

Annual Report 2020-21

National Institute of Technology, Uttarakhand

ANNUAL REPORT 2020-21

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From The Director's Office..... 📄



It is a matter of immense pleasure for me to present the Annual Report and the Audited statement of Accounts of National Institute of Technology, Uttarakhand for the year 2020-21 with the noteworthy achievements of the Institute during the year. This year also the Institute holds special significance in the history due to multifarious activities, initiatives and accomplishments in academics, teaching, research and extra-curricular activities conducted round the year that too in the time of the Pandemic. During the current year, the Institute achieved remarkable figure of 595 undergraduates, 81 postgraduates, and 101 Ph.D. scholars. This year the Institute is enriched with 72 faculty members along with 05 officers, and 61 non-teaching staff members.

With all modesty, pride and pleasure, I would like to say that the Institute witnessed some of the most notable achievements during the year. It is reiterated that the TEQIP-III sponsored 43 events which includes conferences, workshops, symposia, FDP's, STTP's and series of special/guest lectures. It is needless to mention that participants from all over India and abroad showcased their interests in the events organized by the Institute. Approximately, seventy-five faculty and technical staff

members participated in STC's, FDP's, Conferences and Workshops held across India.

It is my privilege to share that faculty members of the Institute have published around hundreds of papers in the journals of national and international repute along with 25 book chapters published by international publishers. Bibhash Kumar; Laiju A. R. and Muskan Mayank, all from the Department of Civil Engineering, obtained PhD Degree in Geotechnical Engineering, Environmental Engineering, and Hydraulics Engineering respectively from the IIT Roorkee. Many faculty members from the same department have completed consultancy projects worth ₹ 4,11,584/- so far. Dr. Krishan Kumar, Assistant Professor, Dept. of CSE, has received the DST funding worth ₹ 40 Lakh while a project under Dr Nitin Kumar of the same department has been sanctioned by Uttarakhand State Council for Science and Technology (UCOST), Dehradun, Uttarakhand worth ₹ 2.09 Lakh. Dr. Prakash Dwivedi (PI) and Dr. Sourav Bose (Co-PI) have received the externally sponsored project titled "Solar powered robust E-Rickshaw controlled with bidirectional DC-DC converter using regenerative cycle boost charging" from the Ministry of Electronics & Information Technology (MeitY), Government of India for ₹ 30.02 Lakh. Dr Pankaj Pal also joined the duo and got the grant worth ₹ 16,90,860. A research project of amount ₹ 0.45 Lakh has been sanctioned to Dr. M. S. Khatri, Assistant Professor in the Department of Physics in July 2020 by UGC DAE CSR, Mumbai and Indore. Many other faculty members have filed their projects in various funding agencies and the result of the same is awaited. Dr Ajay K. Chaubey, Assistant Professor & HoD, Department of Humanities & Social Sciences, has published his two books on Mapping South Asian Diaspora and Women Writers of the South Asian Diaspora. His papers have appeared in the Scopus indexed journals followed by a book chapter included in a volume published

by the Springer, Singapore/Switzerland.

I am also delighted to share that total 220 students were registered with the Training & Placement Cell for the campus placement drive out of which 111 students were selected by the 26 companies. Mr Satyam Kumar (BT17CSE014) and Mr Shivam Singla (BT17CSE036) have been selected for Lowe's India at the package of 19 LPA. Besides, the former has earned an off-campus job in the Google at 32 LPA. In addition to the above, the Institute engaged with 76 companies for virtual placement drive, which is the highest since inception of the Institute. The Training & Placement Cell strives to achieve 100 companies in the year to come. On the other hand, 13 students earned paid internships in various corporates of national and international repute wherein the stipend paid to them ranges from ₹ 10,000 to ₹ 37,500 per month. The total 12 students have opted for higher education through GATE examination with remarkable performances by securing top slots. For the soft-skills and professional development, the T&P Cell has organized various guest lectures and conducted workshops this year.

The Research and Consultancy section has done remarkable job this financial year. The faculty members published more than 100 research papers in the SCI/ SCOPUS indexed journals. The section was also instrumental in getting dozens of MoU's signed with the Universities/Organizations of the national and international eminence. They have conducted more than 25 academic events for the promulgation of enriching the knowledge based ecosystem of the Institute. I am extremely happy to share that the Research & Developments projects worth ₹ 2,87,75,000 are going on under various schemes whereas 14 projects have been submitted and 12 patents have been filed by the faculty members of the various departments.

The motto of National Institute of Technology Uttarakhand is “Sports for all and all for Sports”. To achieve this, Institute provides various sports facilities. The students are encouraged to take part in games & sports to keep themselves fit and inculcate a spirit of sportsmanship amongst them. In the session 2020-21, the Institute organized many sports activities throughout the year in the virtual mode keeping in view of the Covid-19 guidelines issued by the Government of India and the State Government of Uttarakhand. The Institute always motivates the faculty and staff members to participate in various sports tournament to enhance the sense of achievements and feeling of belongingness among one another. To support with intense zeal and enthusiasm to the steps of Government of India (GOI) and the Ministry of Education (erstwhile MHRD), National Institute of Technology, Uttarakhand has organized online YOGA/Meditation activity for nine (09) days. During the course of this 09 days activity the main expert was “Aacharya Rajendra Ji Joshi” who gave extensive YOGA / Meditation training to the entire faculty and staff members of NIT Uttarakhand. In addition, Hon’ble Director, NIT Uttarakhand has also been giving YOGA/Meditation exercise training to the entire NIT Uttarakhand fraternity every day. A couple of staff members of NIT Uttarakhand who were pre-trained from elsewhere, have demonstrated YOGA/Meditation postures. On the day-three, Senior Gastroenterologist Dr. Udawat has joined the activity and taught about nutritional foods and habits to improve the immune system. It is worth mentioning that the strength of participants has been commendable (avg. 95 participants) during all 09 days. Also, the COVID-19 Awareness Camp was organized and a group of eight faculties from NIT Uttarakhand, Srinagar (Garhwal) visited the nearby villages namely Khandaha, Chamranda, Dandani, Bachel and Amkoti, etc to discuss with the village surpanch about the COVID-19 guidelines and rules implemented

in their villages against it.

A powerful life-skills program that charges the youth with a fresh breath of vigor, enthusiasm, excellence and responsibility, the SELP (Student Excellence & Learning Program), a fun, dynamic workshop for college students and young professionals, enables them to absorb all the freshness and positivity around that can give their life the boost of energy they have been looking for. To get the most out of life, we need to increase energy, conserve the energy we have, and manage our time well. The Institute sponsored SELP workshop, which was conducted from January 04 to 09, 2021 via online mode over Zoom App. More than 100 students registered for the workshop. During this workshop, many different activities were performed which helped attendees in boosting their confidence, understanding human relations, improving communication skills and ultimately, gaining the peace of mind. The activities that were performed included the world-renowned breathing technique “Sudarshan Kriya”, yoga, pranayama and many other fun games, each teaching a different lesson. Practicing the knowledge & techniques talked in the course has effectively brought about profound and sustainable, attitudinal and behavioral changes. Some of the experiences shared by the students are “this program benefitted us practically in all aspects of lives. It helps us to work on our mind and body which benefits in efficient life-style.”

National Institute of Technology, Uttarakhand organized 2nd Alumni Meet-2021 on January 16, 2021 in online mode. It is also shared that more than 159 alumni were registered not only from India but also from different parts of the world which included Australia, the USA, the UK and Canada, etc. It is needless to mention that Ms. Amrita Sharma (Gold Medalist 1st Batch), currently working at Rockwell Automation, USA inspired her juniors through motivational speech. Mr. Mohd Azeem currently working at

Juggernaut India Pvt. Ltd elaborated how the Institute thread connects the alumni even in business world with examples. Our B.Tech. alumni Ms. Anuja Singh (pursuing PhD from IIT Bombay), Ms. Priyanka Sharma (Intel Corporation Ltd., USA), Mr. Parth Khatri (ONGC), Mr. Aniket Gupta (pursuing PhD from University of Notre Dame, Indiana), and Mr. Piyush Kumar (Software developer, Amazon) recalled their Institute memories. Our M.Tech. alumni Mr. Abhishek Kumar (Micron Technologies), Mr. Diwakar Mishra (Intel Technology India Pvt. Ltd) and Ms. Pranoti Gogulwar (Intel NXP, Noida) shared their views in the same meet.

As the Institute is dedicated to achieve higher goals in the upgradation of education, teaching, research and consultancy, it looks forward to achieving various targets from activities which are being initiated. On this note, I acknowledge and thank the active support and encouragement the Institute has received from students, members of NIT-UK community, the Board of Governors, the Senate, Members of various committees and from state administration and the Ministry of Education from time to time. We, as an institution, aspire collectively to achieve higher growth in the coming years. I, along with members of the NIT-UK, hereby, assure that we will put all our energies to excel at par with the established NITs and IITs very soon. With these words, I present the Annual Report and the Audited Statement of Accounts of National Institute of Technology, Uttarakhand, Srinagar-Garhwal for the financial year 2020-21 before the authorities.

Professor Akhilesh Swaroop

I/c Director

01.00

INTRODUCTION

National Institute of Technology, Uttarakhand is one among the ten newly sanctioned NITs in 2009 by the Government of India. The Institute is fully funded by the Ministry of Education (erstwhile Human Resource Development), Government of India. The Institute in its opening years worked under the mentorship of NIT Kurukshetra. The Institute started working independently with the appointment of Prof. H. T. Thorat as the first regular Director from Nov. 1st, 2011. Dr. Satish Kumar served as the In-charge Director of the Institute from April 01, 2017 to Nov. 06, 2017. Professor Shyam Lal Soni assumed the charge of the Director of the Institute on November 07, 2017 until November 27, 2020. After the unfortunate demise of Professor Soni, Padamshree Dr. Satish Kumar was Director In-charge from November 28, 2020 to March 31, 2021. At present, Professor Akhilesh Swarup is the Director In-charge of the Institute.

01.01 HISTORICALBACKGROUND

The Institute started functioning in 2010 with an intake of 90 students. With the inception of two more branches, this intake increased to 300 in 2017-18. At present, the Institute has 595 undergraduates, 81 postgraduates and 101 Ph.D. scholars. The Institute was started with B.Tech. programmes in Computer Science & Engineering, Electrical Engineering and Electronics Engineering. B.Tech. program in Mechanical Engineering was started in 2012 followed by B.Tech. programme in Civil Engineering in 2013. The Institute started Ph.D. from 2013-2014 and M.Tech. in all five branches in the year 2016.

01.02 LOCATION

The temporary Campus is located at the premises of Government Polytechnic and ITI in Srinagar Garhwal (Dist. Pauri-Garhwal) which is around 110 kms from Rishikesh. It is situated on the national highway no. 58 that leads to Badrinath (193 kms from Srinagar). Rishikesh is the nearest railway station. Haridwar, a major railway station in Uttarakhand, is 130 km. from Srinagar. The nearest airport is Jolly Grant, Dehradun which is 125 kms from Srinagar. Srinagar is connected by road from the airport at Dehradun, railway stations and bus terminals at Rishikesh and Haridwar.

01.03 CAMPUS

The Institute started functioning in two buildings and a hostel in the premises of Government Polytechnic, Srinagar, Garhwal. At present, it has a residential campus with all the basic facilities for the students in temporarily fabricated buildings in the premises of Government Polytechnic. As the Institute expanded, temporary constructions were erected on the roof tops and the unused spaces of the Polytechnic campus. Later on with the permission from the State Government, Administrative Blocks and Engineering Departments were constructed at the Industrial Training Institute (ITI) Campus. Though the Institute is currently having a limited space of 14,000 square meters, it is functioning with full vigour. At present, the Institute is equipped with 35 labs, 16 classrooms, 1 library, and 11 hostels with an accommodative

capacity of 1000 students. The Institute offers medical assistance to students and staff members through tie ups with various hospitals and by means of providing medical insurance to students. The dispensary at the Institute is run with the help of Medical College, Srinagar with a visiting Doctor. Nurse and emergency vehicle is available for 24 hours. Institute also provides other facilities in the form of ATM, Power Back-Up, Gymnasium, Laundry, Canteen Security, Wi-Fi



connectivity etc. Since its inception, the Institute has expanded its temporary campus by fabricating new buildings polytechnic campus. Later on administrative blocks, engineering departments along with laboratories, play-ground, cafeteria and open-air theatre have been constructed at the ITI Campus. At present the Institute is functioning from two different campuses, namely NIT-UK Parent Campus situated in Srinagar Garhwal and NIT-UK Satellite Campus situated in the premises of Malviya National Institute of Technology, Jaipur. In the parent campus, PG, PhD and UG First year courses are being run while in Satellite campus UG 2nd, 3rd and 4th year are studying at present. But, since November 02, 2020 the Satellite campus has been merged with the Parent campus at Srinagar Garhwal. One of the most important components of education is teaching. Keeping this in mind, NITUK has always taken intransigent efforts in recruiting faculty members. To meet this purpose, many meritorious and bright faculty members, from different parts of the country, have been recruited in different departments of the

Institute from time to time. There are 72 faculty members, 05 officers, 08 contractual teachers and 61 non-teaching staff members in the Institute. The new recruitment process for the new faculty members has also been initiated this year and is in process.

02.00 OBJECTIVES

The Institute is committed to impart technical education of high standards and create such technocrats who can be serviceable to the community. The academic curriculum also aims to spread awareness of socio-technical and socio-economic problems to further provide technical solutions in rural-urban and agriculture sectors. Thus the Institute aims at structuring academic programmes in line with national development, generating technical human resource and interaction with the industries for development of the nation.

02.01 VISION AND MISSION

Vision

To provide a global impetus to education and innovation for sustainable development of Industry and society.

Mission

1. Providing an encouraging environment for education and training of technical professionals.
2. Establishing as a center of excellence for research on challenges and demands of future generations
3. Promoting innovation and leadership skills for producing competent professionals.
4. Developing research collaboration with institutions of repute.

03.00 GOVERNANCE**03.01 COUNCIL, ADMINISTRATIVE AND STATUTORY BODIES AND OTHER COMMITTEES****03.01.01 THE COUNCIL**

S.No.	Name	Designation
1.	The Minister In Charge, Ministry of Human Resource Development, Govt. of India	Chairman (ex-officio)
2.	The Secretary to the Govt. of India, Dept. of Higher Education, Ministry of Human Resource Development	Vice-Chairman (ex-officio)
3.	The Chairperson of all National Institute of Technology	Member (ex-officio)
4.	The Director of all National Institute of Technology	Member (ex-officio)
5.	The Chairman, University Grant Commission	Member (ex-officio)
6.	The Director General, Council for Scientific & Industrial Research	Member (ex-officio)
7.	Secretary, Department of Bio-Technology, Govt. of India	Member (ex-officio)
8.	Secretary, Department of Atomic Energy, Govt. of India	Member (ex-officio)
9.	Secretary, Department of Information Technology, Govt. of India	Member (ex-officio)
10.	Secretary, Department of Space, Govt. of India	Member (ex-officio)
11.	The Chairman, All India Council for Technical Education	Member (ex-officio)
12.	Not less than three, but not more than five persons to be nominated by the Visitor, at least one of whom shall be a woman, having special knowledge or practical experience in respect of education, industry, science or technology	Member
13.	Three Members of Parliament, of whom two shall be chosen by the House of People and one by the Council of States	Member
14.	Two Secretaries to the State Govt. of Uttarakhand, from amongst the Ministries or departments of that government dealing with technical education	Member (ex-officio)

S.No.	Name	Designation
15.	The Financial Advisor, Ministry of Human Resource Development, Govt. of India	Member-Secretary (ex-officio)
16.	Joint Secretary to the Govt. of India (Technical/Additional Secretary (Technical)/Department of Higher Education, Ministry of Human Resource Development.	Member (ex-officio)

03.01.02 BOARD OF GOVERNORS

S.No.	Name	Designation
1.	Dr. R. K. Tyagi	Chairman
2.	Prof. Shyam Lal Soni (till 02.11.2020) , Director, NIT Uttarakhand	Ex-Officio- I/c. Chairperson
3.	Prof. Shyam Lal Soni (till 02.11.2020) , Director, NIT Uttarakhand / Dr. Satish Kumar , I/c Director, NIT Uttarakhand	Ex-Officio Member
4.	Joint Secretary to the Government of India to be nominated by the Central Government dealing with Technical Education	Member
5.	Joint Secretary to the Government of India to be nominated by the Central Government dealing with Finance	Member
6.	Representative, Nominated by the Govt. of Uttarakhand	Member
7.	Representative, Nominated by the Govt. of Uttarakhand	Member
8.	Nominated by the Council	Member
9.	Nominated (Women) by the Council	Member
10.	Dr. Sanat Agrawal (till 27.06.2020) / Dr. Hariharan Muthusamy , Nominated by the Senate of NIT Uttarakhand	Member
11.	Dr. Kuldeep Sharma (till 10.08.2020) / Dr. Siva Kumar Tadepalli , Nominated by the Senate of NIT Uttarakhand	Member
12.	Director, IIT Roorkee or his nominee, not below the rank of a Professor	Member

S.No.	Name	Designation
13.	Colonel Sukhpal Singh (till 10.08.2020) , Registrar, National Institute of Technology, Uttarakhand/ Dr. Dharmendra Tripathi (till 02.11.2020) , I/c Registrar, National Institute of Technology, Uttarakhand/ Dr. Prabhakar Mani Kala , Registrar, National Institute of Technology, Uttarakhand	Secretary

03.01.03 FINANCE COMMITTEE

S.No.	Name	Designation
1.	Dr. R. K. Tyagi	Chairman (Nominated by the Visitor)
2.	Prof. Shyam Lal Soni (till 19.10.2020) , Director, NIT Uttarakhand	Ex-Officio-I/c. Chairperson
3.	Prof. Shyam Lal Soni (19.10.2020) , Director, NIT Uttarakhand / Dr. Satish Kumar , I/c Director, NIT Uttarakhand	Ex-Officio-Member
4.	Joint Secretary dealing with NITs or his nominee	Member
5.	Financial Advisor of MHRD or his nominee	Member
6.	Director, IIT Roorkee, Nominated by the Board	Member
7.	Colonel Sukhpal Singh (till 10.08.2020) , Registrar, National Institute of Technology, Uttarakhand / Dr. Dharmendra Tripathi (till 19.10.2020) , I/c Registrar, National Institute of Technology, Uttarakhand / Dr. Prabhakar Mani Kala , Registrar, National Institute of Technology, Uttarakhand	Ex-Officio-Member Secretary

03.01.04 BUILDING AND WORKS COMMITTEE

S.No.	Name	Designation
1.	Prof. Shyam Lal Soni , Director, NIT Uttarakhand	Ex-Officio Chairman
2.	One member nominated by the Central Govt. not below the rank of Director or Deputy Secretary	Member
3.	Prof. B. R. Gurjar Department of Civil Engg., IIT Roorkee	Member
4.	Colonel Sukhpal Singh (till 03.07.2020) , Registrar, NIT Uttarakhand/ Dr. Dharmendra Tripathi (till 25.10.2020) , I/c Registrar, NIT Uttarakhand/ Dr. Prabhakar Mani Kala , Registrar, NIT Uttarakhand	Ex-Officio Member Secretary
5.	Dean, Planning & Development, NIT Uttarakhand	Member
6.	Mr. Ajay Sharma Superintending Engineer (Civil), IIT Roorkee	Member
7.	Dr. Mukesh Kumar Pathak Vice Chairman (Electrical), IIT Roorkee	Member

03.01.05 THE SENATE

S.No.	Name	Designation
1.	Prof. Shyam Lal Soni , Director, NIT Uttarakhand	Ex-Officio–Chairman
2.	Prof. Ravindra Nagar , MNIT Jaipur, Nominated by the Chairperson, Board	Member
3.	Prof. M. R. Maurya , IIT Roorkee, Nominated by the Chairperson, Board	Member
4.	Prof. Nupur Tandon , MNIT Jaipur, Nominated by the Chairperson, Board	Member
5.	Colonel Sukhpal Singh (till 04.07.2020) , Registrar, NIT Uttarakhand/ Dr. Dharmendra Tripathi (till 01.10.2020) , I/c Registrar, NIT Uttarakhand/ Dr. Prabhakar Mani Kala , Registrar, NIT Uttarakhand	Secretary

03.02 ORGANIZING STRUCTURE**03.02.01 DEANS**

S.No.	Designation	Name	Period
1	Dean (Planning & Development)	Dr. Sanat Agrawal	01.04.2020 to 31.05.2020
		Dr. Vikas Pratap Singh	01.06.2020 to 31.03.2021
2	Dean (Academic Affairs)	Dr. Gurinder Singh Brar	01.04.2020 to 31.03.2021
3	Dean (Research & Consultancy)	Dr. Dharmendra Tripathi	01.04.2020 to 31.03.2021
4	Dean (Faculty Welfare, Development & International Affairs)	Dr. Hariharan Muthusamy	01.04.2020 to 31.03.2021
5	Dean (Student Welfare & Alumni Affairs)	Dr. Vinod Singh Yadav	01.06.2020 to 08.11.2020
		Dr. Prakash Dwivedi	11.01.2021 to 31.03.2021

03.02.02 HEAD OF DEPARTMENTS

S. No.	Departments	Names	Tenure
1	Humanities & Social Sciences	Dr. Renu Bhadola Dangwal	01.04.2020 to 25.01.2021
		Dr. Ajay Kumar Chaubey	25.01.2021 to 31.03.2021
2	Mathematics	Dr. Nitin Sharma	01.04.2020 to 31.03.2021
3	Chemistry	Dr. Pankaj Kandwal	01.04.2020 to 31.03.2021
4	Physics	Dr. Hardeep Kumar	01.04.2020 to 31.03.2021
5	Mechanical Engineering	Dr. Lalta Prasad	01.04.2020 to 31.03.2021
6	Electrical Engineering	Dr. Sourav Bose	01.04.2020 to 31.05.2020
		Dr. Mahiraj Singh Rawat	01.06.2020 to 31.03.2021

S. No.	Departments	Names	Tenure
7	Electronics Engineering	Dr. Tajinder Singh Arora	01.04.2020 to 31.03.2021
8	Civil Engineering	Dr. Kranti Gyanchand Jain	01.04.2020 to 31.05.2020
		Dr. Aditya Kumar Anupam	01.06.2020 to 31.03.2021
9	Computer Science and Engg.	Dr. Krishan Kumar	01.04.2020 to 31.03.2021

04.00 EDUCATION SYSTEM

At present, NIT Uttarakhand offers B. Tech., M.Tech. and Ph. D. programmes. Initially, the Institute started B. Tech. programmes in three branches with an intake of 20 students per branch. The Institute is also conducting M. Tech. programme in five branches with an intake of 19 students in each branch:

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

The Institute offers Ph. D. programme in all the five branches and also in basic sciences and humanities (Mathematics, Physics, Chemistry, Social Science and English).

04.01 ACADEMIC AUTONOMY

The Institute manages its internal academic affairs independently under the supervision of the Senate of the institute which enables them to set up their own curriculum. The academic policies, ordinances, curriculum, courses, examinations, evaluation and results are approved and controlled by the Senate. All kinds of specific academic matters pertaining to teaching, training and research activities of various departments come under preview of the Senate.

04.02 SALIENT FEATURES OF ACADEMIC STRUCTURE

The academic structure of the Institute has many salient features:

- The most (modern and flexible Academic structure)
- 35% courses are elective
- Freedom to choose elective courses per semester
- Freedom to choose sequence of courses
- Faculty to go for credit exchange programme in another Institute for one complete semester
- Freedom to complete the programme in VII semesters and going to industry for one semester internship

The curriculum provides broad based knowledge and simultaneously builds a temper for the life long process of learning and exploring. At undergraduate level, a student needs to do compulsory foundation courses in the areas of basic sciences, humanities and social sciences apart from the departmental requirements. Departmental courses (core and electives) constitute minimum 50% of the total curriculum. Further, students do open category electives to develop broad interdisciplinary knowledge base or to specialize significantly in an area outside the parent discipline. At the post graduate level, students are encouraged to look

Beyond their area of specialization to broaden their horizons through open electives. The medium of instruction in the Institute is English. The Institute follows the semester system. An academic year runs from July through June next year and is comprised of two semesters and two terms. Typically, the 1st semester (Odd Semester) starts in the first week of August and ends in the middle of December, the 2nd semester (Even Semester) starts in first week of January and ends in the middle of May. The Ordinances govern all the rules and regulations for running all Under Graduate and Post Graduate programs in the Institute.

04.03. ACADEMIC PROGRAMMES

04.00.01 Undergraduate Programmes

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

04.00.02 Postgraduate Programmes

- Civil Engineering with specialization in
 - Structural Engineering
 - Transportation Engineering
- Computer Science and Engineering with specialization in Artificial Intelligence
 - Computing Systems
- Electronics Engineering with specialization in
 - Microelectronics and VLSI Design
 - Communication Systems
- Electrical Engineering with specialization in
 - Power System and Control
 - Power Electronics and Drives
- Mechanical Engineering with specialization in
 - Manufacturing Technology
 - Machine Design

04.00.03 Ph.D. Programmes

The Institute offers Ph.D. programme in the following branches:

- Civil Engineering
- Computer Science & Engineering
- Electronics Engineering
- Mechanical Engineering
- Sciences and Humanities (Mathematics, Physics, Chemistry, Social Science, English)

04.04 ADMISSION PROCEDURE

B.Tech. Programme:

The admission to B.Tech. Degree programme at NIT Uttarakhand is done through Joint Seat Allocation Authority (JoSAA) 2020. Admissions were given on the basis of All India Rank (AIR) prepared by Jo SAA considering score in JEE (Main)-2020.

