwise, of the existing internal controls.

During the year, no internal audit was conducted which deprived the Institute of timely identification of flaws, timely feedbacks and corrective actions so far as the accounting and the financial transactions in the authority are concerned.

2. Adequacy of Internal Control

Internal control is weak as Depiction of grant is not shown properly and Investment are not shown properly

3. System of Physical Verification of Stores/Fixed Assets

The Institute carried out physical verification of Stores/Fixed Assets during the period.

4. Regularity in payment of statutory dues

For the year ended 31 March 2023, the Institute is yet to deposit the statutory dues of ₹ 0.11 crore and ₹ 0.02 crore towards 'Taxes and Others' and 'Others: NPS', respectively.

A. Tann Sharma
Sr. Audit Officer (AMG-I)