M.Tech.Programme:

The admission to M. Tech. degree programmes at NIT Uttarakhand is done through Centralized counseling for M. Tech. / M. Arch. / M.Plan. / M. Des. Admissions (CCMT) 2020. Admission were conducted on the basis of GATE-19 and GATE-20

Ph.D.Programme:

For the admission in the Ph.D. program, candidates are shortlisted for written test on the basis of required qualification (GATE/NET/SET qualified). The qualified candidates are called for personal interview. After qualifying, the candidate are provisionally admitted for Ph.D. in the Institute. Their registration for Ph.D. program at the Institute is confirmed only after successful completion of Pre-Registration viva-voce. The Institute scholars is awarded fellowship as per norms. To avail the fellowship, the candidate should be GATE/NET/SET qualified. Part-time Candidate are NOT eligible for fellowship.

04.05 EXAMINATION AND EVALUATION

Students are awarded grade points based on their performance in the class and examinations. The grade and the equivalent numerical points are listed below:

Grade	Grade points	Description
AA	10	Excellent
AB	9	Very good
BB	8	Good (Above Average)
BC	7	Meets all targeted objectives of the course.
CC	6	Below expectations
DD	4	Marginal, Meets minimum targeted objectives of the course.
FF	0	Very poor
GG	-	Incomplete
UU	-	Unsatisfactory

PP	-	Auditpass
YY	-	Auditfail
XX	-	Withdrawal
KK	-	Continued
SS	-	Satisfactory completion (Zero credit course)
ZZ	-	Unsatisfactory/Failed (Zero credit course)
JJ	-	Failed three times in the core course. Permitted to replace it by Elective Course

Only passing grades are shown in the final Grade Card. Student having CGPA minimum 6.75 is considered for the award of First Division.

Evaluation of Performance

The performance of a student is evaluated in terms of two indices, viz., the Semester Grade Point Average (SGPA) which is the Grade Point Average for a semester and Cumulative Grade Point Average (CGPA) which is the Grade Point Average for all the completed semesters' at any point in time. The Earned Credit (ECR) is defined as the sum of course credits for courses in which student has been awarded grades between AA to DD. For UG students, credits from courses in which PP or SS grades have been obtained are also added. Earned Grade Points in a semester (EGP) = \sum (Course credits x Grade point) for courses in which AA- DD grade has been obtained. The SGPA is calculated on the basis of grades obtained in all courses, except audit courses and courses in which SS/ZZ grade is awarded, registered for in the particular semester. UU grades will be considered as failed grade with Grade Point of Zero and will be included while calculating SGPA. The CGPA is calculated on the basis of all pass grades, except audit courses and courses in which SS/ZZ grade is awarded, obtained in all completed semesters.

$SGPA = EGP / \sum$ (Course credits) for courses registered in a semester in which AA, FF & UU grades are awarded.

$CGPA = EGP / \sum$ (Course credits) for courses registered in all completed semesters in which AA- DD grades are awarded.

The conversion formula from CGPA to percentage (%) is as under: $Percentage(\%) = 10 \times CGPA$.

04.06. ACADEMIC CALENDAR

Academic Calendar



Temporary Campus-Government ITI, Srinagar (Garhwal), Distt.PauriGarhwal, Uttarakhand-246174 Phone: 01346-257401, 257400 (O), 01346-251095 (Tele Fax) E-Mail: nituttarakhand@gmail.com, Website: www.nituk.ac.in

Odd Semester – 2020

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Activity of Week
August 2020	3 Enrolment (Without Late Fee)	4 Classes Begin	5	6	7	8	9	Enrolment Classes Begin
	10	11	12 Last date of Enrolment with late fee of ₹1000 Add & Drop	13	14	15 Independence Day	16	Last date of Enrolment Add & Drop
	17	18	19	20	21	22	23	
	24	25	26	27	28	29	30 Muharram	
September 2020	31	1	2 Mid Term Exam – I Slot A & B & C	3 Mid Term Exam – I Slot D & E & F	4 Mid Term Exam – I Slot G & H & I	5	6	Mid Term Exam – I
	7	8	9	10 Last Date of Special MTE-I	11 Last Date of Display of MTE-I Marks	12	13	Special MTE-I
	14 Last Date of Course Withdrawal, Conversion from Credit to Audit Course	15	16	17	18	19	20	Display of MTE-I Marks Course Withdrawal
	21	22	23	24	25	26	27	Conversion from Credit to Audit
	28	29	30	1	2	3 Gandhi Jayanti	4	
	5	6	7	8	9	10	11	
	12	13	14	15 Committee Meeting for finalization of courses to be offered in Even Semester - 2021	16	17	18	Mid Term Exam – II
October 2020	19	20 Last Date of Special MTE-II	21 Display of List of Courses with Slots to be offered in Even Semester - 2021	22 Last Date of Display of MTE-II Marks	23 Dussehra	24 Mid Term Break Starts	25 Dussehra	Special MTE-II Mid Term Break Starts
	26	27	28	29	30 Eid-e-Milad	31 Mid Term Break Ends	1	Mid Term Break Ends
	2	3	4 Registration for Even Semester - 2021	5 Registration for Even Semester - 2021	6	7	8	Registration for Even Semester - 2021
	9	10	11	12	13	14 Deepawali	15	
November 2020	16	17	18	19	20	21	22	
	23	24 Student Initiated Teaching Display of Attendance, Internal Marks and Marks of P & V Type courses	25 Student Initiated Teaching Display of Grades for P & V Type courses	26 End Term Exam Slot A	27 End Term Exam Slot B	28	29	Display of Attendance & Internal Marks Display of Grades For P & V Type Courses
	30 Guru Nanak Jayanti	1 End Term Exam Slot C	2 End Term Exam Slot D	3 End Term Exam Slot E	4 End Term Exam Slot F	5	6	End Term Exam
	7 End Term Exam Slot G	8 End Term Exam Slot H	9 End Term Exam Slot I	10 Winter Term Registration*	11 Last Date of Special ETE	12	13	End Term Exam Special ETE
	14 Last Date of Showing Answer Sheets	15 Committee Meeting for Finalization & Display of Grades	16 Last date for Grievance PhD RPC Presentation	17 Winter Vacation Starts (For Students) PhD RPC Presentation	18 PhD RPC Presentation	19 Winter Vacation Starts (For Faculty Members)	20	Display of Grades PhD RPC Presentation Winter Vacation Starts
	21	22	23	24	25 Christmas	26	27	
	28	29	30	31	1	2 Winter Vacation Ends (For Faculty Members)	3 Winter Vacation Ends (For Students)	Winter Vacation Ends
December 2020	4 TR Finalization	5 Enrolment (Without Late Fee)	6 Classes Begin	7	8	9	10	
	12	13	14	16	17	18	19	

Exam Time Table

Slot	End Sem Exam	Mid Term Examination								
	All Slots	A	B	C	D	E	F	G	H	I
FIRST YEAR COURSES	02:00PM	10:30AM	02:00PM	5:00PM	10:30AM	2:00PM	5:00PM	10:30AM	2:00PM	5:00PM
	05:00PM	11:30AM	03:00PM	6:00PM	11:30AM	3:00PM	6:00PM	11:30AM	3:00PM	6:00PM
COURSE OTHER THAN FIRST YEAR	09:00AM	09:00AM	12:00 NOON	03:30PM	09:00AM	12:00 NOON	03:30PM	09:00AM	12:00 NOON	03:30PM
	12:00 NOON	10:00AM	01:00PM	04:30PM	10:00AM	01:00PM	04:30PM	10:00AM	01:00PM	04:30PM

Academic Calendar



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Even Semester – 2021

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Activity of Week
January 2021					1	2	3	
						Winter Vacation Ends (For Faculty)		
	4	5	6	7	8	9	10	Enrolment Classes Begin
	11	12	13	14	15	16	17	Last date of Enrolment with late fee of ₹1000 Add & Drop
	18	19	20	21	22	23	24	
February 2021	25	26	27	28	29	30	31	Republic Day
	1	2	3	4	5	6	7	
	8	9	10	11	12	13	14	Mid Term Exam – I Mid Term Exam – I Mid Term Exam – I
	15	16	17	18	19	20	21	Last Date of Special MTE-I Last Date of Display of MTE-I Marks
	22	23	24	25	26	27	28	Last Date of Course Withdrawal and Conversion from Credit to Audit
March 2021	30	31						
	1	2	3	4	5	6	7	
	8	9	10	11	12	13	14	
	15	16	17	18	19	20	21	Mid Term Exam – II Mid Term Exam – II Mid Term Exam – II
	22	23	24	25	26	27	28	Last Date of Special MTE-II Last Date of Display of MTE-II Marks Mid Term Break Starts
April 2021	29	30	31	1	2	3	4	Holi Good Friday Mid Term Break Ends
	5	6	7	8	9	10	11	Registration for Odd Semester – 2021
	12	13	14	15	16	17	18	
	19	20	21	22	23	24	25	Monday Time Table Tuesday Time Table Mahaveer Jayanti
	26	27	28	29	30	1	2	Student Initiated Teaching Display of Attendance and Internal Marks Student Initiated Teaching Display of Grades for P & V type courses End Term Exam Slot A End Term Exam Slot B End Term Exam Slot C
May 2021	3	4	5	6	7	8	9	End Term Exam Slot D End Term Exam Slot E End Term Exam Slot F End Term Exam Slot G End Term Exam Slot H End Term Exam Slot I
	10	11	12	13	14	15	16	Last Date of Special ETE Id-UI-Fitar
	17	18	19	20	21	22	23	Committee Meeting for Finalization & Display of Grades Last date for Grievance Summer vacation starts (Students) PhD RPC Presentation PhD RPC Presentation PhD RPC Presentation
	24	25	26	27	28	29	30	Registration for Supplementary Exam Budh Poornima Supplementary Exam Supplementary Exam
	31	1	2	3	4	5	6	Summer Term Registration* Summer Vacation Begins (For Faculty Members)
June 2021	7	8	9	10	11	12	13	
	14	15	16	17	18	19	20	Mid Term Exam – I Slot A & B & C
	21	22	23	24	25	26	27	
	28	29	30	1	2	3	4	Mid Term Exam – II Slot A & B & C
	5	6	7	8	9	10	11	
July 2021	12	13	14	15	16	17	18	
	19	20	21	22	23	24	25	End Term Exam Slot A End Term Exam Slot B Id-UI-Juha End Term Exam Slot C
	26	27	28	29	30	31	1	Summer Vacation Ends (For Faculty Members) Summer Vacation Ends (For Students)
	2	3						Enrolment (Without Late Fee) Classes Begin
								Classes Begin for ODD Sem 2021

05.00 STUDENTS STRENGTH

05.01: SANCTIONED INTAKE AND ACTUAL INTAKE

Numbers of students admitted in First year B.Tech. during the year 2020-21:

B.Tech. First Year (2020 Batch):

S.No.	Branch	Duration	Sanctioned Intake	Enrolled
1.	Civil Engineering	4Years	20	19
2.	Computer Science & Engineering	4Years	20	21
3.	Electronics Engineering	4Years	20	18
4.	Electrical Engineering	4Years	20	20
5.	Mechanical Engineering	4Years	20	19
Total			100	97

Numbers of students admitted in First year M.Tech.during the year 2020-21:

M.Tech. First Year (2020 Batch):

S.No.	Branch	Duration	Sanctioned Intake	Enrolled
1.	Civil Engineering	2Years	19	17
2.	Computer Science & Engineering	2Years	19	10
3.	Electronics Engineering	2Years	19	05
4.	Electrical Engineering	2Years	19	14
5.	Mechanical Engineering	2Years	19	08
Total		Total	95	54

Total 104 students are enrolled in Ph.D. programme in various departments. In the current year, 04 (FullTime/PartTime) students got enrolled in the programme.

Ph.D.Students (2020-21):

S.No.	Branch	Sanctioned Intake	Enrolled
1.	Civil Engineering	40	05
2.	Computer Science & Engineering		03
3.	Electronics Engineering		00
4.	Electrical Engineering		01
5.	Mechanical Engineering		02
6.	Chemistry		01

7.	Mathematics		01
8.	Physics		00
9.	English		00
Total			14

05.02 ENROLLMENT WITH GENDER AND CASTE BREAK-UP

A) Undergraduate Courses (B.Tech.)

Name of the Programme	Total No. of Students (all years)			Out of Total No. of student shown in Col.(2)&(3)								
				SC			ST			PWD		
<i>B.Tech.</i>	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
1	2	3	4	5	6	7	8	9	10	11	12	13
IYear	76	21	97	10	4	14	5	3	8	3	0	3
IIYear	75	14	89	12	02	14	05	02	07	02	0	02
IIIYear	114	29	143	12	06	18	05	06	11	01	01	02
IVYear	234	32	266	33	06	39	13	06	19	03	01	04
Total	499	96	595	67	18	85	28	17	45	9	2	11

B) Postgraduate Courses

(i) M.Tech

Name of the Programm	Total No. of Students (allyears)			Out of Total No. of student shown in Col.(2)&(3)								
				SC			ST			PWD		
<i>M.Tech.</i>	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
1	2	3	4	5	6	7	8	9	10	11	12	13
IYear	38	09	47	03	01	04	00	00	00	00	00	00
IIYear	29	06	35	05	02	07	01	00	01	00	00	00
Total	67	15	82	08	03	14	01	00	01	00	00	00

(ii) Ph.D.

Name of the Programme	Total No. of Students (all years)			Out of Total No. of student shown in Col.(2)&(3)								
				SC			ST			PWD		
<i>PhD</i>	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
1	2	3	4	5	6	7	8	9	10	11	12	13
	84	20	104	03	01	04	01	01	02	02	00	02

Data as per Student Category B.Tech. (2017 Batch)										
	Number of Total Students Enrolled									
	Gen		SC		ST		OBC		Total	
	Total	Girls	Total	Girls	Total	Girls	Total	Girls	Total	Girls
CIV										
Total	18	2	5	0	3	1	25	1	51	4
PWD (Out of Total)	0	0	0	0	0	0	0	0	0	0
Muslim Minority	0	0	0	0	0	0	1	0	1	0
Other Minority	1	0	0	0	2	0	0	0	3	0
CSE										
Total	32	5	8	3	4	2	16	1	60	11
PWD (Out of Total)	1	0	0	0	0	0	0	0	1	0
Muslim Minority	0	0	0	0	0	0	2	0	2	0
Other Minority	1	1	0	0	0	0	0	0	1	1
ECE										
Total	30	4	8	3	4	1	17	1	59	9
PWD (Out of Total)	0	0	0	0	0	0	1	0	1	0
Muslim Minority	1	0	0	0	0	0	0	0	1	0
Other Minority	0	0	0	0	0	0	0	0	0	0
EEE										
Total	12	3	9	0	4	1	20	3	45	7
PWD (Out of Total)	0	0	0	0	0	0	1	1	1	1
Muslim Minority	0	0	0	0	0	0	0	0	0	0
Other Minority	0	0	0	0	1	1	0	0	1	1
MEC										
Total	20	0	9	0	4	1	18	0	51	1
PWD (Out of Total)	1	0	0	0	0	0	0	0	1	0
Muslim Minority	0	0	0	0	0	0	1	0	1	0
Other Minority	0	0	0	0	0	0	0	0	0	0

A) STUDENT ON ROLLS B.TECH.(CLASS-WISE&BRANCH-WISE) DURING 2020-21

Data as per Student Category B.Tech .(2018 Batch)										
	Number of Total Students Enrolled									
	Gen		SC		ST		OBC		Total	
	Total	Girls	Total	Girls	Total	Girls	Total	Girls	Total	Girls
CIV										
Total	07	01	03	01	02	01	13	00	25	03
PWD (OutofTotal)	01	00	00	00	00	00	00	00	01	00
Muslim Minority	00	00	00	00	00	00	02	00	02	00
Other Minority	00	00	00	00	00	00	00	00	00	00
CSE										
Total	13	02	04	01	02	01	12	02	31	06
PWD (OutofTotal)	00	00	00	00	00	00	00	00	00	00
Muslim Minority	00	00	00	00	00	00	00	00	00	00
Other Minority	01	00	00	00	01	01	00	00	02	01
ECE										
Total	16	04	03	02	02	02	09	02	30	10
PWD (OutofTotal)	01	01	00	00	00	00	00	00	01	01
Muslim Minority	00	00	00	00	00	00	01	00	01	00
Other Minority	01	00	00	00	00	00	00	00	01	00
EEE										
Total	14	02	05	01	02	01	08	01	29	05
PWD (OutofTotal)	00	00	00	00	00	00	00	00	00	00
Muslim Minority	01	00	00	00	01	00	00	00	02	00
Other Minority	00	00	00	00	00	00	00	00	00	00
MEC										
Total	11	02	03	01	03	01	11	01	28	05
PWD (OutofTotal)	00	00	00	00	00	00	00	00	00	00
Muslim Minority	00	00	00	00	00	00	01	00	01	00
Other Minority	01	00	00	00	00	00	00	00	01	00

Dataasper Student Category B.Tech. (2019 Batch)										
	Number of Total Students Enrolled									
	Gen		SC		ST		OBC		Total	
	Total	Girls	Total	Girls	Total	Girls	Total	Girls	Total	Girls
CIV										
Total	9	1	2	0	1	1	6	0	18	2
PWD (OutofTotal)	0	0	0	0	0	0	0	0	0	0
Muslim Minority	0	0	0	0	0	0	0	0	0	0
Other Minority	1	0	0	0	0	0	0	0	1	0
CSE										
Total	9	2	2	0	2	0	6	0	19	2
PWD (OutofTotal)	0	0	0	0	0	0	0	0	0	0
Muslim Minority	0	0	0	0	0	0	1	0	1	0
Other Minority	0	0	0	0	0	0	0	0	0	0
ECE										
Total	8	1	3	1	2	1	5	2	18	5
PWD (OutofTotal)	1	0	0	0	0	0	0	0	1	0
Muslim Minority	0	0	0	0	0	0	0	0	0	0
Other Minority	0	0	0	0	0	0	0	0	0	0
EEE										
Total	9	1	4	1	2	0	3	1	18	3
PWD (OutofTotal)	0	0	0	0	0	0	0	0	0	0
MuslimMino rity	0	0	0	0	0	0	1	1	1	1
Other Minority	1	0	0	0	0	0	0	0	1	0
MEC										
Total	6	2	3	0	0	0	7	0	16	2
PWD (OutofTotal)	1	0	0	0	0	0	0	0	1	0
Muslim Minority	1	0	0	0	0	0	1	0	2	0
Other Minority	0	0	0	0	0	0	0	0	0	0

Dataasper Student Category B.Tech. (2020Batch)										
	Number of Total Students Enrolled									
	Gen		SC		ST		OBC		Total	
	Total	Girls	Total	Girls	Total	Girls	Total	Girls	Total	Girls
CIV										
Total	9	1	2	0	2	2	8	1	21	4
PWD (OutofTotal)	1	0	0	0	0	0	1	0	2	0
Muslim Minority	0	0	0	0	0	0	1	0	1	0
Other Minority	0	0	0	0	0	0	0	0	0	0
CSE										
Total	11	1	3	1	2	0	5	2	21	4
PWD (OutofTotal)	1	0	0	0	0	0	0	0	1	0
Muslim Minority	0	0	0	0	1	0	1	0	2	0
Other Minority	0	0	0	0	0	0	0	0	0	0
ECE										
Total	9	5	3	1	1	0	5	0	18	6
PWD (Out of Total)	0	0	0	0	0	0	1	0	1	0
Muslim Minority	0	0	0	0	0	0	1	0	1	0
Other Minority	0	0	0	0	0	0	0	0	0	0
EEE										
Total	8	1	2	1	1	1	9	1	20	4
PWD (OutofTotal)	0	0	0	0	0	0	0	0	0	0
MuslimMinority	1	0	0	0	0	0	1	0	2	0
Other Minority	0	0	0	0	0	0	0	0	0	0
MEC										
Total	7	0	4	1	2	0	6	2	19	3
PWD (OutofTotal)	0	0	0	0	0	0	0	0	0	0
Muslim Minority	0	0	0	0	0	0	0	0	0	0
Other Minority	0	0	0	0	0	0	0	0	0	0

A) STUDENT ON ROLL SM.TECH.(CLASS-WISE & BRANCH-WISE) DURING 2020-21

Data as per Student Category M.Tech. (2019 Batch)										
	Number of Total Students Enrolled									
	Gen		SC		ST		OBC		Total	
	Total	Girls	Total	Girls	Total	Girls	Total	Girls	Total	Girls
CIV										
Total	8	1	3	2	1	0	4	0	16	3
PWD (Out of Total)	0	0	0	0	0	0	0	0	0	0
Muslim Minority	3	0	0	0	1	0	0	0	4	0
Other Minority	0	0	0	0	0	0	0	0	0	0
CSE										
Total	0	0	2	0	0	0	2	1	4	1
PWD (Out of Total)	0	0	0	0	0	0	0	0	0	0
Muslim Minority	0	0	0	0	0	0	0	0	0	0
Other Minority	0	0	0	0	0	0	0	0	0	0
ECE										
Total	0	0	1	0	0	0	1	0	2	0
PWD (Out of Total)	0	0	0	0	0	0	0	0	0	0
Muslim Minority	0	0	0	0	0	0	0	0	0	0
Other Minority	0	0	0	0	0	0	0	0	0	0
EEE										
Total	6	2	1	0	0	0	3	0	10	2
PWD (Out of Total)	0	0	0	0	0	0	0	0	0	0
Muslim Minority	0	0	0	0	0	0	0	0	0	0
Other Minority	0	0	0	0	0	0	0	0	0	0
MEC										
Total	3	0	0	0	0	0	0	0	3	0

PWD (OutofTotal)	0	0	0	0	0	0	0	0	0	0
MuslimMinority	0	0	0	0	0	0	0	0	0	0
OtherMinority	0	0	0	0	0	0	0	0	0	0

**A) STUDENT ON ROLLS M.TECH. (CLASS-WISE&BRANCH-WISE)
DURING 2020-21**

Data as per Student Category M.Tech. (2020 Batch)										
	Number of Total Students Enrolled									
	Gen		SC		ST		OBC		Total	
	Total	Girls	Total	Girls	Total	Girls	Total	Girls	Total	Girls
CIV										
Total	8	1	2	0	0	0	6	1	16	2
PWD (Out of Total)	0	0	0	0	0	0	0	0	0	0
Muslim Minority	1	0	0	0	0	0	0	0	1	0
Other Minority	0	0	0	0	0	0	0	0	0	0
CSE										
Total	5	1	1	0	0	0	2	0	8	1
PWD (Out of Total)	0	0	0	0	0	0	0	0	0	0
Muslim Minority	0	0	0	0	0	0	0	0	0	0
Other Minority	0	1	0	0	0	0	0	0	0	1
ECE										
Total	5	2	0	0	0	0	0	0	5	2
PWD (Out of Total)	0	0	0	0	0	0	0	0	0	0
Muslim Minority	0	0	0	0	0	0	0	0	0	0
Other Minority	0	0	0	0	0	0	0	0	0	0
EEE										
Total	5	1	0	1	0	0	6	1	12	2
PWD (Out of Total)	0	0	0	0	0	0	0	0	0	0
Muslim Minority	0	0	0	0	0	0	0	0	0	0
Other Minority	0	0	0	0	0	0	0	0	0	0
MEC										
Total	6	1	0	0	0	0	0	0	6	1
PWD (Out of Total)	0	0	0	0	0	0	0	0	0	0
Muslim Minority	0	0	0	0	0	0	0	0	0	0
Other Minority	0	0	0	0	0	0	0	0	0	0

A) PH.D. STUDENT ON ROLL (CLASS-WISE & BRANCH- WISE) DURING 2020-21

Dataasper Student Category										
	Number of Total Students Enrolled in Ph.D.									
	Gen		SC		ST		OBC		Total	
	Total	Girls	Total	Girls	Total	Girls	Total	Girls	Total	Girls
CIV										
Total	5	1	0	0	1	1	3	0	9	2
PWD (OutofTotal)	0	0	0	0	0	0	0	0	0	0
Muslim Minority	0	0	0	0	0	0	0	0	0	0
OtherMinority	0	0	0	0	0	0	0	0	0	0
CSE										
Total	18	5	0	0	0	0	1	0	19	5
PWD (OutofTotal)	0	0	0	0	0	0	0	0	0	0
Muslim Minority	0	0	0	0	0	0	0	0	0	0
OtherMinority	0	1	0	0	0	0	0	0	1	1
ECE										
Total	11	1	2	0	0	0	2	0	15	1
PWD (OutofTotal)	0	0	0	0	0	0	0	0	0	0
Muslim Minority	0	0	0	0	0	0	0	0	0	0
OtherMinority	0	0	0	0	0	0	0	0	0	0
EEE										
Total	13	3	0	0	0	0	0	0	13	3
PWD (OutofTotal)	1	0	0	0	0	0	0	0	1	0
Muslim Minority	0	0	0	0	0	0	0	0	0	0
OtherMinority	0	0	0	0	0	0	0	0	0	0
MEC										
Total	22	0	1	0	0	0	3	0	26	0
PWD (OutofTotal)	0	0	0	0	0	0	0	0	0	0

MuslimMinority	0	0	0	0	0	0	0	0	0	0
OtherMinority	1	0	0	0	0	0	0	0	1	0
Physics										
Total	2	1	0	0	0	0	0	0	2	1
PWD (OutofTotal)	0	0	0	0	0	0	0	0	0	0
MuslimMinority	0	0	0	0	0	0	0	0	0	0
OtherMinority	1	0	0	0	0	0	0	0	1	0
Chemistry										
Total	6	4	1	1	1	0	0	0	8	5
PWD (OutofTotal)	1	0	0	0	0	0	0	0	1	0
MuslimMinority	0	0	0	0	0	0	0	0	0	0
OtherMinority	0	0	0	0	0	0	0	0	0	0
Mathematics										
Total	6	1	0	0	0	0	1	0	7	1
PWD (OutofTotal)	0	0	0	0	0	0	0	0	0	0
Muslim Minority	0	0	0	0	0	0	1	0	1	0
OtherMinority	0	0	0	0	0	0	0	0	0	0
English										
Total	5	3	0	0	0	0	0	0	5	3
PWD (OutofTotal)	0	0	0	0	0	0	0	0	0	0
Muslim Minority	0	0	0	0	0	0	0	0	0	0
OtherMinority	1	0	0	0	0	0	0	0	1	0

06.00 SCHOLARSHIPS /MONETARY ASSISTANCE TO STUDENTS**06.01 STATEMENT SHOWING THE DETAILS OF VARIOUS SCHOLARSHIP AND STIPENDS AWARDED**

S.No.	Name of the Scholarship/Stipends	No. of Awarded	Amount Received(₹)	Date of receiving the Amount (₹)	Disbursed and Adjusted as T/F Amount(₹)
1.	Central Sector Scholarship scheme of Top Class Education for SC Students	-	-	-	-
2.	Central Sector Scholarship scheme of Top Class Education for ST Students	-	-	-	-
3.	Mukhya Mantri Medhavi Vidhyarthi Yojna,M.P.	-	-	-	-
4.	Post Matric Scholarship,Bihar	-	-	-	-
5.	Swami Dayanand Education Foundation	-	-	-	-
		-	-	-	-
6.	Ph.D. Fellowship	38	-	-	97,60,287/-
7.	M.Tech. (GATE Scholarship)	120	-	-	1,31,17,295/-

07:00 FACULTY AND STAFF

07.01 FACULTY & STAFF POSITIONS: SANCTIONED POSITIONS & FILLED-IN POSITIONS

S.No.	Designation	Post sanctioned	In-position	Vacant
1.	Teaching	86	62	24
2.	Trainee Teachers	–	10	–
TOTAL (A)		86	72	24
1.	Registrar	01	01	–
2.	Deputy Registrar	01	–	01
3.	Assistant Registrar	02	02	–
4.	SAS Officer	01	01	–
5.	Medical Officer	01	–	01
6.	Executive Engineer	01	–	01
7.	Assistant Librarian	01	–	01
8.	Superintendent	07	05	02
9.	Technical Assistant/ Junior Engineer/Nurse	27	17	10
10.	Senior Assistant	01	01	–
11.	Stenographer	01	–	01
12.	Junior Assistant	12	09	03
13.	Technician/Lab Asstt.	26	19	07
14.	MTS/Office Attendant	13	10	03
TOTAL (B)		95	65	30
TOTAL (A+B)		181	137	54

07.02 DISTRIBUTION OF FACULTY (DEPARTMENT AND DESIGNATION WISE)

S. No.	Department	Professor	Associate Professor	Assistant Professor	Trainee Teacher	Total
1.	Civil Engineering	-	-	09	02	11
2.	Computer Sci.& Engineering	-	-	08	01	09
3.	Electronics Engineering	-	01	07	03	11
4.	Electrical Engineering	-	-	06	03	09
5.	Mechanical Engineering	-	03	12	01	16
6.	Chemistry	-	-	05	-	05
7.	English	-	-	02	-	02
8.	Mathematics	-	01	04	-	05
9.	Physics	-	-	04	-	04
Total		-	05	57	10	72

07.03 DETAILS OF FACULTY

S. No.	Name	Designation	Department
1.	Dr. Dharmendra Tripathi	Associate Professor	Mathematics
2.	Dr. Kuldeep Sharma	Assistant Professor (Grade-I)	
3.	Dr. Dheerendra Bahadur Singh	Assistant Professor (Grade-I)	
4.	Dr. Nitin Sharma	Assistant Professor (Grade-I)	
5.	Dr. Kusum Sharma	Assistant Professor (Grade-I)	
6.	Dr. Renu Bhadola Dangwal	Assistant Professor (Grade-I)- English	Humanities & Social Sciences
7.	Dr. Ajay Kumar Chaubey	Assistant Professor (Grade-I)- English	
8.	Dr. Nagpure Indrajit Manohar	Assistant Professor (Grade-I)	Physics

S. No.	Name	Designation	Department
9.	Dr. Manvendra Singh Khatri	Assistant Professor (Grade-I)	
10.	Dr. Hardeep Kumar	Assistant Professor (Grade-I)	
11.	Dr. Jagrati Sahariya	Assistant Professor (Grade-I)	
12.	Dr. Rampal Pandey	Assistant Professor (Grade-I)	
13.	Dr. Saroj Ranjan De	Assistant Professor (Grade-I)	Chemistry
14.	Dr. Rakesh Kumar Mishra	Assistant Professor (Grade-I)	
15.	Dr. Pankaj Kandwal	Assistant Professor (Grade-I)	
16.	Dr. Kamal Kant Tiwari	Assistant Professor (Grade-I)	
17.	Dr. Hariharan Muthusamy	Associate Professor	
18.	Dr. Siva Kumar Tadepalli	Assistant Professor (Grade-I)	Electronics Engineering
19.	Dr. Sarika Pal	Assistant Professor (Grade-I)	
20.	Dr. Tajinder Singh Arora	Assistant Professor (Grade-I)	
21.	Dr. Ghanapriya Singh	Assistant Professor (Grade-II)	
22.	Dr. Tushar Goel	Assistant Professor (Grade-II)	
23.	Dr. Hemant Kumar Singhal	Assistant Professor (Grade-II)	
24.	Dr. Pankaj Kumar Pal	Assistant Professor (Grade-II)	
25.	Mrs. Sarita Yadav	Trainee Teacher	
26.	Mr. Nitanshu Chauhan	Trainee Teacher	
27.	Mr. Vivek Kumar	Trainee Teacher	
28.	Dr. Prakash Dwivedi	Assistant Professor (Grade-I)	Electrical Engineering
29.	Dr. Mahiraj Singh Rawat	Assistant Professor (Grade-II)	
30.	Dr. Sourav Bose	Assistant Professor (Grade-II)	
31.	Dr. V.G. Durgarao Rayudu	Assistant Professor (Grade-II)	
32.	Dr. Suryanarayana Gangolu	Assistant Professor (Grade-II)	
33.	Dr. Tripurari Nath Gupta	Assistant Professor (Grade-II)	
34.	Mr. Nitesh Kumar	Trainee Teacher	

S. No.	Name	Designation	Department	
35.	Mr. Rohit Kumar	Trainee Teacher	Mechanical Engineering	
36.	Mr. Himesh Kumar	Trainee Teacher		
37.	Dr. Sanat Agrawal	Associate Professor		
38.	Dr. Lalta Prasad	Associate Professor		
39.	Dr. Gurinder Singh Brar	Associate Professor		
40.	Dr. Pawan Kumar Rakesh	Assistant Professor (Grade-I)		
41.	Dr. Vinod Singh Yadav	Assistant Professor (Grade-I)		
42.	Dr. Apurba Mandal	Assistant Professor (Grade-II)		
43.	Dr. Vikas Kukshal	Assistant Professor (Grade-II)		
44.	Dr. Gaurav Kumar	Assistant Professor (Grade-II)		
45.	Dr. Dungali Sreehari	Assistant Professor (Grade-II)		
46.	Dr. Hitesh Sharma	Assistant Professor (Grade-II)		
47.	Dr. T. Sudhakar	Assistant Professor (Grade-II)		
48.	Dr. Prashant Tiwari	Assistant Professor (Grade-II)		
49.	Dr. Anshul Sharma	Assistant Professor (Grade-II)		
50.	Dr. Niraj Kumar Mishra	Assistant Professor (Grade-II)		
51.	Dr. Yogesh Kumar Prajapati	Assistant Professor (Grade-II)		
52.	Mr. Deepak Kumar	Trainee Teacher		
53.	Dr. Kamal Kumar	Assistant Professor (Grade-II)		Computer Science & Engineering
54.	Dr. Nitin Kumar	Assistant Professor (Grade-II)		
55.	Dr. Maheep Singh	Assistant Professor (Grade-II)		
56.	Dr. Krishan Kumar	Assistant Professor (Grade-II)		
57.	Dr. Parveen Kumar	Assistant Professor (Grade-II)		
58.	Dr. Deshmukh Maroti Bhujangrao	Assistant Professor (Grade-II)		
59.	Dr. Surendra Singh	Assistant Professor (Grade-II)		

S. No.	Name	Designation	Department
60.	Dr. Abhimanyu Kumar	Assistant Professor (Grade-II)	Civil Engineering
61.	Ms. Sneha Chauhan	Trainee Teacher	
62.	Dr. Aditya Kumar Anupam	Assistant Professor (Grade-I)	
63.	Dr. Kranti Gyanchand Jain	Assistant Professor (Grade-I)	
64.	Dr. Vikas Pratap Singh	Assistant Professor (Grade-I)	
65.	Dr. Smita Kaloni	Assistant Professor (Grade-II)	
66.	Dr. Shashank Bhatra	Assistant Professor (Grade-II)	
67.	Dr. Bibhash Kumar	Assistant Professor (Grade-II)	
68.	Dr. Shashi Narayan	Assistant Professor (Grade-II)	
69.	Dr. Laiju A.R.	Assistant Professor (Grade-II)	
70.	Mr. Amardeep	Assistant Professor (Grade-II)	
71.	Mr. Muskan Mayank	Trainee Teacher	
72.	Mr. Abhinav Kumar	Trainee Teacher	

07.04 OFFICERS

A) Officers

S.No.	Designation	In position
1.	Director	01
2.	Registrar	01
3.	Assistant Registrar	02
4.	Students Activity and Sports Officer (SASO)	01
Total		05

Details of Officers:

S.No.	Name	Designation
1.	Dr. Satish Kumar	I/c. Director
2.	Dr. Prabhakar Mani Kala	Registrar
3.	Dr. Vineeta Negi Panwar	Assistant Registrar
4.	Mr. Jagdeep Singh	Assistant Registrar
5.	Dr. Kuldeep Singh	Students Activity and Sports Officer

07.05 DISTRIBUTION OF NON-TEACHING STAFF

S. No.	Designation	Pay Matrix Level	In position	OPEN	SC	ST	OB C	PWD
Higher Ministerial Staff								
01.	Superintendent	6 (Six)	05	04	-	-	01	-

Higher Technical Staff								
02.	Technical Assistant	6 (Six)	15	09	01	-	05	-
03.	Junior Engineer	6 (Six)	01	01	-	-	-	-
04.	Nurse	6 (Six)	01	-	01	-	-	-
Lower Ministerial Staff								
05.	Senior Assistant	4 (Four)	01	01	-	-	-	-
06.	Junior Assistant	3 (Three)	09	07	-	-	02	-
Lower Technical Staff								
07.	Laboratory Assistant	3 (Three)	01	01	-	-	-	-
08.	Technician	3 (Three)	18	11	02	01	04	01*
Supporting Staff								
09.	Lab/Office Attendant	1 (One)	10	08	01	-	01	01**
Total			61	42	05	01	13	02

* OBC ** OPEN

07.06 DETAILS OF NON-TEACHING STAFF

S.No.	Name	Designation	Section/Department
1.	Mr. Anoop Sharma	Superintendent (Accounts)	Accounts
2.	Mr. Sanjay Bhatt	Superintendent	Establishment
3.	Mrs. Anjali Gupta Maurya	Superintendent	Accounts
4.	Mr. Praveen Kumar Manwal	Superintendent	Store
5.	Mr. Ravinder Singh	Superintendent	Accounts
6.	Mr. Sumit Kumar	Junior Engineer (Electrical)	Electrical
7.	Mrs. Neha Raturi	Technical Assistant	Physics

S.No.	Name	Designation	Section/Department
8.	Mrs. Bhavana	Technical Assistant	Electronics Engg.
9.	Mr. Ram Mohan Gupta	Technical Assistant	Mechanical Engg.
10.	Mohammed Arshad Saify	Technical Assistant	Mechanical Engg.
11.	Mr. Paras Sah	Technical Assistant	Civil Engg.
12.	Mr. Saurabh Patwal	Technical Assistant	Civil Engg.
13.	Mr. Abhishek	Technical Assistant	Electronics Engg.
14.	Mr. Gole Balaji Dhanraj	Technical Assistant	Electronics Engg.
15.	Mr. Kawal Preet Singh	Technical Assistant	Electrical Engg.
16.	Mr. Vikas Kothari	Technical Assistant	Computer Science & Engg.
17.	Mrs. Kumud Sharma	Technical Assistant	Library & Information Centre
18.	Ms. Sangeeta Basu	Nurse	Dispensary
19.	Mr. Vikas Singh Chauhan	Technical Assistant	Computer Science & Engg.
20.	Mr. Alok Kumar Patel	Technical Assistant	Electrical Engg.
21.	Mr. Rajesh Kumar	Technical Assistant	Computer Science & Engg.
22.	Mr. Purushottam Prabhakar Jawarkar	Technical Assistant (SASA)	Sports
23.	Mrs. Beena Rawat	Senior Assistant	Store
24.	Ms. Rekha Rawat	Junior Assistant	Academics
25.	Mrs. Swati Bhatt	Junior Assistant	Academics
26.	Mrs. Meenakshi Bhatt	Junior Assistant	Accounts
27.	Mr. Amit Singh	Junior Assistant	Accounts
28.	Mr. Ajay Singh	Junior Assistant	Establishment
29.	Mr. Gaurav Singh Negi	Junior Assistant	Establishment
30.	Mrs. Pooja	Junior Assistant	Store

S.No.	Name	Designation	Section/Department
31.	Mr. Ranjit Sharma	Junior Assistant	Accounts
32.	Mr. Manoj Kumar	Junior Assistant	Director Office
33.	Mr. Anil Bhatt	Technician	Chemistry
34.	Mr. Pradeep Kumar	Technician	Electrical Engg.
35.	Mr. Jai Dev	Technician	Computer Science & Engg.
36.	Mr. Manoj Kumar	Technician	Computer Science & Engg.
37.	Mr. Santosh Singh Rawat	Technician	Mechanical Engg.
38.	Mr. Rinku	Technician	Mechanical Engg.
39.	Mr. Sushil Kumar	Technician	Civil Engg.
40.	Mr. Chandramohan	Technician	Civil Engg.
41.	Mr. Yudhbir Singh Negi	Technician	Computer Science & Engg.
42.	Mr. Nilesh Kumar Bhardwaj	Technician	Library & Information Centre
43.	Mr. Pawan Rana	Technician	Mechanical Engg.
44.	Mr. Krishan Kumar	Technician	Mechanical Engg.
45.	Mr. Chandra Pal Singh	Technician	Electronics Engg.
46.	Mr. Robin Manish Kujur	Technician	Computer Science & Engg.
47.	Mr. Amandeep Singh	Technician	Electrical Engg.
48.	Mr. Sachin Sharma	Technician	Computer Science & Engg.
49.	Mr. Keshav	Technician	Computer Science & Engg.
50.	Mr. Shashi Kumar Jha	Technician	Library & Information Centre
51.	Mr. Sanjay Chauhan	Technician	Electrical Engg.

S.No.	Name	Designation	Section/Department
52.	Mr. Ravindra Kumar	Lab Attendant	Electrical Engg.
53.	Mr. Ashish Nautiyal	Office Attendant	Accounts
54.	Mr. Malkeet Singh	Lab Attendant	Mechanical Engg.
55.	Mr. Tanuj Thapliyal	Office Attendant	Establishment
56.	Mr. Deepak Vijay	Office Attendant	Registrar Office
57.	Mrs. Suman Mewad	Office Attendant	Library & Information Centre
58.	Mr. Siddharth Awadhiya	Office Attendant	Library & Information Centre
59.	Mr. Saurabh Singh Negi	Office Attendant	Store
60.	Mrs. Deepika Maithani	Office Attendant	Academic
61.	Mr. Pankaj Singh	Office Attendant	Registrar Office

07.07 STAFF DEPARTED DURING THE YEAR

NIL

07.08 STAFF ON DEPUTATION DURING THE YEAR

S. No.	Name	Designation	Department/ Section	Remarks
1.	Mr. Anoop Sharma	Superintendent	Accounts	02.04.2019 to 31.03.2021
2.	Mr. Praveen Kumar Manwal	Superintendent	Store	02.04.2019 to 31.03.2021
3.	Mr. Sumit Kumar	Jr. Engineer	Electrical	19.08.2019 to 31.03.2021
4.	Mrs. Kumud Sharma	Technical Assistant	Library & Information Centre	27.01.2020 to 31.03.2021

5.	Mr. Saurabh Patwal	Technical Assistant	Civil Engineering	10.11.2020 to 31.03.2021
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07.09 STAFF ON LIEN DURING THE YEAR

S. No.	Name	Designation	Department/ Section	Remarks
1.	Mr. Nilesh Kumar Bhardwaj	Technician	Library & Information Centre	16.10.2020 to 31.03.2021
2.	Mr. Ravinder Singh	Superintendent	Accounts	05.02.2021 to 31.03.2021

07.10 CONCESSION TO STAFF

The reservation policy of Government of India is adapted in recruitment of the staff of NIT Uttarakhand. Concessions and benefits are made applicable to reserved categories viz SCs, STs and OBCs.

08.00 INFRASTRUCTURE

08.01 ACADEMIC

08.01.01 Department of Civil Engineering

Department of Civil Engineering, N.I.T. Uttarakhand was established in 2013 with an intake of 60 students. The department offers four year courses leading to Bachelor's Degree in Civil Engineering. Department of Civil Engineering has advanced academic structure with core courses and variety of elective courses so that the students' knowledge is not only enhanced in core discipline but also in the related disciplines. The departmental offers postgraduate courses in Structural Engineering and Transportation Engineering along with Ph. D. degree program. Department has 10 Assistant Professors, 01 Trainee Teacher, 02 Technical Assistants and 01 Technician.

Academic Staff

S.No.	Faculty Profile	Qualification	Specialization
1.	Dr. Aditya Kumar Anupam (Head & Assistant Professor)	Ph.D., IIT Roorkee M.Tech, IIT BHU	Transportation Engineering
2.	Dr. Kranti Jain (Assistant Professor)	Ph.D., IIT Roorkee M.Tech, IIT Roorkee	Structural Engineering
3.	Dr. Vikas Pratap Singh (Assistant Professor)	Ph.D., IISc Bangalore M.Tech, MNIT Allahabad	Geotechnical Engineering
4.	Dr. Smita Kaloni (Assistant Professor)	Ph.D., IIT Roorkee M.Tech, MNIT Allahabad	Structural Engineering
5.	Dr. Shashi Narayan (Assistant Professor)	Ph.D., MNIT Jaipur M.Sc (Engg.), IISc Bangalore	Structural Engineering
6.	Dr. Shashank Bhatra (Assistant Professor)	Ph.D., IIT Roorkee M.Tech, IIT Roorkee	Geotechnical Engineering
7.	Dr. Laiju A R (Assistant Professor)	Ph.D., IIT Roorkee M.Tech, NIT Trichy	Environmental Engineering
8.	Mr. Amardeep (Assistant Professor)	Ph.D. (Pursuing), IIT Kanpur M.Tech, IIT Delhi	Structural Engineering
9.	Dr. Bibhash Kumar (Assistant Professor)	Ph.D., IIT Roorkee M.Tech, IIT Roorkee	Geotechnical Engineering
10.	Dr. Muskan Mayank (Assistant Professor)	Ph.D., IIT Roorkee M.Tech, IIT Roorkee	Hydraulics Engineering
11.	Mr. Abhinav Kumar (Trainee Teacher)	Ph.D. (Pursuing), IIT Roorkee M.Tech, IIT Roorkee	Transportation Engineering

Laboratories

The Department of Civil Engineering has fully functional lab facilities, covering all important experimental setup for the undergraduate program. The department is also in the process to establish lab facilities for post graduate program in structural and transportation engineering along with research facilities in environmental engineering and computational mechanics. The department has the following lab facilities.

1. **Structural Analysis Lab:** The Structural Analysis Laboratory serves a wide spectrum of activities covering the entire range of teaching, research, development, and consultancy. Equipped with basic instruments, laboratory also plans to install load frame and advanced displacement and strain measuring sensors.

2. **Building Material Testing Lab:** This lab facility delivers an extensive range of experiments/ tests on basic building materials e.g. Cement, sand, aggregate, fly-ash, bricks etc. The lab has all major test facilities for the industrial consultancy related to building material testing.

Equipments:

- Air Entrainment Apparatus Cement Auto Clave
- Flow Table (Motorized) for Mortar Flow Table (Motorized) for Concrete Heat of Hydration Apparatus
- Concrete Permeability (water) Apparatus Marsh Cone Test Apparatus
- Vee-Bee Consistometer J-Ring Apparatus
- L-Box Apparatus

3. **Concrete Testing Lab:** This lab facility delivers an extensive range of experiments/tests to be performed on the concrete, special concrete related to the fresh and hardened state. The lab has all major test facilities for the industrial consultancy related to building material testing.

Equipments:

- Creep Test Rig Digital Mortar Mixer
- Electronic Flexure Test Apparatus
- Servo Controlled Compression Testing Machine

4. **Road Material Testing Lab:** The Road Material Testing Laboratory carries out testing and analysis on all types of road materials such as asphalt, binders, aggregate materials and other unbound materials for use.

As bearing layers and reinforcement for highways.

Equipments:

- Marshall stability test Apparatus Centrifuge Extractor
- Benkelman Beam Core Drilling Machine Skid Resistance Tester Film Striping
- Device CBR Test Apparatus
- Standard tar viscometer

- Los Angeles abrasion testing machine Compression testing machine Universal Penetrometer
- Ductility test Apparatus Swell Test Apparatus

5. **Geology Lab:** Department of Civil Engineering also undertakes research in engineering geology with a special interest in Himalayan geology. Department in the long term solution for hill stability.

Equipments/Accessories:

- Brunton's Compass

Collection boxes of various physical attributes of common minerals Hand specimen of minerals used in civil construction

Model of common geological discontinuities

Charts describing various structural geology phenomena

6. **Environmental Engineering Lab:** Department has a state of the art environmental lab facility. The lab facility has all major instruments to test the drinking water supply and monitor the level of impurities in water bodies.

Equipments:

- Bench top pH Meter Auto Level BOD Incubator
- Centrifuge COD Digester DO meter
- Double beam UV-Visible spectrophotometer Flame Photo meter
- High volume air sampler Hot air Oven Universal Jar Test Apparatus
- Microprocessor based peristaltic pump Muffle furnace
- Orbital Shaking Incubator Sound Level meter Turbidity meter
- Ultra-Pure Water Purification System Ultrasonic Water Bath

7. **Soil Testing Lab:** Soil testing laboratory is equipped with facilities to carry out many types of tests on soils. These include testing of a large range of sample sizes for compressibility, shear strength and drainage properties. There are different physical, chemical and geotechnical properties determined in the laboratory that is required for identifying the geomaterials. These properties are extensively used in designing of dams, reservoirs, foundations and tunnels etc. The lab offers consultancy services to the industry.

Equipments:

- Triaxial test apparatus Laboratory vane shear Plate load test setup Consolidation apparatus
- Universal Permeability apparatus Automatics oil compactor
- Soil cone penetrometer
- Compaction Test Apparatus for light compaction

8. **Software and Computational Lab Facility:** The department has established one computational lab facility which not only offers students learning on basic structural design software but also caters the needs of the large computational work involved in research work

innumerical and analytical mathematical techniques.

Equipments:

- 25 Computersystems
- 02 Workstations **Softwares** ANAYS
- MATLAB
- VISSIMandVISWALK
- Abacus
- Plaxis

9. **Survey Lab:** The department has fully functional surveying and geomatics lab facility. The facility has all major measuring devices and plans to further add more remote sensing and GPS devices to enrich the learning environment in the department.

Equipments:

- Vernier The odolite Auto Level Dumpy Level
- Surveyors Compass Prismatic Compass
- Ghat Tracer and French curve

10. **Other Labs:** The civil engineering department has also planned to develop a laboratory facility in the field of non- destructive testing of structures along with advanced hydraulics, foundation engineering, rock-testing and traffic engineering lab facility.

Department of civil engineering has also established a culture of excellent faculty research and involvement of students in industry and research-oriented projects. Department is establishing state of the art research facility in environmental engineering, which will not only modernize the ways of testing drinking water but will also produce excellent ways of waste water management in the hilly state of Uttarakhand. The research in the material testing lab is intended to provide a cheaper solution to the construction material requirements. Faculty members plan to use the naturally available resources for better utilization in construction activities. River material found along the bank of river Alaknanda has been continuously tested in different gradation profiles to offer cheaper and better material availability locally. Student's areals involved in these projects and material testing lab facility is extensively used for these experiments. Department is also involved in understanding the better safety aspects of pedestrians and vehicles movement. Taking the case study of various towns, faculty members in the department are involved to propose a comfortable and safer solution for traffic control and vehicular movement. Faculty members from the department have taken an active part in national and international conferences organized by transportation research board and other active bodies.

LABS

Building Material and Testing Lab

Road Material Testing Lab



Fluid Mechanics Lab

Environmental Engineering Lab



Geology Lab



Soil Testing Lab



Concrete Testing Lab



Computational Mechanics Lab



Department is also involved in working towards the earthquake resistant structures with application of reliability-based design. Faculty members in the department are involved in studying the progressive collapse of structures and extending pushover analysis to the design of multi-story buildings. Along with this, faculty members in the department are also involved in studying the vibration of structures in the crude sense of mathematics by applying inverse problems and system identification techniques. Department faculty members are also involved in studies involving the behavior of concrete for structural use. Multiscale modelling of concrete is being studied for fracture and advanced shear behavior under the system of loadings. Mechanics based studies involving the advanced form of functionally graded materials and composites are well underway in the department.

Department is also involved in research on soil elastic medium behavior and stability of tunneling in different ground strata. The soil stabilization and hill slope analysis are also studied very keenly in the department. Modelling and study of sub-surface hydrology are also taken in the department.

Expert Lecture:

Organised Expert Lecture delivered by

- 1) Dr. Arun Jugran, Scientist, G. B. Pant National Institute of Himalayan Environment, Garhwal Regional Centre, Srinagar (Garhwal) on "Biodiversity, Conservation & Sustainable Development" via Google Meet platform at 6:00 pm on 12th January 2021,
- 2) Dr. Tarun Kumar Raghuvanshi, Associate Professor, School of Earth Sciences, College of Natural and Computational Sciences, Addis Ababa University, Ethiopia, on "Landslide Hazard" via Google Meet platform from 10:00 am to 12:00 noon on 24th February 2021

Short Term Courses/Short Term Training Program/Workshops/conferences:

Department of Civil Engineering has organized following Short Term Courses:-

1. "Computational Modelling of Geotechnical Structures using FEM Based Softwares" held on 28th February – 4th March 2021.
2. Five days workshop on "Transport Research and Innovations" held on 18th to 22nd Sep 2020
3. Five days STC on "Forensic Engineering and Rehabilitation of Structures" held on 05th to 09th September, 2020

Student Projects: Department offers major and minor projects in various research and industry-oriented topics to students. Under the close mentorship of department faculty members, students learn to use the application of theory for the solution of practical problems. The department also hosts semester project exhibition where student projects are showcased to the institute. This learning environment not only gives sufficient knowledge to our students but also prepares them for presenting their organization and work in a better communicative way.

B. Tech Projects completed in the Academic year 2020-21

Name of the Project	Supervisor
Scale-dependency of dispersion during contaminant plume transport in porous media.	Dr. Muskan Mayank
Buckling analysis of column using Open SEES	Dr. Shashi Narayan
Design of rainwater harvesting system over large water bodies	Dr. Laiju A R
Design of desalination plant	Dr. Laiju A R
Non-linear analysis of beam on elastic foundation using FDM	Dr. Shashank Bhatra
Seismic slope stability analysis of earthen dam as per IS code.	Dr. Smita Kaloni
Earthquake resistance design of Dam as per IS code.	Dr. Smita Kaloni
Pervious Concrete: Application and Construction Considerations.	Dr. Aditya Kr. Anupam

M. Tech Projects completed in the academic year 2020-21

Name of the Project	Supervisor
A comparative study of different base isolation systems for regular and irregular reinforced concrete building	Mr. Amardeep
Incorporating the silica fume hydration mechanism within the VCCTL framework	Mr. Amardeep
Effect of Irregularities on the Progressive Collapse Potential of RC Frames	Dr. Kranti Jain
A study on lateral strength of CFS wood sheathed shear wall panel under static loads	Dr. Shashi Narayan
Analytical Investigation on shear behaviour of RC beam wrapped with FRP	Dr. Kranti Jain
A comparative study of standards for wind and snow loads on transmission line system	Dr. Shashi Narayan
Pedestrian speed analysis and modelling for single and two-stage crossing at signalized intersection	Mr. Abhinav Kumar
Analysis of driver behavior in dilemma zone at signalized intersection	Mr. Abhinav Kumar
Analysis of pedestrian gap acceptance behavior with left-turning traffic at signalized intersection	Mr. Abhinav Kumar
Effect of motorized two-wheelers at signalized intersections	Mr. Abhinav Kumar

Effect of Irregularities in RC Frame over Progressive Collapse Potential (Souraj Kumar Gupta)	Dr. Kranti Jain
Strengthening of Reinforced Concrete Beam in Shear (Rahul Kumar)	Dr. Kranti Jain
Effect of Modified Binder on Physical and Rheological Properties	Dr. Aditya Kumar Anupam
Use of Recycled Polyethylene Terephthalate Fiber and Calcium Carbide Residue in Subgrade	Dr. Aditya Kumar Anupam
Use of Slate Waste Aggregates as Base / Sub-Base Material	Dr. Aditya Kumar Anupam
Study of the PCI prioritization method for Maintenance and Rehabilitation of flexible Pavement	Dr. Aditya Kumar Anupam
Effect of Reclaimed Asphalt Pavement (RAP) material on physical and Rheological properties of Bitumen	Dr. Aditya Kumar Anupam

Ph.D. Programmes: Existing

NIT Uttarakhand started offering Ph.D. programs in all the disciplines since Spring 2014. Currently 18 students are pursuing their doctoral degree at Civil Engineering Department, NIT Uttarakhand.

Faculty Achievements

- **No. of National/International Journals**

In academic year 2020-2021	In last three years	Name of Faculty
02	03	Mr. Abhinav Kumar
02	06	Dr. Bibhash Kumar
01	01	Dr. Kranti Jain
01	03	Dr. Smita Kaloni
01	03	Dr. Shashank Bhatra
01	02	Dr. Laiju A R
01	03	Dr. Muskan Mayank

- No. of National/International Conferences**

In academic year 2020-2021	In last three years	Name of Faculty
02	03	Mr. Abhinav Kumar
03	07	Dr. Kranti Jain
01	03	Dr. Smita Kaloni
01	02	Dr. Shashank Bhatra
--	03	Dr. Muskan Mayank

- Special Achievements**

1. Bibhash Kumar obtained PhD Degree in Geotechnical Engineering from IIT Roorkee.
2. Laiju A R obtained Ph. D Degree in Environmental Engineering from IIT Roorkee.
3. Muskan Mayank obtained Ph. D Degree in Hydraulics Engineering from IIT Roorkee.

List of Consultancy received by Department of Civil Engineering.

S. No.	Consultancy Project Given by	Date of sanction of project	Name of Project Investigator	Consultancy amount	Status of Project
1.	M.G. Contractor Pvt. Ltd	29.07.2020	Dr. Aditya Kumar Anupam	3,02,080	Completed
2.	M/s Rahee Infratech Limited, Camp Office Lachmoli, Srinagar	13.12.2020	Dr. Shashank Bhatra	5,900	Completed
3.	M/s Rahee Infratech Limited, Camp Office Lachmoli, Srinagar	14.01.2021	Dr. Laiju A.R.	44,604	Completed
4.	LNA Infraprojects Private Limited, Vidhya Nagar, Jaipur	09.01.2021	Dr. Aditya Kumar Anupam	59,000	Completed

08.01.02 Department of Computer Science

The Department of Computer Science and Engineering (CSE) is an integral part of National Institute of Technology (NIT) Uttarakhand. The department started in 2010 with an intake of 30 students in B. Tech. Programme in CSE. Further, Department started M.Tech. and Ph.D. Programme from 2016. The Department offers M. Tech in specialization:

1. Artificial Intelligence (AI)
2. Computing Systems (CS)

The courses run by the department are as per the recent issues related to AI and CS technologies and their applications.

Academic Staff

The Department is running with 09 dynamic faculty members. Their specializations are follows as:

S. No.	Faculty Name	Designation	Specialization
1.	Dr. Krishan Kumar	Assistant Professor & Head	Real-time Systems, Cloud Security, Virtualization, Computer Vision, Multimedia Analysis, Machine Learning, Deep Learning, Artificial Intelligence.
2.	Dr. Kamal Kumar	Assistant Professor	WSN, Security, Cloud Computing, Deep Learning, Artificial Intelligence etc.
3.	Dr. Nitin Kumar	Assistant Professor	Biometrics, Pattern Recognition, Image Processing, Visual Attention Modeling, Machine Learning.
4.	Dr. Abhimanyu Kumar	Assistant Professor	Cryptography, Cryptographic Key Establishment, Secure Multicasting.
5.	Dr. Maroti Deshmukh	Assistant Professor	Cryptography and Multimedia Data Security, Secret Sharing Schemes, Machine Learning.
6.	Dr. Maheep Singh	Assistant Professor	Image Processing, Machine Learning, Network Security
7.	Dr. Parveen Kumar	Assistant Professor	Digital Image Processing, Pattern Recognition and Machine Learning, Computer Vision, Theory of Computation, Analysis of Algorithm
8.	Dr. Surendra Singh	Assistant Professor	Computer Networks, Secure Real Time System, Network Security, Vehicular and Mobile Ad-hoc network.
9.	Ms. Sneha Chauhan	Trainee Teacher	Cryptology and Information Security, Logical Analysis of Data

Research and Development Infrastructure

The Department is equipped with latest Servers/Computers/workstations with Intel Xeon/i7 processor, 1TB Hard disk, 4 GB RAM and 23 inch monitors for comfortable view for students.

1. Servers : Server 1: 4-Dell M610 BladeServers
Server 2: 4-IBM Blade Servers
2. Internet Connectivity :NKN Leased Line of 1Gbps
3. Wi-Fi Connectivity : Whole Campus, Departments and Hostels are covered up with Wi Fi for InternetConnectivity.
4. Network Security : Cyberoam 1500ing XP
5. Storage : Dell PowerVault NX3200

The Department comprises of the five laboratories which are equipped with latest hardware and software like C/C++ Compilers, Java Run Time Environment, Python, Matlab, Weka, Cisco Packet Tracer, PHP with MySql, Microsoft Office, Ubuntu 21.04, Fedora 31 and Open source software.

S. No.	Name of Laboratory	No. of Computer Systems	Software Installed	Online UPS Supply
1	Programing Lab	30	C/C++, JAVA, MATLAB	10KVA
2	Linux Lab	35	Ubuntu Linux, C/C++, JAVA, MATLAB, LEX and FLEX	20KVA
3	Network Lab	35	C/C++, JAVA, MATLAB	
4	Software Lab	30	C/C++, JAVA, MATLAB	10KVA
5	Project Lab	20 Workstations	Open Source Software	10KVA

Hardware Configuration

S.No.	Name of Laboratory	Hardware Configuration	
1	Programing Lab	Operating System	Windows 10, Ubuntu 17.04
		Processor	Intel core i3
	Linux Lab	RAM	4 GB
		Hard Disk	500 GB
		Graphics Card	Inbuilt
Network Lab	Display	19 inch	
2	Software Lab	Operating System	Windows 10, Ubuntu 17.04
		Processor	Intel core i7
		RAM	8 GB
		Hard Disk	1 TB
		Graphics Card	1 GB NIVDIA
3	Project Lab	Display	23 inch
		Operating System	Windows 8.1, Ubuntu 18.04
		Processor	Intel Xeon(R)E52620 v3
		RAM	16 GB
		Hard Disk	1 TB
	Graphics Card	2 GB NIVDIA	
	Display	23 inch	

Some photographs of the departmental laboratories are depicted below:

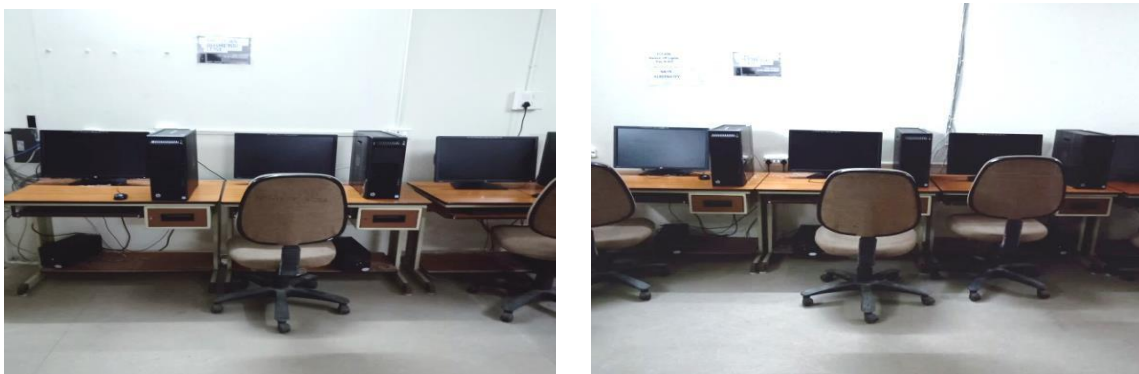
Programming Lab:



Network Lab:



Project Lab:



Linux Lab:**Research and Project Activities**

- Total number of projects: 02
- Total number of publications in International Journals (Last five years): 75
- Total number of publications in International Conferences (Last five years): 125
- Total number of publications: 200

Research Sponsored Project

- *Department of Science and Technology (DST), GoI* sponsored research project title ‘Secret Sharing Scheme based technology for multimedia security over cloud’ of amount Rs. 40 Lakh is running in the department of CSE under the supervision of Dr. Krishan Kumar, Assistant Professor.
- *Uttarakhand State Council for Science and Technology (UCOST), Dehradun Uttarakhand* sponsored research project title ‘Development and Analysis of Cancelable Biometric Template Generation for Per Person Identification’ of amount Rs. 2.09 Lakh is running in the department of CSE under the supervision of Dr. Nitin Kumar, Assistant Professor.

Workshop/STC/FTP organized

- An Online STTP on Recent Advances in Artificial Intelligence from 27.07.2020 to 31.07.2020, was jointly organized by Department of Computer Science and Engineering, National Institute of Technology, Uttarakhand and SLIET Longowal.
- Department of Computer Science and Engineering, NIT Uttarakhand organized 5-days Online STC on "Technological Challenges & Opportunities in COVID-19 Outbreak" from July 06th - 10th, 2020 sponsored by TEQIP III.
- Dr. Nitin Kumar, Coordinator, organized Five Day Staff Development Program on Office Automation in collaboration with Department of Computer Science and Engineering, Sant Longowal Institute of Engineering and Technology, Longowal during August 24-28, 2020.
- Dr. Nitin Kumar, Coordinator, organized Five Day Short Term Training Program on Soft Skills and Personality Development in collaboration with Department of Humanities and Social Sciences, National Institute of Technology, Tiruchirappalli during Sep. 17-21, 2020.
- Department of Computer Science and Engineering, NIT Uttarakhand organized 5-

days Online Faculty Development Programme on Next Generation of Networking and Computing at NIT Uttarakhand, March 08-12, 2021.

- Dr. Krishan Kumar, Coordinator of TEQIP-III Sponsored five days Virtual International Workshop on Pandemic and Socio-Economic Determinants: The Uses, Mathematics and Computations behind the Modeling to inform Decision Makers at NIT Uttarakhand, February 08-12, 2021.
- Dr. Krishan Kumar, Coordinator of DIC Sponsored five days Online Workshop on Awareness to Innovation, Startup and Entrepreneurship at NIT Uttarakhand, January 29-February 02, 2021.
- Dr. Krishan Kumar, Convener of TEQIP-III Sponsored five days Online Faculty Development Programme on Recent Pedagogy and ICT Tools in Teaching & Research at NIT Uttarakhand, August 27-31, 2020.
- Dr. Krishan Kumar, Convener of TEQIP-III Sponsored six days Online Short Term Training Programme on Computational Techniques and Programming at NIT Uttarakhand with collaboration with SLIET Longowal, July 20-25, 2020.

Expert Lectures/Talks Delivered

- Dr. Krishan Kumar delivered Hands-on session on Python and its applications in Computer Vision in Virtual International Workshop on Pandemic and Socio-Economic Determinants: The Uses, Mathematics and Computations behind the Modeling to inform Decision Makers at NIT Uttarakhand, February 2021.
- Dr. Krishan Kumar delivered Keynote Speech on Role of Deep Learning in Multimedia in Online AICTE sponsored STTP on AI and Deep Learning MIET, Jammu on February 2021.
- Dr. Krishan Kumar delivered Keynote Speech on Role of Deep Learning in Multimedia in Online International Conference on Science & Technology (ICOST -2021), January 2021.
- Dr. Krishan Kumar delivered Expert Talks on UNIX, LINUX & Basics of Computer Programming: C/C++ in Online Six-day TEQIP-III sponsored STTP on Computational Techniques and Programming, NIT Uttarakhand, July 2020.
-

Notable Achievement by the students

- Rahul Goswami batch B. Tech. 2016-20 got selected in Google with CTC 31 Lac
- Ayushi Agarwal, batch B. Tech. 2016-20 got selected for MS at University of California, San Diego, USA.
- Himanshu Patel batch B. Tech. 2017-21 secured GATE Score 519 in GATE 2021.
- Harshita Choudhary batch B. Tech. 2017-21 got selected for internship at BNY Mellon.
- Jyoti Kumari Jangid batch B. Tech. 2017-21 got selected for internship at Elocity Technologies.
- Alok Singh Narvariya batch B. Tech. 2017-21 got selected for internship at ITH Technologies.
- Chirag Rawat batch B. Tech. 2017-21 got selected for internship at Unicommerce.
- Anmol Goyal and Pankaj Singh batch B. Tech. 2017-21 got selected for internship at Loyalty Jaggernaut.
- Shubham Aswal batch B. Tech. 2017-21 got selected for internship at Golcha Group.

Publications (2020-21)

1. **Krishan Kumar**, [*Text Query based Summarized Event Searching Interface System using Deep Learning over Cloud*](#), **Multimedia Tools and Applications (Core-B, IF- 2.600, Q1, SCIE)**, Volume 80, Issue 7, pp. 11079–11094, January 2021. DOI: 10.1007/s11042-020-10157-4.
2. Rama Krishna Koppanati, **Krishan Kumar**, [*P-MEC: Polynomial congruence based Multimedia Encryption technique over Cloud*](#), **IEEE Consumer Electronics Magazine (IF- 3.789, Q1, SCIE)**, Volume 10, Issue 5, pp. 41-46, June 2020. DOI: 10.1109/MCE.2020.3003127.
3. Shikhar Sharma, **Krishan Kumar**, Navjot Singh, [*Deep Eigen Space Based ASL Recognition System*](#), **IETE Journal of Research (Core-C, IF-2.333, Q3, SCIE)**, Volume 36, Issue 3, pp. 265-274, July 2020, DOI: 10.1080/02564602.2018.1454347.
4. Parveen Kumar, Ambalika Sharma, "Segmentation-free writer identification based on convolutional neural network", **Computers and Electrical Engineering, Elsevier**, 2020.
5. Alok Negi, Prachi Chauhan, **Krishan Kumar**, Rishabh S. Rajput, [*Face Mask Detection Classifier and Model Pruning with Keras-Surgeon*](#), **5th IEEE International Conference on Recent Advances and Innovations in Engineering (ICRAIE'20)**, December 2020, pp. 1-6, DOI: 10.1109/ICRAIE51050.2020.9358337. Jaipur (India).
6. Alok Negi, **Krishan Kumar**, Prachi Chauhan, Rishabh S. Rajput, "[*Deep Neural Architecture for Face mask Detection on Simulated Masked Face Dataset against Covid-19 Pandemic*](#)", **IEEE International Conference on Computing, Communication, and Intelligent Systems (ICCCIS'21)**, February 2021, pp. 595-600, DOI: 10.1109/ICCCIS51004.2021.9397196. Greater Noida (India).
7. Alok Negi, **Krishan Kumar**, Prachi Chauhan, "[*Deep Neural Network-Based Multi-Class Image Classification for Plant Diseases*](#)", **Agricultural Informatics: Automation Using the IoT and Machine Learning**, March 2021, pp. 117-129. DOI: 10.1002/9781119769231.ch6. ISBN: 9781119768845, John Wiley & Sons, Inc.
8. Purohit, Kaustubh, Avanish Kumar, Mayank Upadhyay, and **Krishan Kumar**. "Symmetric Key Generation and Distribution Using Diffie-Hellman Algorithm." In **Soft Computing: Theories and Applications**, pp. 135-141. Springer, Singapore, 2020.
9. Vivek Kumar Singh, **Nitin Kumar**, Navjot Singh, "A hybrid approach using color spatial variance and novel object position prior for salient object detection", **Multimedia Tools and Applications**, pp. 1 -23, Springer, Aug. 2020.
10. Neha Goyal, **Nitin Kumar**, Kapil, "[*On solving leaf classification using linear regression*](#)", **Multimedia Tools and Applications**, pp. 1 -19, Springer, Sep. 2020.
11. Kanchan Bisht, **Maroti Deshmukh**, "A Novel Approach for Multilevel Multi-Secret Image Sharing Scheme". **Journal of Supercomputing**, Vol. 77, pp. 12157–12191, Springer, 2021.
12. Arjun Rawat, **Maroti Deshmukh**. "[*Computation and Communication Efficient Secure Group Key Exchange Protocol for Low Configuration System*](#)" **International Journal of Information Technology**, Vol. 13, pp. 839–843, 2021.
13. Ayushi Agarwal, **Maroti Deshmukh**. "[*3-D plane based extended Shamir's secret sharing*](#)", **International Journal of Information Technology**, Vol. 13, pp. 609–612, Springer, 2021.
14. Arjun Singh Rawat, **Maroti Deshmukh**. "[*Tree and Elliptic Curve based Efficient and Secure Group Key Agreement Protocol*](#)". **Journal of Information Security and Applications, Elsevier**, Vol. 55, pp. 1-10, 2020.

15. Ayushi Agarwal, **Maroti Deshmukh, Maheep Singh**. “*Object Detection Framework to Generate Secret Shares*”. **Multimedia Tools and Applications**, Springer, Vol. 79, pp. 24685–24706, 2020.

FDP/WORKSHOP/STTP/STC Attended

- a) Dr. Nitin Kumar attended a Short Term Course on 'MANAGEMENT OF SMALL AND MEDIUM ENTERPRISES' from 06/07/2020 to 10/07/2020 organized by NITTTR, Chandigarh through online mode.
- b) Dr. Nitin Kumar attended a Faculty Development Program (FDP) on “Outcome Based Education (OBE) System” during July 20-25, 2020.
- c) Dr. Krishan Kumar attended a Faculty Development Program (FDP) on “Outcome Based Education (OBE) System” during July 20-25, 2020.
- d) Ms. Sneha Chauhan attended a Faculty Development Program (FDP) on “Outcome Based Education (OBE) System” during July 20-25, 2020 organized by NIT Uttarakhand.
- e) Dr. Nitin Kumar attended a One-week workshop on "Writing Research Papers & Grant Proposals: Scientific, Technical, and Ethical Practices & Conduct” during August 24-28, 2020.
- f) Dr. Krishan Kumar attended a One-week workshop on "Writing Research Papers & Grant Proposals: Scientific, Technical, and Ethical Practices & Conduct” during August 24-28, 2020.
- g) Dr. Nitin Kumar attended a Short Term Course on 'Stress Management: A Post COVID-19 Pandemic Perspective' during Sep. 14-18, 2020.
- h) Dr. Krishan Kumar attended a Short Term Course on 'Stress Management: A Post COVID-19 Pandemic Perspective' during Sep. 14-18, 2020.
- i) Dr. Krishan Kumar attended five days online training on ‘Deep Learning: from Basic to Practice’ during Dec. 26-30, 2020.
- j) Ms. Sneha Chauhan attended a Short Term Course on 'Stress Management: A Post COVID-19 Pandemic Perspective' during Sep. 14-18, 2020 organized by NIT Uttarakhand.

Faculty Achievements

1. Dr. Krishan Kumar has been elevated as Senior Member, IEEE USA (April 2020).
2. Dr. Krishan Kumar has been appointed as an Editor at IETE Journal of Research (SCIE) March 2021.
3. Dr. Parveen Kumar completed Ph.D. from IIT Roorkee in July 2020.

08.01.03 Department of Electronics Engineering

Started during the session 2010-11, the Department offers B. Tech. programme in Electronics and Communication Engineering. The Department also offers M. Tech programme in Microelectronics & VLSI Design and Communication Systems and PhD programs in multiple specializations. The ECE department has always taken lead in establishing well equipped and state of art lab facilities for students. The department has developed Research lab with latest work stations, National Instruments equipment, logic analyzer and lab view software. The department has 01 Associate Professor, 07 Assistant Professors, 03 Trainee

Teachers and 03 Technical Assistants.

Academic Staff

S. No.	Faculty Name	Designation	Specialization
1.	Dr. Tajinder Singh Arora	Head & Assistant Professor	Analog Integrated Circuit and Signal Processing, Microelectronics, Analog Signal Processing , VLSI
2.	Dr. Hariharan Muthusamy	Associate Professor	EEG, VEP, ECG and EMG Signal Processing Infant Cry Signal Analysis
3.	Dr. Siva Kumar Tadepalli	Assistant Professor	VLSI, Nonlinear Systems
4.	Dr. Sarika Pal	Assistant Professor	Optical Sensor, Metamaterials, Optoelectronics, Communication
5.	Dr. Ghanapriya Singh	Assistant Professor	Digital Signal Processing, Digital Image Processing, Speech Processing, Context - Aware computing, Human-Computer interaction, Machine learning.
6.	Dr. Tushar Goel	Assistant Professor	RF & Microwave
7.	Dr. Hemant Kumar Singhal	Assistant Professor	RF & Microwave
8.	Dr. Pankaj Kumar Pal	Assistant Professor	Semiconductor device physics and VLSI Design
9.	Ms. Sarita Yadav	Trainee Teacher	VLSI Design
10.	Mr. Nitanshu Chauhan	Trainee Teacher	VLSI design
11.	Mr. Vivek Kumar	Trainee Teacher	VLSI Design

Laboratories

1. Research Lab: This lab is mainly dedicated to research work for UG/PG and faculty members. This lab consists of high speed computation platform to cater to the need of research in VLSI, Microwave and signal processing.

2. Analog Electronics Lab: This lab emphasizes on providing fundamental knowledge of basic electronic devices and circuits to the students. ECE as well as EEE Students are made to work on discrete and integrated circuit components.

3. Microprocessor Lab: Microprocessor lab is dedicated to programming and interfacing of 8 bit 8085 microprocessor and 8051 microcontroller with various peripherals. Students are encouraged to design various automated embedded systems based electronics projects in the lab.

4. Digital Signal and Image Processing: This lab provides real time processing of 1D and 2D signals and having floating point processor that can provide minimum quantization errors. Students also can visualize signals and analyze its basic proper ties like time shifting,

modulation, filtering, scaling, and compression on a virtual platform such as lab-view and code composers.

5. Communication Lab: Communication lab facilitates the students to the understand the basic principle of communication systems. Students can realize different analog and digital modulations such as amplitude modulation, frequency modulation, phase shift keying, amplitude shift keying, frequency shift keying modulation, QPSK and QAM etc. on trainer kits and visualize the signal processing on CRO, high end digital storage oscilloscopes and spectrum analyzer.

6. Electronics System Design Lab: Electronics system design lab is devoted to design advanced digital and electronics systems, mostly this lab is utilized by third year and final year students. This lab consists of 20 high end computer systems for hardware description language programming and FPGA Altera DE2 kits for interfacing purpose.

7. Electronic Workshop: Students from ECE as well as other departments who are interested in robotics and embedded systems work in this lab. Lab provide all basic facilities like ICs, PCB boards, soldering irons, motors and AVR microcontroller kits, USB burners. In addition, department has also purchased new E-Yantra kits for robotics. This lab is used mainly by the students working on their major and minor projects.

8. Digital Electronics Lab: Digital electronics lab is basic lab for Electronics, Electrical, and computer science under graduate students. Students are made familiar with basic building block of digital electronics systems such as logic gates, combinational and sequential circuits, using digital ICs and digital training kits.

Major Equipments:

- NI Academic Site license Lab view Software-campus teaching License.(Unlimited Users)
 - Signal and System solution
1. Elvis-II Signal & System.
 2. Emona Sigex Signal and System Experimenter NI Elvis.
 3. NIPXI -5441 100MS/S with AWG with onboard signal processing 256MB.
 - RF System Solution
 1. NI PXIe-5632 8.5 GHz Vector Network Analyzer b) NI PXIe-8820 2.2GHz Celeron 1020E.
 2. NI PXIe-5632 8.5 GHz, 2-port, W/Time Domain Analysis.
 3. NIPXIe-1085, 18 slot 3U PXI Express Chassis.
 4. RF Signal Analyzer – (Upto 20 GHz), (20GHz USB Signal Generator AM/FM)
 5. RF Signal Analyzer (Upto 26.5 GHz)
 6. Phase Matrix (26.5 GHz Vector Signal Analyzer)
 - Wireless Communication Solution
 1. NI USRP-2932 400 MHz to 4.4 GHz, GPS Clock Software Radio Kit, Toolkit
 2. 144MHz,400 MHz and 1200 MHz Tri Band (7 inch) Vertical Antenna c) Dual Band 2.4-2.48 GHz & 4.9-5.9 GHz Vertical Antenna

3. USRP MIMO Sync and Data Cable, 0.5M
 - RF/Wireless Measurement lab

1. NIPXI Chasis Controller & RF Modules (RF VSA, RF VSG)
2. NI WLAB Measurement suit for Labview. c) NI Measurement suite for fixed WiMax.
3. Set of Antennas, Coaxial Cable and Mounting Accessories.
 - DSP Application

1. NI Speedy 33 DSP target chip. b) TMS320C6713 DSKs.
 - Image Processing Solution (Embedded Vision System Solution)

1. NI EVS 1464 (Windows) Vision system with Windows7,GigE Vision, IEEE1394b
 - Real Time Data Acquisition

1. NI my DAQ (Data Acquisition Cards).





Terasic Altera DEII Development Platform

- 1 GHz Spectrum Analyzer with Trace Generator
- 100 MHz Cathode Ray Oscilloscope
- 10MHz Function Generator with 40 MHz Frequency Counter
- 5 MHz General Purpose Function Generator
- 4/8 – bit Analog to Digital Convertor
- Digital System Design Kit
- 4 Bit Shift Register
- XPO 8086 Kit with accessories
- XPO 8051/8031 Kit with accessories
- 32bit DSP Design Platform with Peripherals
- DC milliammeter (0-100 mA)
- MASTECH MAS-830L Multimeter (3 ½ Digit)
- Digital Circuits Development Platform (Model ST2614)
- 200 MHz Four Channel Digital Storage Oscilloscope with Colour Display
- 30MHz Cathode Ray Oscilloscope
- 10MHz General Purpose Function Generator
- 3 ¼ Digit Type Digital Multi meter
- 4/8 – bit Digital to Analog Convertor
- 4 Bit Counter
- Digital Circuit Trainer Kit
- XPO 8085/8088 Kit with accessories
- 8253, 8259, 8279, 8251, 8255 Peripheral Devices
- MATLAB and Simulink-R2013a
- Moving Coil DC milliammeter (0-1 mA)
- Digital IC Tester
- Caddo62 Digital Multimeter (5 ½ Digit)

In addition to this Department has following facilities for UG/PG students in various labs:

- Cadence and Synopsys Electronic design and automation (EDA) Tool
- Digital storage oscilloscope for 4 channels upto 200MHz
- Spectrum analyzer & Vector network analyzer for measurements of high frequency up to 8.5GHz
- RF signal analyzer up to 26.5GHz
- Logic analyzer for 34 channels
- Digital IC testing facility
- Floating point digital signal processor
- Data acquisition systems up to 1GHz
- Arbitrary wave form generator
- 70 frame rate per second camera
- High end computer facilities in electronics system design and digital signal processing lab
- Digital measurement for voltage, current, resistors and capacitors
- High configured latest workstations in Research lab.

Research in Department

- Data hiding steganography in Image Processing
- Antenna for inter-satellite communication
- On chip RF Transceiver
- Design of power amplifier
- Photonic crystal device
- Context awareness
- Minimum power supply design for Fin FET
- Microwave filter
- Organic electronics
- Low noise oscillator
- Microelectronics and VLSI
- A 5 year project on Special Manpower Development Programme Chipto System Design (SMDP-C2SD) by MeitY.

Technical activities:

- Time to time students of ECE department have been participating in technical activities and winning accolades in technical competitions held in different IIT's and NIT's in India.
- Students have been routinely publishing papers in reputed conferences.
- **Aniket** from the Third year has visited Germany for his internship under the coveted DAAD scholarship.
- A number of students in past two years have obtained internship offers from reputed industries like Intel and NXP Semiconductors to name a few.

Specialized Training in the Department

- Training conducted on Lab view software and hardware
- Training conducted on Sentaurus software
- Training conducted on MATLAB computation programming
- Training conducted on FPGA hardware programming
- Training conducted on CST Microwave Studio Software
- Training conducted on CAD tool Software
- Training conducted on AS Software
- Training conducted on Synopsys TCAD Software

Student Projects

- Design of Monopole UWB Antennas
- Design of Fractal UWB Antennas
- Digital Processing and Filtering of audio signal on FPGA
- FIR Filter Implementation on FPGA
- Electronic voting machine prototype on FPGA
- Alphabetical keypad using AT89C51Microcontroller
- Water Level Indicator

- Implementation of snake game using VGA key board interfacing on FPGA Board
- Digital Alarm Clock on FPGA
- Implementation of Traffic Surveillance system
- Implementation of Digital audio 12B and Equalizer on NI Lab view
- LCD Display using Altera DE2Cyclone

Industrial Visits:

Every academic year, students are taken on industrial trips. Some major visits in past few years were

- Chilla hydro power project, Haridwar
- Bharat Heavy Electricals Limited, Mumbai
- Tarapur Atomic power station, Mumbai
- CSIR, National Institute of Oceanography (NIO), Goa Electronics Limited (GEL)
- CENSE, IISc. Bangalore (Mtech 2016 and Btech 2014)
- IIT Bombay and BARC, Mumbai (2015 btech)
-

STUDENT'S INTERNSHIP

Sr.No.	Name of the Student	Branch	Roll.No.	Name of the Company	Stipend
1.	Abhinav Kumar	ECE	BT15ECE046	NxP India Pvt. Ltd.	15,000/-
2.	Diwakar Mishra	ECE	MT17ECE004	Intel Technology India Pvt. Ltd., Bagalore	14,000/-
3.	Tushar Vijai Singh	ECE	MT18ECE001	NPX India Pvt. Ltd.	25,000/-
4.	Pranoti Gogulwar	ECE	MT18ECE004	NPX India Pvt. Ltd.	25,000/-
5.	Raghavendra Nath Yadav	ECE	MT19ECE001	Intel Technology India Pvt. Ltd.,	20,000/-
6.	Ms. Nelakurthy Sahithi	Microelectronics and VLSI Design	MT20ECE005	Intel India (Bangalore)	40,000/-
7.	Mr. Kaushal Devrani	ECE	BT18ECE006	Samsung R&D Institute India-Banglore Pvt. Ltd.	50,000/-

RESEARCH SCHOLARS IN THE DEPARTMENTS

1. Mr. Yogendra Pratap Pundir
Supervisor: Dr. Pankaj Kumar Pal, Assistant Professor
2. Mr. Rajesh Saha
Supervisor: Dr. Pankaj Kumar Pal, Assistant Professor
3. Varun Kumar Kakkar
Supervisor: Dr. Pankaj Kumar Pal, Assistant Professor
4. Lalit Kumar Gariya
Supervisor: Dr. Hariharan Muthusamy, Associate Professor
5. Maneesh Kumar Singh
Supervisor: Dr. Sarika Pal, Assistant Professor
6. Rishi Nigam
Supervisor: Dr. Shiva Kumar Tadepalli, Assistant Professor
7. B.K. Hemant
Supervisor: Dr. Tajinder Singh Arora, Assistant Professor
8. Arvind Kumar
Supervisor: Dr. Tajinder Singh Arora, Assistant Professor
9. Gaurav Maithani
Supervisor: Dr. Sarika Pal, Assistant Professor
10. Sachin Tiwari
Supervisor: Dr. Tajinder Singh Arora, Assistant Professor
11. Ruchi Juyal
Supervisor: Dr. Hariharan Muthusamy, Associate Professor
12. Arvind Bisht
Supervisor: Dr. Pankaj Kumar Pal, Assistant Professor
13. Rajeev Kumar
Supervisor: Dr. Sarika Pal, Assistant Professor
14. Vipin Kumar Verma
Supervisor: Dr. Sarika Pal, Assistant Professor
15. Avinash Bhatt
Supervisor: Dr. Tushar Goel, Assistant Professor
16. Satendra Pathak
Supervisor: Dr. Tushar Goel, Assistant Professor

DETAILS OF THE PROJECTS SANCTIONED/ONGOING (2020-2021):

S.No.	Principal Investigator/Department	Project Title	Financial Worth	Sponsoring Organization	Status
1.	Dr. Pankaj Kumar Pal Assistant Professor, ECE	Special Man Power Development Programme Chip to System Design (SMDP-C2SD)”	16,90,860 124.09 lacs	MeitY, GoI	Ongoing

DETAILS OF PATENTS:

S. No.	Department	Patent Title	Patent Application No. / Patent No.
1	Electronics	Highly-Directional Compact Semicircular Angular-Phased Antenna Array in 9.35-42.89 GHz.	Indian Patent 201811035222
2		Open Vs Enclosed Spatial Environment Classification For A Mobile or Wearable Device Using Microphone and Deep Learning Method.	US62/789,406
3		Open Vs Enclosed Spatial Environment Classification For A Mobile or Wearable Device Using Microphone and Deep Learning Method.	US10588517B2

Swayam/NPTEL/MOOCs (2019-20):

S.No.	Faculty Name	Department	Designation	Enrolled (Yes/No)	Certified (Yes/No)
1.	Dr. Tajinder Singh Arora	Electronics Engg.	Assistant Professor	Yes	Yes
2.	Mr. ViveK Kumar	Electronics Engg.	Trainee Teacher	Yes	Yes

8.01.04. Department of Electrical Engineering**About**

The Department of Electrical Engineering was established during the inception of the Institute in 2010 and has a fine blend of young and dynamic faculty. The Department is currently offering B.Tech. in Electrical & Electronics Engineering and M. Tech program in Electrical Engineering with two specializations i.e., Power System & Control, and Power Electronics & Drives. The department is also offering Ph.D. program in the emerging areas of Electrical Engineering for both full time and part time researchers. The major areas of expertise of faculty of department are Power Systems, Power Electronics, and Control Systems.

Faculty & Staff:

S.No.	Name of Faculty	Designation	Specialization
1.	Dr. Prakash Dwivedi	Assistant Professor	Control System
2.	Dr. Mahiraj Singh Rawat	HoD & Assistant Professor	Power Systems
3.	Dr. Sourav Bose	Assistant Professor	Power Electronics, Electric Drives & Renewable Energy
4.	Dr. V. G. Durgarao Rayudu	Assistant Professor	Control System
5.	Dr. Suryanarayana Gangolu	Assistant Professor	Power System
6.	Dr. TripurariNath Gupta	Assistant Professor	Power Electronics
7.	Mr. Nitesh Kumar	Trainee Teacher	Electric Drives
8.	Mr. Rohit Kumar	Trainee Teacher	Power Electronics
9.	Mr. Himesh Kumar	Trainee Teacher	Power System
10.	Mr. Alok Kumar Patel	Technical Assistant	-
11.	Mr. Pradeep Kumar	Technician	-

Laboratories:

S.No.	Laboratory Name	S.No.	Laboratory Name
1.	Basic Electrical Circuit Laboratory	6.	Measurement Laboratory

2.	Control System Laboratory	7.	Power Electronics Laboratory
3.	Electrical Drives Laboratory	8.	Simulation Laboratory
4.	Electrical Machine Laboratory	9.	Switch Gear & Protection Laboratory
5.	Elementary Electrical Engineering Laboratory	10.	Advanced Electrical Drives Laboratory

Basic Electrical Circuit Laboratory:



List of Experiments

1. To verify and finding the equivalent circuit of a Thevenin's theorem.
2. To verify and finding the equivalent circuit of a Norton's theorem.
3. To verify Maximum Power Transfer theorem.
4. To verify Super Position theorem.
5. To study the operation of Series and Parallel Resonance of a RLC circuit.
6. To find the power of a 3- ϕ balanced and unbalanced system.
7. To study the operation of a Transformer as a Coupled circuit and determination of its
 - a) Self-Inductance
 - b) Mutual Inductance
 - c) Coupling Coefficient.
8. To verify Telligen's theorem.
9. Transient response of a RL and RC Circuits.
10. To find the various Two- Port network parameters of a given network.

List of Major Equipment's

1. Maximum Power Transfer Theorem kit
2. Series and Parallel Resonance of a RLC circuit kit
3. Verification of Telligen's theorem kit
4. Two- Port network parameters Kit

Control System Laboratory:**List of Experiments**

1. Error Detector Using Potentiometer and Synchros.
2. Time Response Behavior of Different Blocks of Control System.
3. System Identification.
4. Ziegler-Nichols tuning of PID Controller.
5. To study the effect of addition of pole on transient response to the second order closed loop control system by using MATLAB & LABVIEW.
6. To study the stability analysis of linear system.
7. To study the effect of addition of zero & pole to open loop transfer function of second order unity feedback control system by using root locus technique (using MATLAB & LABVIEW).

Additional Experiments

8. To study the effect of addition of pole on frequency response to the second order closed loop control system by using MATLAB & LABVIEW.
9. To study the frequency response of Lag, Lead, Lag-Lead network.
10. To study the speed characteristics of BLDC Motor.

List of Major Equipment's

1. Temp. Control System Trainer
2. BLDC Motor trainer system
3. PID Controller
4. Relay Control System
5. Stability analysis of Linear System
6. Transducer Instrumentation & Control trainer
7. Qbot
8. AERO
9. Inverted Pendulum

Electrical Drives Laboratory:



List of Experiments

1. Study of chopper/DC-DC converter-controlled DC Drive.
2. Study of Rectifier controlled DC Drive.
3. Study of PWM controlled Inverter fed Induction Motor
4. Study of electrical braking operation of DC Motor
5. Study of electrical braking operation of AC motor
6. Study of V/f control operation of 3phase induction motor drive.
7. Study of permanent magnet synchronous motor drive fed by PWM Inverter.
8. Study of Closed-Loop Control of DC Drives.
9. Study of slip power recovery control of induction motors.
10. Study of two-quadrant operation of DC-DC Converter.

List of Major Equipment's

1. DC-Motor Gen System (3kw)-NI LabVIEW based
2. Induction Generator System- NI LabVIEW based instruments.
3. 3-phase Synch motor gen System, 3 kW
4. Three Phase Squirrel Cage Induction –Controlled by NI-LabVIEW and VFD Drives
5. Switched reluctance Motor kit 0.3 kW
6. 3-Phase Universal Motor Controller
7. PM Synch Motor Kit 3 kW
8. PMBLDC- Kit 0.25 kW
9. Solar and Wind Power Trainer Kit (NI LabView)
10. Smart Grid Monitoring Module
11. Three-phase half and fully controlled rectifier.
12. Variable frequency drives.
13. Voltage Source Inverter.

Electrical Machine Laboratory-I:**List of Experiments**

1. To determine the efficiency of single-phase Transformer by conducting Sumpner's back- to- back test.
2. To conduct load test on DC shunt generator and to draw the external and internal characteristics of DC shunt generator.
3. To conduct Hopkinson's test on a pair of identical DC machines to pre-determine the efficiency of the machine as generator and as motor.
4. To perform the scott connection of transformer and to obtain the two-phase supply from three phase supply.
5. To determine the efficiency of the two given dc series motors which are mechanically coupled.
6. To study of the speed control of a dc shunt motor using conventional Ward- Leonard method.
7. To draw the magnetization characteristics of dc shunt generator.
8. To conduct brake test on DC compound motor for long shunt cumulative & differential connections and to draw the performance characteristics.
9. To perform parallel operation of two dissimilar Transformer and determine combined and individual transfer efficiency.
10. To perform the Swinburne's test of the DC machine and pre-determine the efficiency of the machine as generator and as motor.

Electrical Machine Laboratory-II:**List of Experiments**

1. To determine speed- torque characteristics of single-phase Induction motor and study the effect of voltage variation.
2. To draw the circle diagram of 3-phase induction motor by conducting no load and blocked rotor test.
3. To study speed control of three phase Induction motor by varying supply voltage and keeping v/f constant.
4. To determine V-curve and inverted V-curve of a three-phase synchronous motor.
5. To predetermine the regulation of 3-phase alternator by EMF and MMF methods and also draw the vector diagram.
6. To determine the efficiency of 3-phase induction motor by performing load test.
7. To study synchronization of an alternator with infinite bus using
 - (A) Dark lamp method
 - (B) Two bright and one dark lamp method
8. To determine the percentage regulation of an alternator by ZPF method.
9. To study the power angle curve of synchronous generator.
10. To determine x_d and x_q of a salient pole synchronous motor using the slip test.

List of Major Equipment's

1. 3-Phase Rectifier
2. DC Shunt Motor
3. Squirrel Cage IM
4. Dc Power Supply SCR Based
5. DC compound Gen Set
6. Slip Ring Motor
7. Synchronous Motor 4 pole coupled with DC Shunt Generator
8. Synchronous Motor, with Induction motor Coupled Dc Shunt gen. 220V,3 kW, 1500rpm
9. Synchronous Motor, 1HP, Coupled Dc Shunt gen. 220V, 3kW, 1550 rpm
10. Servo Stabilizer 3-ph
11. Multi Winding Transformer

Elementary Electrical Engineering Laboratory:**List of Experiments**

1. To study and verify Kirchhoff's current and voltage laws for a circuit.
2. To study the performance & phasor diagram of RLC series circuit.
3. To study the speed control of DC shunts motor.
4. To perform the open circuit & Short circuit test for measuring the losses of the transformer.
5. To study the performance & phasor diagram of RLC parallel circuit.
6. Study of different types of machines.
7. To test the polarity of the single phase transformer.
8. Determine B/H curve for magnetic material.
9. To calculate the efficiency & voltage regulation of a single phase transformer.
10. Calculation of slip(s) of Induction motor for clock wise and anti-clock wise rotation of rotor.

List of Major Equipment's

1. DC Supply 110-220 V.
2. Ammeter DC 1-0-1 Amp.
3. DC 0.5-1 Amp.
4. Rheostat 110Ω , 2.8 Amp; 1089Ω , 0.6 Amp.
5. Variac Input 220 V, output 270V, 5 Amp
6. Ammeter AC 2.5-5 Amp.
7. Voltmeter 150-300 V.
8. Transformer 220 V, 1KVA, 4.5 Amp.
9. Wattmeter 2.5-5 Amp, 75-150-300 V.
10. Capacitor 0-10 μF
11. Single Phase lamp load input 220 V

Measurement Laboratory:**List of Experiments**

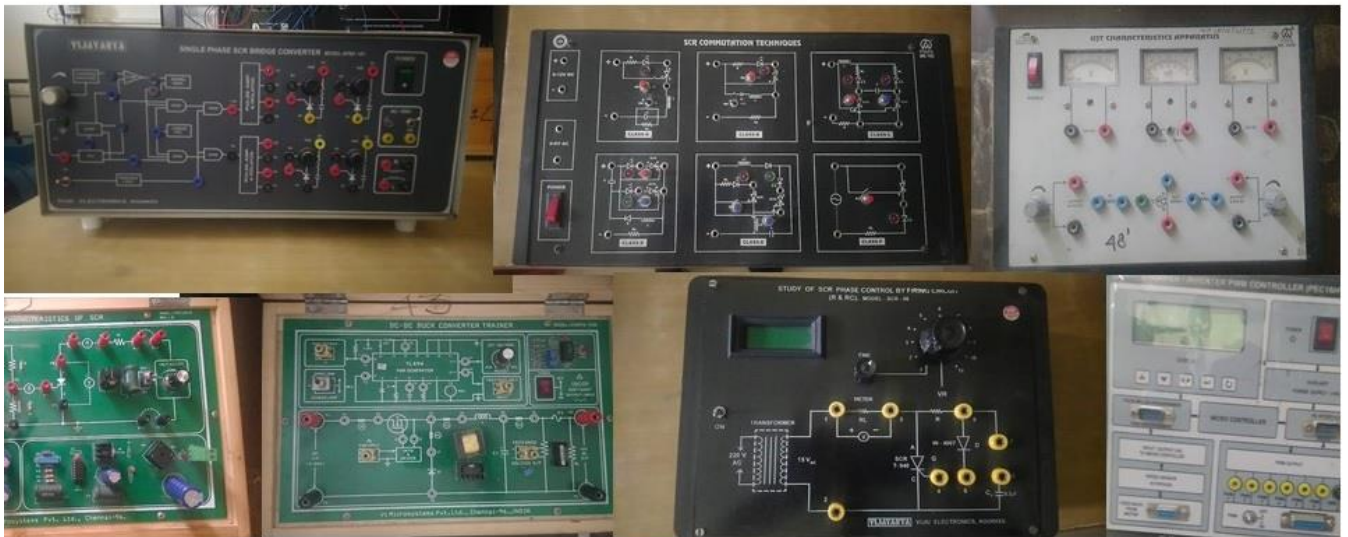
1. Measurement of unknown medium resistance by using Wheat Stone Bridge
2. Measurement of unknown small resistance by using Kelvin Double Bridge
3. Measurement of unknown medium inductance by using Maxwell Bridge
4. Measurement of unknown high inductance by using Hay' Bridge
5. Study of analog meters—PMMC, Electro Dynamo Meter, Moving Iron
6. Measurement of small distance variations by using LVDT
7. Measurement of weight by using Strain Gauge
8. Measurement of Torque
9. Study of CRO (Cathode Ray Oscilloscope)
10. Measurement Wind using Digital Anemometer
11. Measurement of solar irradiance using Digital Pyranometer (Solar Power meter)

List of Major Equipment's

1. **Wheat Stone Bridge** Source-5V R1 -1K Ω , 10K Ω , 100K Ω . R2- 10K. R3-, 10 Ω , 100 Ω , 1K Ω , 10K Ω , 100K Ω
2. **Kelvin Double Bridge** Source-5V. R1 -1K Ω , 10K Ω , 100K Ω . R2- 100 Ω , R3-1K Ω , 10K Ω , 100K Ω .
3. **Maxwell Bridge Source**-1KHz Oscillator R1-10K. R2-0.1mf. R3 -10 Ω , 100 Ω , 1K Ω , 10K Ω , 100K Ω
4. **Hay' Bridge Source**-1KHz Oscillator R2 -10 Ω , 100 Ω , 1K Ω , 10K Ω , 100K Ω . R3 - 10 Ω . R4 -10 Ω
5. PMMC, Electro Dynamo Meter, Moving Iron
6. **LVDT** Input 203 AC Display 0-10 V Displacement range 0-20 mm
7. **Strain Gauge** Measuring Range-0-5,Kg Non-linearity Error - $\pm 1\%$ Excitation Source- D.C. Excitation (5Volts) Display- 3(1/2) Digit LED

8. **Torque** Measuring Range-0-2.5Newton meter. Non-linearity Error - $\pm 1\%$ Source-D.C. Excitation (5Volts) ; Working Temperature-0-500C Display- 3(1/2) Digit LED
9. **CRO (Cathode Ray Oscilloscope)**
10. **Anemometer** Display-LCD ,Size-65x25 mm Operating Temperature-0-500C(32-1220F) Air Velocity Sensor Structure- Conventional twisted vane arms and low friction ball-bearing design. Power supply-006P DC 9V battery Power Consumption- Approx DC 9mA Weight-325g/0.72lb(Including Battery)
11. **Pyranometer** (Solar Power meter) Sensor-High Sensitivity Silicon Photodiode Range-0~2000W/m²(0~634BTU/ft².h) Tilt angle range- 00~90 Store temp .&relative humidity- -100C~600 C(140F~1400F Less than 85%RH) Memory-20 point memory Accessories-9V battery

Power Electronics Laboratory:



List of Experiments

1. To study the V-I characteristics of SCR.
2. To study the V-I characteristics of TRIAC.
3. To study UJT characteristics.
4. To study SCR phase control.
5. To study SCR commutation techniques.
6. To study the performance of boost converter.
7. To study the performance of buck converter.
8. To study the operation of full bridge-controlled converter with R-Load.
9. To study single phase full bridge inverter.
10. To study single phase ac voltage controller
 - a. Based on SCR
 - b. Based on TRIAC

List of Major Equipment's

1. PEC16M1B Trainer Kit
2. PEC16M1C Trainer Kit
3. ME547D Trainer Kit

4. SCR-06 Trainer Kit
5. SCR commutation (ME-793) Trainer Kit
6. DC-DC Boost converter (VSMPS-06A)
7. DC-DC Buck converter (VSMPS-05A)
8. SPBC-101 Trainer Kit
9. PEC16M3 & 16HV2B Trainer Kit
10. PEC14M14AC Trainer Kit

Simulation Laboratory:



List of Experiments (Soft Computing Techniques Lab)

1. Programs on Matrix operations to understand the basic concepts of MatLab.
2. To print all the Continuous Discrete Membership Functions by using MatLab.
3. To perform different fuzzy operations on Membership Functions by using MatLab.
4. Design a Fuzzy controller for Air conditioning system/Washing Machine.
5. Identification of a system using Perceptron/Radial Base Function Network (RBFN).
6. Identification of a system by using Backpropagation algorithm.
7. Minimizing the objective function by using Genetic Algorithm (GA)
8. Minimizing the objective function by using Particle Swarm Optimization (PSO)
9. Minimizing the objective function by using Cuckoo Search Algorithm (CSA)
10. Minimizing the objective function by using Ant Colony Optimization (ACO)
11. Minimizing the objective function by using Differential Evolutionary (DE) algorithm
12. Minimizing the objective function by using Cat Swarm Optimization (CSO)

List of Experiments (Power System Lab)**MATLAB/SIMULINK Based Experiments**

1. Static Load Flow Analysis of Standard IEEE bus system using N-R method.
2. Dynamic Analysis of IEEE 9 bus System.
3. Small signal Stability Analysis of Single Machine Infinite Bus System.
4. Short circuit Analysis of IEEE 9 bus power system.

DIGSILENT Power Factory Based Experiments-

1. Modeling and Analysis of Low Voltage Distribution Network (Mesh and Radial).
2. Study of Relay Coordination and Time grading Calculation using PowerFactory.
3. Power Quality and Harmonics Analysis of Power System.
4. Modeling IEEE 8 bus power system and analyzing/creating different operation Scenarios using PowerFactory.
5. Transient stability & Voltage Stability Analysis of Standard Power System.
6. Contingency Analysis of standard Power System.

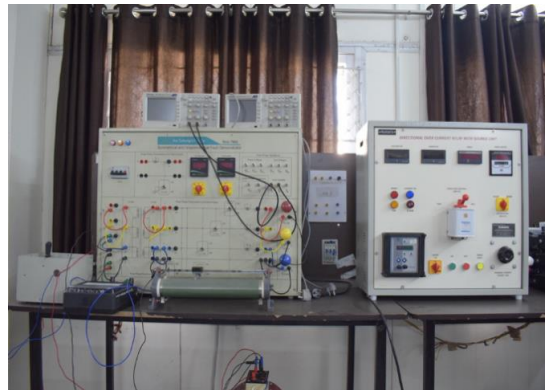
List of Software

1. DigSILENT PowerFactory 2018
2. MatLab 2019b
3. LabView 2013

Desktop Computer Details

Total No of Computer- 27

Specification Intel Core I i5-4590 CPU @3.30 GHz, RAM – 4GB, OS-64bit Microsoft Windows 10

Switch Gear & Protection Laboratory:**List of Experiments**

1. To study the protection of transformer with percentage biased differential relay (Microcontroller based numerical relay).
2. To study IDMT over current relay (single phase) and to determine the pickup and reset value and determine the time and current characteristics.
3. To study the working of Buchholz relay.
4. To analyze the underground cable fault using Varley loop test.
5. To study the directional over current protection.
6. To study the breakdown voltage of transformer oil by adjusting electrode gap length.
7. To study and draw the characteristics of numerical overcurrent relay.
8. To study and analyze the different type of symmetrical and unsymmetrical faults occurs in transmission line.
9. To study microcontroller based over/under voltage relay.
10. To study the complete protection of alternator unit.
11. To study the protection of feeder system.
12. To study the principle of reverse power protection.

List of Major Equipment's

1. IDMT over current relay kit (ME2471R)
2. Buchholz relay unit
3. Varley loop test kit (VPL-83A)
4. Transformer oil test kit
5. Feeder protection unit
6. Symmetrical and unsymmetrical fault analysis (NVI57065)
7. Microcontroller based over/under voltage relay (VPL-05)
8. Reverse power protection Panel
9. Protection of Alternator unit (PWS-3012A)
10. Percentage biased differential relay
11. (ME2473RD)
12. Directional overcurrent relay (JRP 011)
13. Numerical overcurrent relay (ANSI NO. 50&51)

Advanced Electrical Drives Laboratory:**List of Experiments**

1. Design simulation of Single phase rectifier with R, RL and RLE loads using MATLAB.
2. Study and analysis of open and closed loop control of three phase induction motor using DSP microcontroller board.
3. Study and analysis of open and closed loop control of BLDC motor using DSP microcontroller board.
4. Study and analysis of open and closed loop control of Switch Reluctance Motor using FPGA.
5. Study and analysis of open and closed loop control of PMDC motor using DSP microcontroller board.

6. Study and analysis of three level diode clamp three phase MLI for open and closed loop control of Induction motor using FPGA Board.
7. Study and analysis of five level cascaded MLI operation through FPGA control Board.
8. Study and analysis of various operation by Matrix Converter through FPGA Controlled Board.
9. Study and analysis of closed loop control of BLDC and Three Phase Induction Motor parameter on Real Time GUI FPGA platform.

List of Major Equipment's

1. Real Time – GUI FPGA Controller Based
 - I. Induction Motor Set up
 - II. DC Motor Drive Set Up
 - III. BLDC Motor Drive Set up
 - IV. SR Motor Drive Set up.
2. Matrix Converter Power Module
3. Three Phase Five Level Cascaded Multilevel Inverter.
4. Three Phase Three Level Diode Clamped Multilevel Inverter Power Module.
5. DSPIC4011 Microcontroller Based PWM Controller.

6. FPGA PWM Controller
7. AC/DC Current Measurement Cards with auxiliary power supply
8. AC/DC Voltage Measurement Card with auxiliary power supply
9. Single IGBT Project card with Opt coupler based driver circuit
10. Dual IGBT Project card with Opt coupler based driver circuit
11. Opal RT Real Time HIL Simulator and HIL Controller
12. Typhoon HIL Simulator.
13. Workstation Dell

Ph.D. Research Facilities



1	Aero
2	Qbot
3	Inverted Pendulum
4	FPGA PWM Controller
5	OPAL-RT-Real Time Digital HIL Simulator for Power System, Power Electronics Machine and Drives Applications
6	Typhoon HIL Hardware in the Loop Real Time Simulator Power Electronics and Renewable Energy (Simulator)-
7	Digital Signal Processor (TMS320F28335)
8	Matrix Converter Power Module
9	Three Phase Five Level Cascaded Multilevel Inverter.
10	Electrical Vehicle (E-Rickshaw)
Software	
1	MatLab 2019b
2	DigSalient PowerFactory 2018
3	Labview 2013

Industry Collaborative Laboratory

The Department of Electrical Engineering, NIT Uttarakhand has an Industry Collaborated lab established by Mitsubishi Electric India Pvt. Ltd. under MoU between NITUK and MITSUBISHI Electric India Pvt. Ltd. The following equipment's/software are provided to the Electrical Engineering Department of NIT Uttarakhand under MoU between NITUK and MITSUBISHI Electric India Pvt. Ltd.

1. MELSOFT MX OPC Server (Integrated solution for plant engineering)
2. MELSOFT MC Works 64 (Integrated solution for plant engineering)
3. FA learning kit; Inverter (FR-A820) and Servo Amplifier (MR-J4W3).

Activities/Workshops Organized:

Sr. No.	Title of the Program	Duration	Program
1	Microgrid Issues, Challenges and Solutions in Smart Grid	8th- 12th March 2021	5 days STC
2	Recent Trends in Instrumentation Engineering	7 th -11 th September 2020	5 days online STTP
3	Faculty Development for New Tomorrow: Readiness for teaching and learning post COVID-19	24 th - 28 th July 2020	5 days online FDP

Activities/Expert Lectures:

Sr. No.	Name	Designation	Institute/Organization
1	Dr. Premalata Jena	Associate Professor	IIT Roorkee
2	Dr. Shelly Vadhera	Associate Professor	NIT Kurukshetra
3	Dr. Dheeraj K. Khatod	Associate Professor	IIT Roorkee
4	Dr. P. Raja	Associate Professor	NIT Tiruchirappalli
5	Dr. Himanshu Misra	Assistant Professor	IIT Mandi

Research/Journals & Conferences:

Journals	
Year	Details
2021	1. Ankit Uniyal, Saumendra Sarangi and Mahiraj Singh Rawat, A novel strategy for Voltage and Frequency Regulation in high RE penetrated Microgrids, Arabian Journal for Science and Engineering, Springer, 2021. (SCI-E)
	2. Gupta, TN, Singh, B, Kewat, S. Robust control for seamless operation of wind-BES microgrid. Int Trans Electr Energ Syst. 2021;e12838. https://doi.org/10.1002/2050-7038.12838 .
	3. T. N. Gupta, B. Singh and S. B. Q. NAQVI, "Multi-Objective Control of Solar PV-BES Microgrid", Journal of The Institution of Engineers (India): Series B (DOI: 10.1007/s40031-021-00598-2)-2021.
	4. Uniyal, A., Sarangi, S. & Rawat, M. S. Optimal Dump Load Allocations in High RBDG Penetrated Microgrid for Voltage and Frequency Regulation. Arab J Sci Eng 46, 1511–1528 (2021).
2020	1. Mahiraj Singh Rawat and Shelly Vadhera, Probabilistic Steady State Voltage Stability Assessment Method for Correlated Wind Energy and Solar PV Integrated Power Systems, Energy Technology December 2020 (SCI-E). (Wiley-VCH)
	2. Suryanarayana Gangolu., and Saumendra Sarangi (2020). A novel complex current ratio-based technique for transmission line protection. Protection and control of modern power systems,5,1-9. (Springer)
	3. Gupta, TN, Singh, B. Single-phase wind-BES microgrid with seamless transition capability. IET Power Electronics. 2020; 1– 13. https://doi.org/10.1049/pel2.12035
	4. T. N. Gupta, B. Singh and S. B. Q. NAQVI, "Performance Evaluation of Single-Phase PV-BES Based Microgrid with Seamless Transition Capability," IEEE Transactions on Industrial Electronics (Early Access)-2020.
	5. T. N. Gupta, S. Murshid and B. Singh, "Improving power quality of single phase utility grid connected to win-PV system using multilayer-frequency adaptive

	fundamental signal extractor," IET Renewable Power Generation, Volume 14, Issue 12, September 2020, p. 2126 - 2134.
	6. Rohit Kumar and Mukesh K. Pathak , "Distributed droop control of dc microgrid for improved voltage regulation and current sharing", IET Renewable Power Generation, Volume 14, Issue 13, 05 October 2020, p. 2499 – 2506.
	7. Arvind Kumar Prajapati, V G Durgarao Rayudu, Afzal Sikander and Rajendra Prasad, "A New Technique for the Reduced Order Modelling of Linear dynamic systems and design of Controller", Circuits, Systems and Signal Processing, vol. 39, no. 10, pp. 4849-4867, 2020. (SCI).

Conferences	
Year	Details
	1. A. Sharma, T. N. Gupta and M. S. Rawat, "Grid Connected Solar PV fed Constant Power Water Pumping System", 2021 The International Conference for Intelligent Technologies (CONIT 2021), Kartakata, India-Accepted
	2. S. K. Peeploda, T. N. Gupta and M. S. Rawat, "A double-SOGI Based Power Quality Improvement for a Weak Grid Connected PV System", International Conference on Computational Intelligence and Emerging Power System (ICCIPS 2021), March 9- 10, 2021, Ajmer, India.
	3. Ankit Uniyal, Saumendra Sarangi and Mahiraj Rawat, Effect of penetration levels on thermal demands with V and f regulation in multi-energy microgrid, International Conference on Smart Grid Energy Systems and Control (SGESC-2021), March 19-21, 2021.
	4. Santosh Kumar Singh, Mayank Rawal, Mahiraj Singh Rawat and Tripurari Nath Gupta, "A Hybrid Islanding Detection Technique for Synchronous Generator based Microgrids", International Conference on Smart Grid Energy Systems and Control (SGESC-2021)- March 19-21, 2021..
	5. Ashutosh Sharma and Suryanarayana Gangolu "Positive Sequence Impedance based Fault Discrimination Technique in Grid-Connected Solar PV System" IEEE 2nd International Conference of Emerging Technologies 2021(2nd INCET 2021), Belgaum, Karnataka, India.
	6. Srinivasa Murthy G and Suryanarayana Gangolu "A New Technique for Fault Discrimination in Shunt Compensated Transmission Line" IEEE 2nd International Conference of Emerging Technologies 2021(2nd INCET 2021), Belgaum, Karnataka, India.
	7. Srinivasa Murthy G and Suryanarayana Gangolu "Negative Sequence-based Fault Discrimination Technique for Shunt Compensated Transmission Line" IEEE 2nd International Conference of Emerging Technologies 2021(2nd INCET 2021), Belgaum ,Karnataka , India.
	8. Srinivasa Murthy G and Suryanarayana Gangolu "Fault detection in floating PV system Using dc leakages"International Online Conference on Smart Grid Energy Systems and Control (SGESC-2021) held during March 19-21, 2021, at NIT Kurukshetra.
	9. S. K. Peeploda, T. N. Gupta and A. Sharma, "A TOFSE Based Control Algorithm to Enhance Power Quality under Abnormal Grid Condition", 2021 The International Conference for Intelligent Technologies (CONIT 2021), Kartakata, India-Accepted

	10. S. K. Peeploada and T. N. Gupta, "Power Quality Improvement of 3-phase Microgrid Based TOFE under Weak Grid Condition", 2021 The International Conference of emerging Technologies (INCET 2021), Belgaum, India.
	11. A. Sharma and T. N. Gupta, "Solar Powered PMSM Driven Battery Supported Water Pumping System", International Conference on Smart Grid Energy Systems and Control (SGESC-2021).
	12. R. Kumar and M. K. Pathak, "Control of DC Microgrid for Improved Current Sharing and Voltage Regulation," 2020 3rd International Conference on Energy, Power and Environment: Towards Clean Energy Technologies, 2021, pp. 1-4, doi: 10.1109/ICEPE50861.2021.9404421.
2020	1. Rajat Singh, Sourav Bose, Prakash Dwivedi, "Multi-Output Flyback Converter Closed Loop Control with MPPT Tracked PV Module", <i>Accepted In the proceedings of the 17th IEEE India Council International conference INDICON2020, Delhi, India, 2020.</i>
	2. Abhishek, Prakash Dwivedi, Sourav Bose "Design and Analysis of Buck-Boost Converter Using Adaptive Sliding Mode Approach", <i>Accepted In the proceedings of the 17th IEEE India Council International conference INDICON2020, Delhi, India, 2020</i>
	3. Abhishek, Prakash Dwivedi, Sourav Bose "Design and Analysis of Bi-Directional SEPIC-ZETA Converter Using Adaptive Sliding Mode Approach", <i>Accepted In the proceedings of the 17th IEEE India Council International conference INDICON2020, Delhi, India, 2020.</i>
	4. Divakar, Prakash Dwivedi, Sourav Bose, Nitin Gupta "Design and Analysis of Closed-Loop Control for Full-wave Rectifier by using IMC Controller", <i>Accepted In the proceedings of the IEEE Power Electronics, Drives and Energy Systems (PEDES 2020), Jaipur, India, 2020.</i>
	5. Samant Kumar Singh, Sourav Bose, Prakash Dwivedi, "Decoupled MultiLoop Control Of Switched Inductor Z-Source Inverters For Distributed Generations", <i>In the proceedings of the IEEE International Conference for Convergence in Engineering (ICCE 2020), Kolkata, India, 2020.</i>
	6. Rajat Singh, Sourav Bose, Prakash Dwivedi, "Fractional order PI controlled Flyback converter with MPPT tracked PV system", <i>In the proceedings of the IEEE International Conference on Smart Technologies for Power, Energy and Control (STPEC 2020), VNIT Nagpur, India, 2020.</i>
	7. Divakar Singh, Prakash Dwivedi, Sourav Bose, Sandeep Pandey, "Comparative Analysis of PI Control with Anti-Windup Schemes for Front-end Rectifier", <i>In the proceedings of the IEEE International Conference on Smart Technologies for Power, Energy and Control (STPEC 2020), VNIT Nagpur, India, 2020.</i>
	8. Samant Kumar Singh, Sourav Bose, Prakash Dwivedi, "Fractional Order PI Based Behavioural Closed Loop Study of Switched Inductor Z source Inverter", <i>Accepted In the proceedings of the 46th Annual Conference of the IEEE Industrial Electronics Society (IECON 2020), Singapore, 2020.</i>
	9. Divakar, Prakash Dwivedi, Sourav Bose, "Design and Analysis of Closed Loop Control for Single Phase Boost Rectifier by using Fractional Order PI Controller", <i>Accepted In the proceedings of the 46th Annual Conference of the IEEE Industrial Electronics Society (IECON 2020), Singapore, 2020.</i>
	10. Divakar, Prakash Dwivedi, Sourav Bose, "Design and Analysis of Multiple-loop Control Scheme Applied to a Front-end Rectifier", <i>Accepted In the proceedings of the 46th Annual Conference of the IEEE Industrial Electronics Society (IECON 2020), Singapore, 2020.</i>
	11. Abhishek Kumar, Prakash Dwivedi, Sourav Bose, "Design and Analysis of

Boost Converter using sliding mode approach", <i>Accepted In the proceedings of the 46th Annual Conference of the IEEE Industrial Electronics Society (IECON 2020), Singapore, 2020.</i>
12. Samant Kumar Singh, Sourav Bose, Prakash Dwivedi, "Closed loop control of Z-Source Inverters involving composite partial pole-zero cancellation strategy", <i>In the proceedings of the 6th Students Conference on Engineering & Systems (SCES 2020), Allahabad, India, 2020.</i>
13. Bikramaditya Chandan, Prakash Dwivedi, Sourav Bose, "An Experimental Study of SEPIC Converter with BLDC Motor as Application", <i>In the proceedings of the IEEE HYDCON-2020, Hyderabad, India, 2020.</i>
14. Abhishek Kumar, Prakash Dwivedi, Sourav Bose, "Design and Analysis of Buck Converter using sliding mode approach", <i>In the proceedings of the 6th Students Conference on Engineering & Systems (SCES 2020), Allahabad, India, 2020.</i>
15. Abhishek Kumar, Durgesh Nautiyal, Prakash Dwivedi, "Closed loop control of Buck Converter with type III Compensator", <i>In the proceedings of the Electric Power and Renewable Energy Conference (EPREC 2020), Jamshedpur, India, 2020</i>
16. Rajat Singh, Sourav Bose, Prakash Dwivedi, "Closed Loop Control of Flyback Converter with PV as a source", <i>In the proceedings of the 9th IEEE Power India International Conference (PIICON 2020), Haryana, India, 2020.</i>
17. Shivam Tripathi, Mahiraj Singh Rawat and V G Durgarao Rayudu, Dynamic Voltage Instability Identification of Power System Using Thevenin Equivalent Method, In Proc. 6th Students Conference on Engineering & Systems (SCES 2020), MNNIT Allahabad, July 10-12, 2020.
18. Himani Kala and Mahiraj Singh Rawat, Optimal Probabilistic Power Flow in AC-DC Hybrid Microgrid, In Proc. 6th Students Conference on Engineering & Systems (SCES 2020), MNNIT Allahabad, July 10-12, 2020.
19. Durgesh Chandra Nautiyal and Mahiraj Singh Rawat, Comparative Study of Various Wind Turbines: A Review, International Conference on Innovative Engineering Design 2020, Dehradun, 18-20 January 2020.
20. Raja Ram Kumar, Chandan Chetri, Priyanka Devi and Sourav Bose, "Design and Analysis of Dual Stator Non-magnetic Rotor Six-Phase Permanent Magnet Synchronous Generator for Marine Power Application " Accepted In the proceedings of the IEEE INTERNATIONAL CONFERENCE ON COMPUTING, POWER AND COMMUNICATION TECHNOLOGIES (GUCON), Greater Noida, 2020.
21. Sourav Bose and S. P. Singh, "Sensor-less Vector Control of DFIG Based Micro Wind Energy Conversion System," 2020 IEEE International Conference on Power Electronics, Smart Grid and Renewable Energy (PESGRE2020), Cochin, India, 2020, pp. 1-6, doi: 10.1109/PESGRE45664.2020.9070748.
22. Samant Kumar Singh, Sourav Bose, and Prakash Dwivedi, "Closed-Loop Control of Z-source Inverters Involving Composite Partial Pole-Zero Cancellation Strategy", <i>In the proceedings of the 6th Students Conference on Engineering & Systems (SCES) 2020, Allahabad, India, 2020.</i>
23. SK Mourya, Suryanarayana Gangolu and S Sarangi "Quadrature based overcurrent relay for PV penetrated primary distribution system" 21st National Power Systems Conference (NPSC 2020/IIT Gandhinagar.
24. Apoorva Sharma, SK Mourya, Suryanarayana Gangolu and TN Gupta "Wavelet Transform based Passive Technique to Detect Islanding in PV Interactive Power System" 7th IEEE Uttar Pradesh Section International Conference on Electrical, Electronics and Computer Engineering (UPCON 2020)/MNNIT Allahabad
25. Ekta Priyadarshini and Suryanarayana Gangolu "Local End Data Based Fault Detection Technique in Transmission Line Using DWT" 6th Students' Conference on

	Engineering & Systems 2020 (SCES-2020), during July 10-12, 2020, organized by the Department of Electrical Engineering, Motilal Nehru National Institute of Technology Allahabad
	26. Ekta Priyadarshini and Suryanarayana Gangolu “A New Scheme for Fault Detection in Transmission Line using Wavelet Transform” International Conference on Innovative Engineering Design (ICoIED 2020)
	27. Sunil Kumar Maurya , Suryanarayana Gangolu and Saumendra Sarangi “Unsymmetrical Fault Analysis of PV for Different Transformer Configurations” 9th IEEE Power India International Conference (PIICON-2020)
	28. A. Sharma, S. K. Maurya, S. Gangolu and T. N. Gupta, "Wavelet Transform based Passive Technique to Detect Islanding in PV Interactive Power System," 2020 IEEE 7th Uttar Pradesh Section International Conference on Electrical, Electronics and Computer Engineering (UPCON), Prayagraj, India, 2020, pp. 1-6, doi: 10.1109/UPCON50219.2020.9376470.
	29. T. N. Gupta, B. Singh, A. Chandra and K. Al-Haddad, "Control of Single-Phase Solar PV-BES Microgrid," IECON 2020 The 46th Annual Conference of the IEEE Industrial Electronics Society, Singapore, Singapore, 2020, pp. 3660-3665

Book Chapters	
2021	Neha Manjul, Mahiraj Singh Rawat, Transient Stability Analysis of Wind Integrated Power Network using STATCOM and BESS using DIgSILENT PowerFactory, Proceedings of the 7th International Conference on Advances in Energy Research, pp. 525-536, 2021. (Springer Proceedings in Energy) ISBN 978-981-15-5954-9
2020	Isha Chandra and Mahiraj Singh Rawat, A Comparison between Passive Islanding Detection Methods in Grid Integrated Photovoltaic System, Advances in Engineering Design, Select Proceedings of ICOIED 2020, Springer, ISBN 978-981-334-018-3.
	Mahiraj Singh Rawat, Shelly Vadhera, Evolution of Islanding Detection Methods for Microgrid Systems, Optimizing and Measuring Smart Grid Operation and Control, IGI Global, USA, pp. 221-257, Nov. 2020. ISBN13: 9781799840275

List of externally Sponsored R&D Projects Ongoing

Sr. No.	Title of Project	Sponsoring Agency	Amount	Investigators
1	Solar powered robust E-Rickshaw control with bidirectional DC-DC converter using regenerative cycle boost charging	Ministry of Electronics & Information Technology (MeitY), Government of India	Rs. 30.02 Lakh.	Dr. Prakash Dwivedi (PI) Dr. Sourav Bose (Co-PI)

Campus Placement (B. Tech.)

Batch	Total No of Students(Passed out Students)	Total No of Students Placed
2016-2020	33	17
2017-2021	44	15

Achievements:

- Samant Kumar Singh got Best Paper Award for the paper entitled “Closed loop control of Z-Source Inverters involving composite partial pole-zero cancellation strategy” in 6th Student conference on Engineering and Systems 2020 (SCES 2020), organized by MNNIT Allahabad.
- The following received POSOCO POWER SYSTEM AWARDS (PPSA) for the M.Tech. Dissertation. The details are given as follows:

Sr.No.	Student Name	Title of Dissertation	Year	Supervisor
1.	Kirti Gupta	Adaptive Relaying Schemes for Distribution System with Inverter Based Distributed Generations (IBDGs)	2020	Dr. Saumendra Sarangi, Assistant Professor, EED
2.	Sunil Kumar Maurya	Novel Protection Techniques for Highly PV Connected Distribution	2021	Dr. Suryanarayan Gangolu, Assistant Professor, EED

3. GATE 2021

Sr. No.	Students appeared for GATE 2021	Students Qualified for GATE 2021	% Qualified
1	24	13	54.16

Top Five students from the Department of Electrical Engineering in GATE 2021 are

Sr. No.	Student Name	Roll Number	B.Tech. Batch	Gate Score	All India Rank
1.	Yatharth Pandey	BT17EEEE004	2017-2021	766	396
2.	Dayitva Gupta	BT17EEEE023	2017-2021	695	923
3.	Piyush Kumar	BT17EEEE011	2017-2021	585	2575
4.	Anmol Kumar	BT17EEEE033	2017-2021	517	4246
5.	Vatsala Shukla	BT17EEEE031	2017-2021	498	4784

Alumni Achievements:

S.No.	Roll No.	Name	Organization	Course/
1.	MT18EEEE001	Rajat Singh	MNIT Allahabad	Ph.D
2.	MT18EEEE004	Divakar	L&T Tech. Services	Hardware Engineer
3.	MT18EEEE005	Samant Kumar Singh	IIT Ropar	SRF
4.	MT18EEEE007	Sunil Kumar Maurya	IIT Kanpur	Ph.D
5.	MT18EEEE010	Isha Chandra	MNIT Allahabad	Ph.D

08.01.05 Department of Mechanical Engineering

The Department of Mechanical Engineering at the National Institute of Technology, Uttarakhand was established in 2012 and currently has an intake of 30 UG and 15 PG students per year. The Department offers B. Tech. course in Mechanical Engineering, M.Tech. Program in Manufacturing Technology and Machine Design and a PhD program. The department has flexible academic structure with numerous core and elective courses, to facilitate the students to opt for the courses of their interest.

Faculty Profile

S. No.	Faculty Name	Designation	Specializations
1.	Dr. Lalta Prasad	Associate Professor and Head	Biomass Gasification, Alternative Fuels, Renewable Energy, Composite materials
2.	Dr. Sanat Agrawal	Associate Professor	Additive Manufacturing and Computer Aided Design
3.	Dr. Gurinder Singh Brar	Associate Professor	Advanced Machining and Joining Processes
4.	Dr. Pawan Kumar Rakesh	Assistant Professor	Polymeric Composite Materials
5.	Dr. Vinod Singh Yadav	Assistant Professor	Internal Combustion Engines, Alternate Fuels and Emissions, Non-Conventional Sources of Energy
6.	Dr. Apurba Mandal	Assistant Professor	Nano mechanics, Computational analysis of nanomaterials, nanocomposites and nanostructures, multi- scale modelling
7.	Dr. Vikas Kukshal	Assistant Professor	Advanced Manufacturing Processes, CAD/CAM
8.	Dr. Dungali Sreehari	Assistant Professor	Production Technology, Advance Manufacturing Processes
9.	Dr. Hitesh Sharma	Assistant Professor	Composite Materials, Metal Cutting
10.	Dr. T. Sudhakar	Assistant Professor	Two Phase Flow, Heat Transfer, CFD
11.	Dr. Niraj Kumar Mishra	Assistant Professor	Fluids and Thermal
12.	Dr. Yogesh Kumar Prajapati	Assistant Professor	Fluids and Thermal
13.	Dr. Gaurav Kumar	Assistant Professor	Manufacturing Engineering
14.	Dr. Deepak Kumar	Trainee Teacher	Thermal Engineering
15.	Dr. Prashant Tiwari	Assistant Professor	Design Engineering, Mechanical Vibration

Laboratories

1. Heat Transfer Lab
 - Refrigeration Test Rig
 - Stefan’s Law Apparatus
 - Cooling Tower Test Rig
 - Pool Boiling apparatus.
 - Air Conditioning Test Rig
 - Heat Transfer in Forced Convection
 - Air Duct Test Ring



2. Applied Thermodynamics Lab
 - One Cylinder 4 Stroke Diesel Engine Test Rig
 - One Cylinder 4 Stroke Diesel Engine Test Rig 7.
 - One Cylinder 2 Stroke Petrol Engine Test Rig
 - Single Stage Air Compressor Test Rig
 - Double Stage Test Air Compressor
 - Babcock & Wilcox Boiler Model
 - Lancashire Boiler Model
 - Model of 4 Stroke Diesel Engine
 - Model of Fuel Supply System



3. Fluid Mechanics Lab
 - Pelton Wheel Turbine Test Rig
 - Francis Turbine Test Rig
 - Gear Pump Test Rig
 - Bernoulli’s Theorem kit
 - Coriolis’s Force Demonstration
 - Reynolds’s Apparatus
 - Losses in Pipes Apparatus
 - Orifice meter, Venture meter, Rota meter Apparatus
 - Free and Forced Vortices Apparatus
 - Models of Different Types of Pumps and Turbines



4. Solid Mechanics Lab
 - Brignell Hardness Tester
 - Universal Testing Machine
 - IZod Test, Charpy Test



- Hook's Law Apparatus
- Tri Filler Suspension
- Deformation of the Straight Beam Apparatus
- Deformation of Curved Beam Apparatus

5 Kinematics of Machine Lab

- Static and Dynamic Balancing
- Whirling of Shafts Apparatus
- Motorized Gyroscope
- V-Belt Drives Model.
- Double Hook Coupling
- Winch Apparatus
- Combined Flat & V belt friction Apparatus
- Worth Quick Return Mechanism
- Smart Structure Instrument
- Vibration Shakers
- Universal Vibration Apparatus



6. Computer Aided Design Lab

- Auto Cad Software
- ANSYS 18.0 Software
- CATIA R6 Software



7. Measurement Lab

- Microscope.
- Sine Bar, Slip Gauge
- Vernier height gauge Micrometer
- Vernier caliper
- Go & No-Go gauges
- LVDT Apparatus
- Microwave for Material Processing



8. Machine Tool Lab

- Lathe Machine
- Milling Machine
- Wood Turning machine
- Shaper Machine
- Surface Grinder
- Drilling Machine



- Hydraulic Punching Machine
- Fly Press

Research in Department

- Total number of publications in International Journals (Last three years):25
Some International Journals in which the faculty of department has published work are: -
- Journal of Applied Thermal Engineering; Elsevier Publisher
- Journal of Natural Fibers; Taylor and Frances Publisher
- Internal Journal of Heat and Mass transfer; Elsevier Publisher
- Journal of Chemical Engineering Science; Elsevier Publisher
- Journal of Precision Engineering; Elsevier Publisher.
- Journal of thermoplastic composite materials; Sage Publisher.
- Journal of Measurement of Control; Sage Publisher.
- Journal of Polymers and Polymer composites; Sage Publisher.
- Journal of Material Research Express; IOP Science.

Total number of publications in International conferences (Last three years): 30

- Twenty five students are pursuing Ph.D. in the Department of Mechanical Engineering. Among twenty five Ph.D. students, 12 are Full-time and 13 are Part-time students.
- Faculty members have also won some best paper awards in reputed International Conferences.
- Department has also organized two STC/STTP courses in last year
- Students' Chapter of the Institution of Engineers (India) – The Institution of Engineers (India), IEI, is the largest multidisciplinary professional society of engineers, established in 1920. The Students' Chapter of IE(I) was inaugurated at NIT, Uttarakhand in October, 2018. Dr. Gurinder Singh Brar is currently the Faculty Adviser of the Students' Chapter of IEI.

Students Projects

The students are motivated by involving them in the projects related to various fields of Mechanical Engineering like Kinematics links, Heat Transfer, Robotics, Engines etc. Department offers minor and major projects in various research and industry oriented topics to students. Under the close mentorship of department faculty members, students learn to use the application of theory for solution of practical problems.

Details of the selected Projects completed by the students are as follows:

S. No.	Project Name	Guide
1	Sterling engine	Dr. Pawan Kumar Rakesh
2	Pedal Power hack saw	
3	Mini Wind Turbine	Dr. Hitesh Sharma
4	Submarine	
5	Heron's Steam Engine	Dr. Vikas Kukshal
6	Representation of Mathematical function through mechanism	
7	Copying mechanism	Dr. D. Sreehari
8	Design and fabrication of Micro channels for heat transfer applications	
9	Humanoid Robot	Dr. Anshul
10	Model of Steam Powered Vehicles	Dr. Niraj Kumar Mishra
11	Mechanism based walking machine	Dr. T. Sudhakar
12	Thermal stress analysis of piston	Dr. Yogesh Prajapati
13	Design analyze is of air pre-heater using bell Delaware method	Dr. Anshul Sharma

Candidates Completed/doing

PhD

- Candidates completed: 03
- Candidates ongoing: 14(Full-time), 17(Part-time)

R&D achievements

- Publications in reputed International Journals: 10
- Publications in reputed International and national Conference: 13

Books Published:

1. Singh, R., Kukshal, V., & Yadav, V. S. (2021). A Review on Forward and Inverse Kinematics of Classical Serial Manipulators. In *Advances in Engineering Design* (pp. 417-428). Springer, Singapore.
2. Prasad, S., Mishra, V., Khoj, V., & Kukshal, V. (2021). Finite Element Modeling and Analysis of Natural Fiber-Reinforced Composite. In *Advances in Engineering Design* (pp. 321-327). Springer, Singapore.
3. Rana, J. and Agrawal, S. (2021), "Physical Modelling of Terrain Using Different File Formats: A Review". In: Rakesh P.K., Sharma A.K., Singh I. (eds), *Advances in Engineering Design: Lecture Notes in Mechanical Engineering*, Springer, Singapore, Feb 2021, pp. 311-319.

Workshop Organized, Participate/Conference/FDP/STC/STTP:

1. Organized an **International Conference on Advances in Materials Processing & Manufacturing Applications (iCADMA 2020)** as a **Secretary** during 05-06 November 2020.
2. Organized an **International Conference on Evolution in Manufacturing (ICEM - 2020)** as a Secretary during 10th-12th December 2020.
3. Organized a Five Days Virtual Workshop on "**Awareness to Innovation, Startup and Entrepreneurship**" as a Coordinator from 29th January to 2nd February 2021.
4. Rana, J., Agrawal, S., Singla, A., (2020), "Physical model of terrain by using different file formats: A review", presented in the International Conference on Innovative Engineering Design-ICoIED January 2020, Dehradun.
5. Participated in a 1-day Curriculum Development Workshop (CDW) organized by the Mechanical Engineering Department of NIT Uttarakhand online on Jan 04, 2021.
6. Participated in a TEQIP-III sponsored, online, 5-day workshop on "Stress Management: A Post COVID-19 Pandemic Perspective" organized by the Faculty Welfare Section, NIT Uttarakhand during September 14-18, 2020.
7. Participated in a TEQIP-III sponsored, online, 5-day workshop on "Writing Research Papers and Grant Proposals: Scientific, Technical and Ethical Practices, and Conduct" organized by the R&C Section of NIT Uttarakhand during August 24-28, 2020.
8. Participated in a TEQIP-III sponsored, online, 6-day Faculty Development Program (FDP) on "Outcome Based Education (OBE) System" jointly organized by the NBA Section and the R&C Section of NIT Uttarakhand during July 20-25, 2020.

- 9 1. Vaibav Mishra, Vikas Kukshal (2020), Numerical analysis for estimating ballistic performance of armour materials. International Conference on Advances in Materials Processing and manufacturing, organised by NIT Uttarakhand and MNIT Jaipur from November 5-6, 2020.
- 10 Participated in the TEQIP III sponsored E-Training Program/Short -term course on “Atomistic Modelling of Solids: Theory & Applications” in the Department of Mechanical Engineering from Dec 21 to 25, 2020 at IIT Indore.
- 11 Mishra, V., & Kukshal, V. (2021). Numerical analysis for estimating ballistic performance of armour material. Materials Today: Proceedings.
12. Shekhawat, D., Kukshal, V., Banerjee, M. K., & Patnaik, A. (2021). Study the reduction of mill scale with lean grade coal through RI-RDI. In IOP Conference Series: Materials Science and Engineering (Vol. 1017, No. 1, p. 012037). IOP Publishing.
13. Pattnaik, P., Sharma, A., Choudhary, M., Singh, V., Agarwal, P., & Kukshal, V. (2020). Role of machine learning in the field of Fiber reinforced polymer composites: A preliminary discussion. Materials Today: Proceedings.
14. Kumar, A., Kukshal, V., & Kiragi, V. R. (2020). Assessment of mechanical and sliding wear performance of Ni particulate filled 7075 aluminium alloy composite. Materials Today: Proceedings.

Expert lectures organized

1. Organized a TEQIP-III sponsored online expert talk from industry by Mr Dharmendra Kumar, Chief Engineering, Engineering Division, Tata Steel Limited, Jamshedpur, for the Mech. Engg. students of NIT Uttarakhand on the topic "The Landscape for Mechanical Engineers" on January 31, 202
2. Organized another TEQIP-III sponsored online expert talk from industry by Mr Siddhant Mukherjee, Sr Design Engineer, Seat Structure and Mechanism Development, Adient India Pvt. Ltd., Pune, for the students of NIT Uttarakhand on the topic "Career prospects in the automotive industry" on January 23, 2021.
3. 1. Contributed as resource person in five days online faculty development program on “Design of Experiment using TAGUCHI Design” held from 26/01/2021 to 30/01/2021 at “Regional College for Education Research and Technology, Jaipur”.

08.01.06 DEPARTMENT OF CHEMISTRY

The Department of Chemistry was established in June 2019. Earlier it was integral part of Department of Science and Humanities. The department offers basic applied chemistry course for B.Tech. first year. Department also runs various advanced engineering chemistry and advanced chemistry courses. The Department of Chemistry also offers Ph.D. courses in Organic Chemistry, Inorganic Chemistry, Nano-chemistry and Theoretical Chemistry specializations. Currently 10 Ph.D. scholars are pursuing doctoral research in the department.

Academic Staff

The Department of Chemistry is composed of 5 faculty members with wide area of specialization as mentioned below-

Sr. No.	Name and Designation	Area of Research
1.	Dr. Pankaj Kandwal, Assistant Professor (Gr-I), Head of the Department	Theoretical calculations on molecules and materials, Membrane Science and Technology, Methods for separation of hazardous contaminants from aqueous streams.
2.	Dr. Rampal Pandey, Assistant Professor (Gr-I)	Inorganic chemistry, Metal-organic frameworks, Soft and responsive materials, Catalysis and Photocatalysis
3.	Dr. Saroj Ranjan De, Assistant Professor (Gr-I)	Total Synthesis of Bioactive Natural Products and Transition-Metal-Catalyzed C-H Activation Reactions.
4.	Dr. Rakesh Kumar Mishra, Assistant Professor (Gr-I)	Small Molecule Probes, Supramolecular Chemistry, Fluorescent Materials, Covalent Organic Frameworks, Soft & Hybrid Materials, Biochar based Functional Materials
5.	Dr. Kamal Kant Tiwari, Assistant Professor (Gr-I)	Inorganic Chemistry, Coordination Chemistry, Ground Water Quality

Research Facilities

The Department consists of laboratories for B.Tech. Practical and Ph.D. research. The research lab is equipped with basic facilities, such as –

- Fume Hood – 01 no.
- Rotavapor – 02 nos.
- Hot-air Oven

- Low-temperature water bath
- UV-chamber
- Bench-Top NMR
- Gaussian16 & GaussView06 (windows based)
- Workstation (HP Z640)



Bench-Top NMR



Rotavapor



Weighing Machine



Solvent drying Setup



Low-Temperature Bath



Hot-Air Oven

Invited Talks delivered

- Dr Rampal Pandey delivered invited talk in International Online Webinar on Recent Innovations in Chemical Sciences at AKS University Satna, July, 18-20, 2020
- Dr Rampal Pandey delivered two invited online lectures for MSc 4th Semester students, June 13 & 17, 2020. Subject: Photoinorganic Chemistry

- Dr. Rakesh K. Mishra delivered an invited talk in a National Webinar on Immuno-Boosters For Good Health: Biochemical Aspects, September 08, 2020, organized by Pt. Deendayal Upadhyay Govt. Arts and Commerce College, Sagar - MP.
- Dr. Pankaj Kandwal delivered three invited talks in the STC titled “Analytical Techniques in the Realm of Molecules & Materials” (ATRMM-20) during 26-30th June 2020 on following topics –
 - 2-dimensional Nuclear Magnetic Resonance spectroscopy for Biological Molecules
 - Radioanalytical methods of Analysis
 - Chemistry of nuclear waste remediation

Conference/Symposium/Seminar/Workshop/FDP/STTP/STC organized:

- 2nd-National Conference on Physical Sciences (NCRAPS) at NIT Uttarakhand (virtual mode), during 19th-20th Dec. 2020
- One week Workshop entitled “Smart Materials: Concept, Design and Applications” during 7th–11th Sept. 2020

Patents/Projects granted/submitted:

- Dr. Rampal Pandey received an "International Outstanding Scientist Award" from VDGGOOD professional association on 12th Oct. 2020
- Dr. Rampal Pandey has been granted Patent by The Govt. of India on 23rd Sep. 2020
- Dr. Rampal Pandey has been granted Patent by The Govt. of India on 4th Jan. 2021
- Project titled as “Development and DFT Investigations of Nanoalloy Grafted MXene Nanocomposites for Gas Sensing Applications” submitted to CRG (DST) in March 2021 by Dr. Pankaj Kandwal as Co-PI (under consideration)
- Project titled as “Development of Rigorous Model for Mass Transfer of Metal ions through Supported Liquid Membranes” submitted to MATRICS (DST) in March 2021 by Dr. Pankaj Kandwal as PI (under consideration)
- Project entitled “*Functionalized biochar as sustainable multifunctional catalytic material for Organic transformations*” submitted to CRG (DST) by Rakesh K. Mishra (CRG/2021/007036). Total Budget: [46,03,344 INR](#); Status: Accepted for Evaluation
- Project entitled “*Pine Cone Based Biochar as Sustainable Multifunctional Materials*” to UCOST Uttarakhand. **Total Budget:** 9,24,000 INR by Rakesh K. Mishra (under consideration).

Research Publications

1. Carbon-doped Titanium Dioxide Nanoparticles for Visible Light Driven Photocatalytic Activity. Charu Negi, **Pankaj Kandwal**, Himani Sharma, Gautam Dalapati, Charu Dwivedi, Applied Surface Science, 554 (2021), 149553.
2. Europium (III) permeation through a flat sheet supported liquid membrane containing CMPO with iso-decanol phase modifier: Experimental and modeling studies. Rohit Kumar, Seraj A. Ansari, **Pankaj Kandwal**, P.K. Mohapatra, Chemical Engineering Research and Design, 168 (2021) 307-316.

3. Selective permeation of ^{90}Y from a mixture of $^{90}\text{Y}/^{90}\text{Sr}$ through diglycolamide impregnated supported liquid membranes. Rohit Kumar, S.A. Ansari, **Pankaj Kandwal**, P.K. Mohapatra, Applied Radiation and Isotopes, 170 (2021) 109604.
4. Structural, Optical and Decay Properties of Zinc(II) 8-Hydroxyquinoline and Its Thin Film, Deepshikha Painuly, R. Singhal, **P. Kandwal**, I. M. Nagpure, Journal of Electronic Materials, 49 (2020) 6096–6106
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12. Biochar for remediation of agrochemicals and synthetic organic dyes from environmental samples: A review, R. K. Gautam, M. Goswami, **Rakesh K. Mishra**, P. Chaturvedi, M. K. Awashthi, R. S. Singh, B. S. Giri, A. Pandey, Chemosphere, 272, **2021**, 129917.
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- 14.

15. Assessment of hydrochemical backgrounds and threshold values of groundwater in a part of desert area, Rajasthan, India, Abdur Rahman, **K. K. Tiwari**, N. C. Mondal, Environmental Pollution, 2020, 266, 115150.
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18. Anthropogenic nitrate in groundwater and its health risks in the view of background concentration in a semi-arid area of Rajasthan, India, Abdur Rahman, N. C. Mondal and **K. K. Tiwari**, Scientific Reports, 2021, 11, 9279.

08.01.07 Department of Physics

The Department of Physics was established in June 2019. It offers core and elective courses in Physics for undergraduate B.Tech. programme of the Institute. In addition, the department also offers Ph.D. programme in Physics. The broad areas of research include materials science: thin films, magnetism, spintronics, nanowires; optoelectronics and theoretical condensed matter.

Academic Staff

- Department of Physics has four faculty members. The details of faculty members and their specialization are as follows:

Sr. No.	Faculty Name	Designation	Areas of Specialization
1	Dr. Hardeep Kumar	HOD & Assistant Professor	Experimental Condensed Matter Physics: Thin Films, Spintronics, Magnetic Materials
2	Dr. Manvendra Singh Khatri	Assistant Professor	Experimental Condensed Matter Physics: Magnetic Materials and Electrodeposition
3	Dr. Indrajit Manohar Nagpure	Assistant Professor	Material Science and Optics: Solidstate lighting, LED, OLED, TLD and Solar Cells

4	Dr. Jagrati Sahariya	Assistant Professor	X-ray scattering, Charge and Magnetic Compton Profile, Density Functional Theory, Ab-initio Calculations, Solar Cell Materials
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Department of Physics has one non-teaching staff. The details of non-teaching and her designation are mentioned as follows:

Sr. No.	Name	Designation
1	Mrs. Neha Raturi	Technical Assistant

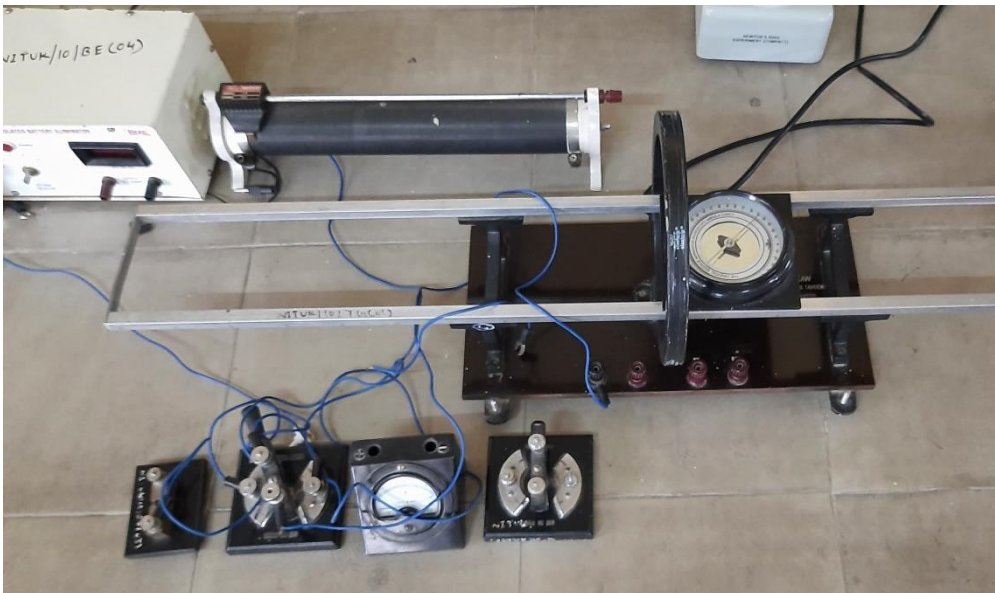
Ph.D. Students:

Currently, there are three students pursuing their Ph.D. The details of Ph.D. students are as follows:

1. Mr. Hardepinder Singh, Supervisor: Dr. Hardeep Kumar, Assistant Professor
2. Ms. Preeti Negi, Supervisor: Dr. Hardeep Kumar, Assistant Professor
3. Mr. Himanshu Saini, Supervisor: Dr. M. S. Khatri

Physics Laboratory

- **List of Equipments for B.Tech. are as follows**
- Newton's Ring
- Planck's Constant
- Sonometer
- Faraday effect
- Optical fiber kit
- Dielectric constant set-up
- Standard Spectrometer
- CdS Cell
- Hall Effect Kit
- Four Probe Set-up
- Steward Tangent Galvanometer
- Solar Cell Experimental Kit
- He-Ne Laser Source
- P-N junction Set-up
- Optical Fiber Kit



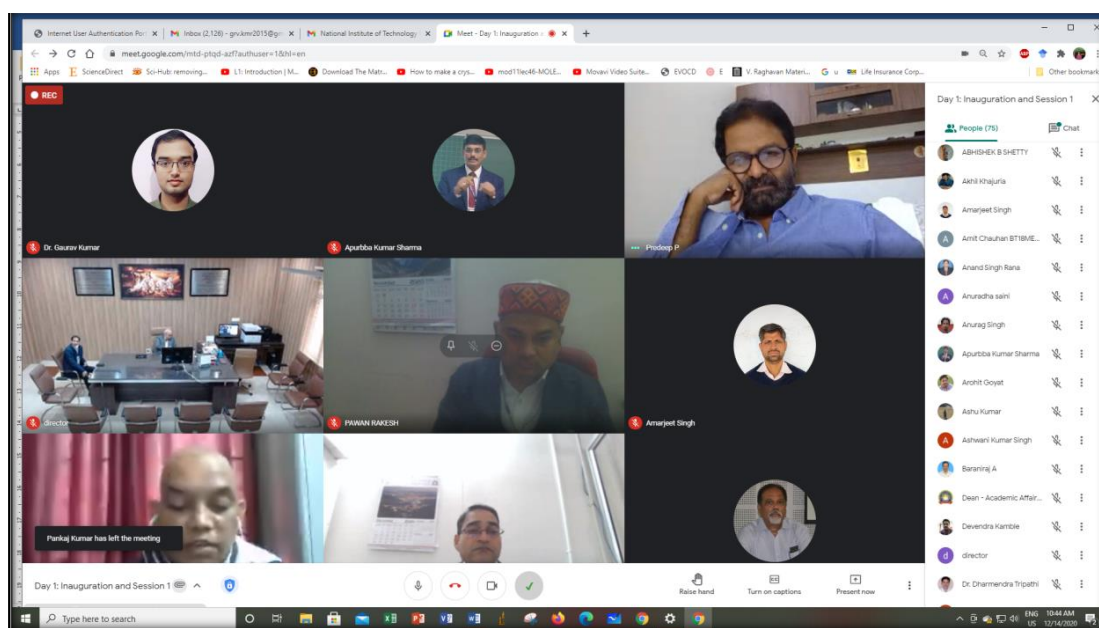


Short Term Courses

• Department of Physics, National Institute of Technology, Uttarakhand, has organized TEQIP-III sponsored One Week Short Term Course (STC) in online mode on “RECENT ADVANCES IN OPTICAL AND MAGNETIC MATERIALS” during 14-18 December, 2020 under Twining Activity of TEQIP-III with Department of Physics, SLIET Longowal. The objective of the online STC was providing in-depth knowledge on recent advances in the field of Optical and Magnetic Materials and their applications in the field of Science and Technology. STC covered in depth knowledge on structural analysis by X-ray diffraction, Fluorescence Spectroscopy, Optical Materials, Magnetism and Spintronics, Magnetic Materials, Fundamentals and potential device applications, Photovoltaics and Surface Characterization Techniques adequate for advanced Materials. The 83 participants, including faculty, PhD students, research Scientist, professionals and MTech/MSc students from all over India have participated in the course. The details of invited speakers along with the title of talk are as follows:

Sr. No.	Name of Speaker	Title of talk
1	Prof. M. R. Shenoy, Dept. of Physics, IIT Delhi	Semiconductor Optoelectronic Materials
2	Prof. P. Predeep, Dept. of Physics, NIT Calicut, Kerala	Multiferroic Materials: A potential candidate for solar cell applications
3	Dr. Ravi P. Singh, IISER Bhopal, Madhya Pradesh	Unconventional Superconductors: New Paradigms for Quantum Materials
4	Dr. Ajit Kumar Patra, Dept. of Physics, Central University, Rajasthan	Magnetic thin films for MEMS Applications
5	Dr. Mukesh Ranjan, Scientific Officer-Grade	Plasmonics for SERS and Solar

	G,Institute for Plasma Research, Gandhinagar, Gujarat	Cell applications
6	Prof. R. S. Gedam, Dept. of Physics, VNIT Nagpur, Maharashtra	Glassy Materials: Synthesis, Properties and Applications
7	Prof. S. J. Dhoble, Dept. of Physics, RTM Nagpur University, Nagpur, Maharashtra	Synthesis and importance of Nanomaterials
8	Dr. D. Haranath, Dept. of Physics NIT Warangal, Telangana	Extraction of invisible Fingerprints using Afterglow Luminescent Materials for Forensic Applications
9	Dr. Braj Bhushan Singh, NISER, Bhubaneswar, Orissa	Inverse spin Hall effect and spin pumping in topological insulators and antiferromagnetics
10	Prof. M. M. Sinha, Department of Physics, SLEIT Longowal, Punjab	Electron Microscopy: Fundamentals and Applications



SEMICONDUCTOR OPTOELECTRONIC MATERIALS

Periodic Table of Elements

....	II	III	IV	V	VI
..		Al ¹³	Si ¹⁴	P ¹⁵	S ¹⁶	...
Zn		Ga ³¹	Ge ³²	As ³³	Se ³⁴	...
Cd		In	Sn	Sb	Te	...
Hg	


Elemental and Binary Semiconductors

Si: 14 1s² 2s² 2p⁶ 3s² 3p² no. of valence electrons = 4

Ga: 31 1s² 2s³ 2p⁶ 3s² 3p⁶ 3d¹⁰ 4s² 4p¹ no. of valence electrons = 3

As: 33 ... 1s² 2s² 2p⁶ 3s² 3p⁶ 3d¹⁰ 4s² 4p³ no. of valence electrons = 5

IV: Si, Ge III-V: GaAs, AlAs, InP, InAs II-VI: ZnSe, CdTe

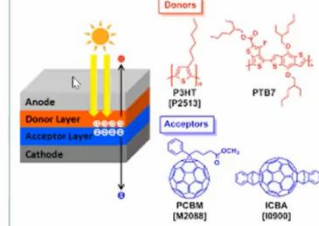


M.R. Shetty

10

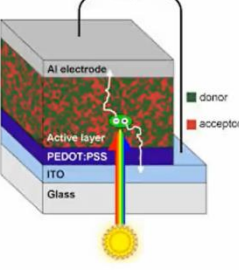
Activate Windows
Go to Settings to activate Windows.

ORGANIC SOLAR CELL DEVICE STRUCTURE



Donors: P3HT [P2513], PTB7

Acceptors: PCBM [M2088], ICBA [09500]




Al electrode

Active layer: PEDOT:PSS

ITO

Glass

donor (green), acceptor (red)




Predeep P.


0453:36

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Introduction to Superconductivity

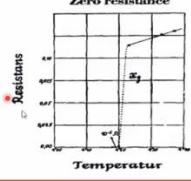


Kamerlingh Onnes



1913


Zero resistance




Resistans

Temperatur

- Superconductivity discovered in 1911: The electrical resistivity of Mercury dropped to zero at 4.2 K.
- Meissner effect discovered in 1933: A superconductor excludes all magnetic flux from its interior.

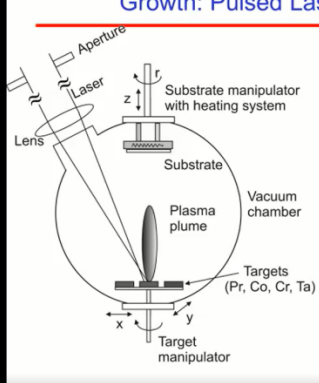


$T > T_c$



$T < T_c$

Growth: Pulsed Laser Deposition



Film architecture

Cr/Ta cover \approx 5 nm
Pr-Co \approx 80 nm
Cr buffer \approx 15 nm
MgO(110)

Materials and Method

Precursor chemicals + Organic Fuel

↓

Homogenous aqueous solution


↓


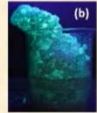
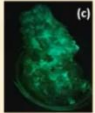
Thick viscous gel, Overnight, 100°C

↓

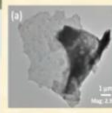
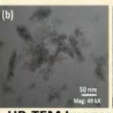
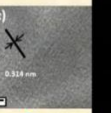
Viscous gel in pre-fired furnace

Auto-Combustion Process



(a) Auto-combustion process, (b) sample under UV light and (c) glow in dark

HR-TEM Images

- Flake powder with a mean diameter of 10 μ m and an average thickness of 0.5 μ m is optimum for latent print development
- Flake-like morphology adheres more firmly with ridges, with only a few particles present in the furrows of the developed fingerprints

Dr. Jagrati Sahariya has participated in the following workshops/Conferences as a Coordinator/ Convener:

- **Coordinator**, One Week Workshop on “Renewable Energy & Sustainable Development” organized by Research & Consultancy Section, NIT Uttarakhand during March 01-05, 2021.
- **Coordinator**, A Webinar on “Future of Science, Technology, and Innovation (STI): Impacts on Education, Skills and Work” on occasion of National Science Day organized by Research & Consultancy Section, NIT Uttarakhand on 28th February, 2021.
- **Coordinator**, TEQIP-III sponsored Virtual International Workshop on “Pandemic and Socio-Economic Determinants: The Uses, Mathematics and Computations behind the Modeling to inform Decision Makers” during February 08-12, 2021 organized by the R&C section, NIT Uttarakhand.
- **Convener** 2nd National Conference on “Recent Advances in Physical Sciences (NCRAPS-2020)” jointly organized by Department of Chemistry, Physics and Mathematics, during December 19-20, 2020 (online mode).

Faculty Achievements

(i) Publications in National/International Journals

1. Effect of pH and Boric Acid on Magnetic Properties of Electrodeposited Co Nanowires, Shivani Agarwal and **M. S. Khatri**, Proc. Natl. Acad. Sci., India, Sect. A Phys. Sci. (2020).
2. Structural, Optical and Decay Properties of Zinc (II) 8-Hydroxyquinoline and Its Thin Film, Deepshikha Painuly, R. Singhal, P. Kandwal, **I M Nagpure**, Journal of Electronic Materials, 49 (2020) 6096-6106.
3. Structural, electronic and optical modeling of perovskite solar materials $ASnX_3$ (A = Rb, K; X = Cl, Br): First principle investigations, Karina Khan, Amit Soni, **Jagrati Sahariya**, Materials Chemistry and Physics 262 (2021) 124284.
4. Role of intermediate band and carrier mobility in Sn/Fe doped $CuAlS_2$ thin film for solar cell: An ab-initio study, Aditi Gaur, Karina Khan, B.R. Bhagat, **Jagrati Sahariya**, Amit Soni, Alpa Dashora, Solar Energy 215 (2021) 144-150.
5. Density functional investigations to study effect of M = (Ge, Sn) doping on opto-electronic response of $ZnSi_{(1-x)}M_xP_2$, Karina Khan, Aditi Gaur, Ushma Ahuja, Amit Soni, **Jagrati Sahariya**, Optik - International Journal for Light and Electron Optics, 208 164570 (2020).

(ii) Publications in National/International Conferences

1. Theoretical simulation of optoelectronic and structural characteristics of $HgCN_2$ by DFT approach Karina Khan, Aditi Gaur, Ushma Ahuja, Amit Soni, **Jagrati Sahariya**, Materials Today: Proceedings, 2021
2. Revealing the impact of aluminum doping on opto-electronic properties of $CuGaSe_2$ thin films flexible solar cells -A DFT study, Karina Khan, Aditi Gaur, Amit Soni, **Jagrati Sahariya**, AIP Conference Proceedings, 2294 (2020) 030004.
3. Optical and electronic analysis of Al doped $CuInSe_2$ thin film based flexible solar cells, Aditi Gaur, Karina Khan, Amit Soni, Alpa Dashora, **Jagrati Sahariya**, AIP Conference Proceedings, 2294 (2020) 030003.

4. Optoelectronic investigations of ZnGeAs₂: A first principle TB-mBJ approximation, Aditi Gaur, Karina Khan, Ushma Ahuja, Amit Soni, **Jagrati Sahariya**, AIP Conference Proceedings, 2265 (2020) 030368.
5. Optoelectronic analysis of silicon doped ZnGa₂S₄: A first principle study, Aditi Gaur, Karina Khan, Amit Soni, Alpa Dashora, **Jagrati Sahariya**, Ushma Ahuja, IOP Publishing: Journal of Physics: Conference Series, 1706 (2020)012029.
6. Effect on structural and optoelectronic properties of Sn doped MgSiP₂ – A DFT study, Karina Khan, Aditi Gaur, Amit Soni, **Jagrati Sahariya**; Journal of Physics: Conference Series, 1504 (2020) 012013.
7. Theoretical analysis of Sn-doped ZnS for optoelectronic application, Aditi Gaur, Karina Khan, Amit Soni, Alpa Dashora, **Jagrati Sahariya**; Journal of Physics: Conference Series, 1504 (2020) 012014.
8. Investigation of structural and optoelectronic properties of ZnSi_{1-x}Ge_xP₂ (x = 0, 0.125) compound using density functional theory, Karina Khan, Aditi Gaur, Amit Soni, **Jagrati Sahariya**, AIP Conference Proceedings 2220 (2020) 130043.

(iii) **R & D Projects:** Following CRS projects funded by UGC-DAE CSR Mumbai and Indore centres are in progress in the department of Physics:

Sr. No.	Title of The R&D Project	Name of faculty	Year in which started	Sanctioned Amount Rs. (in Lacs)	Status
1	Fabrication and characterization of Co based CoPt/Pt multilayered films by electrodeposition	Dr. M. S. Khatri	13/07/2020	0.45	on going
2	Study of FeRh epitaxial films and heterostructures for spintronics applications	Dr. Hardeep Kumar	05/03/2020	2.26	on going

(iv) Special Achievements

- Department of Physics conducted the *course development workshop* (CDW) on 12.03.2021 for the review of designed M.Sc. (Physics) course structure and syllabus of courses on Google meet platform. Following external and internal members were present in the CDW:

Sr. No.	Name & Designation	Affiliation	Role
1	Dr. P. Srivastava, Professor	Department of Physics, IIT Delhi	External Member
2	Dr. V. Srinivas, Professor	Department of Physics, IIT Madras	External Member
3	Dr. Manish Dev Shrimali, Professor	Department of Physics, Central Univ. of Rajasthan	External Member
4	Dr D. Haranath, Associate Professor	Department of Physics, NIT Warangal	External Member
5	Dr. M.S. Khatri Assistant Prof.	Department of Physics, NIT Uttarakhand	Internal Member
6	Dr. I. M. Nagpure, Assistant Prof.	Department of Physics, NIT Uttarakhand	Internal Member
7	Dr. J. Sahariya, Assistant Prof.	Department of Physics, NIT Uttarakhand	Internal Member
8	Dr. Hardeep Kumar, Assistant Prof. & Head	Department of Physics, NIT Uttarakhand	Convener

- Dr. M. S. Khatri has delivered an expert lecture on “Fabrication and characterization of electrodeposited magnetic thin films and nanowires” in a five day “Webinar Series on Recent Advances in Physics”, during 14-18 September, 2020 at Department of Physics, NIT Meghalaya.
- Dr. Hardeep Kumar has delivered an invited talk in 5th National e-conference on Advanced Materials and Radiation Physics (AMRP-2020) organized by SLIET Longowal during 9-11 Nov, 2021.
- Dr. Hardeep Kumar has delivered an expert lecture to B.Tech (Solar and Alternative Energy) 8th semester students of Amity University Noida on “Hydrogen: A clean energy carrier” on 29 Jan, 2021.
- Dr. M. S. Khatri has served as reviewer of innovative ideas/innovations received under the INSPIRE Awards-MANAK for the year 2020-21 conducted by National Innovation Foundation-India.
- Investigation of Bulk, Doped and Thin Film Solar Cells: A Review Article; Aditi Gaur, Karina Khan, Amit Soni, **Jagrati Sahariya**; *In Energy Systems and Nanotechnology Springer*, 2021 DOI: https://doi.org/10.1007/978-981-16-1256-5_1.

- Review on Opto-electronic Response of Emerging Solar Photovoltaic Materials; Karina Khan, Aditi Gaur, K. N. Sharma, Amit Soni, **Jagrati Sahariya**; *In Energy Systems and Nanotechnology* Springer, 2021 DOI: https://doi.org/10.1007/978-981-16-1256-5_6.
- Dr. Jagrati Sahariya has attended following Training Programmes/Workshops/Summer Schools:
 1. Short Term Course on “Quantum and Energy Materials: Potential & Applications” organized by NITTTR, Chandigarh during April 20- 24, 2020.
 2. Online Workshop on Patent Drafting and Processing with Importance of Trademark and Copyright organized by Journal of Advanced Engineering Research in association with hexacube India during May 8-9, 2020.
 3. One Week FDP on “Spectroscopic and analytical techniques: applications” jointly organized by Guru Angad Dev Teaching Learning Centre SGBT Khalsa College, University of Delhi under Pandit Madan Mohan Malviya National Mission on Teachers and Teaching (PMMMNTT) of MHRD and Department of Chemistry, J.C. Bose University of Science and Technology, YMCA, Faridabad during May 25-29, 2020.
 4. Faculty Development Program (FDP) on “Outcome Based Education (OBE) System” held on July 20-25, 2020 jointly organized by NBA Section & R&C section, NIT Uttarakhand, (Online Mode).
 5. One-week workshop on "Writing Research Papers & Grant Proposals: Scientific, Technical, and Ethical Practices & Conduct” during August 24-28, 2020 which is being organized by the R&C Section, NIT Uttarakhand.
 6. TEQIP-III Sponsored Workshop on “Stress Management: A Post COVID-19 Pandemic Perspective” organized by Faculty Welfare Section during September 14-18, 2020.

08.01.08 Department of Mathematics

With persistent commitment towards quality education, the Department of Mathematics came into existence in June 2019. Earlier it was the part of Department of Sciences and Humanities. The department has strength of 05 faculty members including one Associate Professor to cater to the needs of the Under-Graduate and Post-Graduate programs in the Institute. The department offers core as well as elective courses for B. Tech, M. Tech. and PhD programs of the Institute. The department offers Ph.D. program focusing on contemporary areas of fundamental importance and also involved in conducting workshops, seminars, expert lectures etc. to give extra edge to professional growth of students from time to time.

1. Associate Professor -01
2. Assistant Professor-04
3. Technical Assistant -01
4. Laboratory Assistant -01

Faculty Profile

S.No.	Faculty Name	Designation	Specialization
1.	Dr. Nitin Sharma	Assistant Professor & HoD	Mathematical Biology & Molecular Dynamics

2.	Dr. Dharmendra Tripathi	Associate Professor, & Dean R&C	Biofluid –Mechanics, Mathematical Modelling, CFD, Pumping Flow, Bone Mechanics, Microfluidics, Nanofluids, Non- Newtonian fluids
3.	Dr. Kuldeep Sharma	Assistant Professor	Computational Mechanics & Numerical Methods
4.	Dr. Dheerendra B. Singh	Assistant Professor	Nonlinear Wave propagation & Gas-dynamics
5.	Dr. Kusum Sharma	Assistant Professor	Approximation Theory & Summability Theory

Curriculum Development Workshop

The department conducted Curriculum Development Workshop on 10th March 2021 to finalize the course structure for M.Sc. (Mathematics) program. The following experts attended the meeting:

1. Prof.(Dr.) S. Sundar from Department of Mathematics, Indian Institute of Technology Madras.
2. Prof.(Dr.) Ranjit Upadhyay from Department of Mathematics and Computing, IIT(ISM) Dhanbad.
3. Dr. Arvind Kumar Mishra from Department of Mathematics, BHU, Varanasi.

Ph. D. Scholars

The following three students joined the department in the session 2020-2021 in PhD program and with this total number of students increased to 9.

1. Mr. Ashish Kumar
2. Mr. Surajchand
3. Ms. Diksha Dumka

Projects

Dr. D.Tripathi submitted a project to ISRO on “Bone Health Research in Space Environment towards Developing Therapeutics for Indian Astronauts” (Amount: Rs.3,15,73,920/-)
Status: Under Evaluation

Expert Lectures delivered

1. Dr. D. Tripathi delivered an Keynote lecture on “Non-Newtonian fluids flow model with Rhythmic Membrane Contraction” in 2nd International Conference on Mathematical Techniques and Applications (e-ICMTA-2021) organized by Department of Mathematics held on 24th to 26th March 2021, SRMIST, Kattankulathur, Tamil Nadu, India.
2. Dr. D. Tripathi delivered an Expert lecture on “Role of Mathematical Models in Science and Engineering” on occasion of National Science Day Celebration organized by Department of Mathematics, SRMIST, Ramapuram, Chennai on 26.02.2021.
3. Dr. D. Tripathi delivered an Invited lecture on “NEP-2020: Technical Evolution in Higher Education” in a Webinar on New National Education Policy (NEP) 2020: Reforming & Rejuvenating Teaching Learning in Higher Education Institutions for the 21st Century organized by Department of Mechanical Engineering, KNIT Sultanpur on 20th February 2021
4. Dr. D. Tripathi delivered an Invited lecture on “Technical Evolution in Higher Education under NEP-2020” in National Webinar on New Education Policy (A Reform in Higher Education) organized by Raj School of Management and Sciences, Varanasi on January 23, 2021.
5. Dr. D. Tripathi delivered an Invited lecture on “Role of Mathematics in Engineering & Health Care” in a Webinar on “National Mathematics Day” organized by Gyan Ganga Collage of Institute, Jabalpur, MP sponsored by NCSTC, DST & MPCST Bhopal on December 22, 2020.
6. Dr. D. Tripathi delivered an Invited lecture on “Role of Mathematics in Engineering & Health Care” in a Webinar on “National Mathematics Day” organized by Gyan Ganga Institute of Technology and Science, Jabalpur, MP sponsored by NCSTC, DST & MPCST Bhopal on December 22, 2020.
7. Dr. D. Tripathi delivered an Invited lecture on “Flow Models based on Pumping Mechanisms” XXVI International Conference on “Advances in Mechanics” (ICAM-2020) in association with Indian Academy of Physical Sciences organized by Department of Mathematics and Statistics, Manipal University Jaipur during 18th -20th December 2020 (ONLINE MODE).
8. Dr. D. Tripathi delivered an Invited lecture on “Electroosmosis effects on Pumping Flow Models” 15th India-Japan Bilateral Conference (BICON-2020) organized by Biyani Girls College Jaipur during December 17-19, 2020.

9. Dr. D. Tripathi chaired a session in 65th Congress of ISTAM (An International Conference) organized by GITAM (Deemed to be University) Hyderabad, December 9-12, 2020.
10. Dr. D. Tripathi chaired a session and delivered an Invited lecture on “Mathematical Modelling of Canalicular Fluid Flow in Bone Adaption” in National Conference on Recent Trends in Mathematics (NCRMT-2020) organized by Department Of Mathematics, National Institute of Technology Manipur during November, 27-28 2020.
11. Dr. D. Tripathi chaired a session and delivered a Keynote lecture on “Pumping Flow Models for Physiological Applications” in National Conference on Exploring New Horizons of Mathematics in Context of Current Challenges on 20th November 2020 organized by Department of Mathematics, BIT Durg, Chhattisgarh, India
12. Dr. D. Tripathi delivered an expert talk on “Electroosmotic Flow with Microfluidics Applications” 5-Day FDP on “Recent trends in Fluid Dynamics” organized by SCE, Bengaluru during November 17-21, 2020.
13. Dr. D. Tripathi delivered a lecture on “Mathematical Modelling of Non-linear Systems” in Five Day online Workshop on "Recent Trends in Mathematics and its Applications" during 28th October to 1st November 2020 organized by Department of Mathematics, NIT Manipur.
14. Dr. D. Tripathi delivered a lecture on “Some physiological Flow Models” in Five Day online Workshop on "Recent Trends in Mathematics and its Applications" during 28th October to 1st November 2020 organized by Department of Mathematics, NIT Manipur.
15. Dr. D. Tripathi delivered Webinar talk on “Mathematical Modelling of Pumping Flows in Physiological Systems” TEQIP-III sponsored Online workshop on Mathematical Modeling And MATLAB Applications (MMMA-2020) organized by Department of Mathematics, National Institute of Technology, Uttarakhand under twinning activity with SLIET Longowal during 24-25/08/2020.
16. Dr. D. Tripathi delivered 02 Webinar talks on “Applications of Fluid Mechanics in Physiological Flows” organized by Department of Mathematics, DIT University Dehradun during 29-30th June 2020.
17. Dr. Kuldeep Sharma delivered an invited talk on the topic of “Introduction to Finite Element Method with Matlab Programming” in two days Online workshop on Mathematical Modeling and MATLAB Applications (MMMA-2020), 24-25 August 2020.
18. Dr. Kuldeep Sharma delivered an invited talk on “XFEM- a highly efficient numerical technique for studying the propagating cracks in smart materials” online in the ICIIE-2020 held at Panjab University, Chandigarh.

19. Dr. Kuldeep Sharma delivered four expert lectures on the topic of Vector Calculus in the Ten days Workshop for Remedial Classes of B.Tech. First Year Students of RTU, Kota.
20. Dr. Nitin Sharma delivered a keynote lecture on the topic of “Mathematical Modelling in Biology” in one day international webinar on Mathematical Modelling And Its Applications in Epidemiology, organized by school of advanced sciences and languages on 23.05.2020, VIT, Bhopal.
21. Dr. Nitin Sharma delivered an invited talk on the topic of “Mathematical Modeling for Epidemic Diseases” in two days online workshop on Mathematical Modeling and MATLAB Applications (MMA-2020), 24-25 August 2020, jointly organized by the Department of Mathematics, NITUK and SLIET, Longowal.

Publication in Journals

1. D. Tripathi, J. Prakash, M.G. Reddy and J.C. Misra, Numerical Simulation of Double Diffusive Convection and Electroosmosis during Peristaltic Transport of a Micropolar Nanofluid on an Asymmetric Microchannel, *Journal of Thermal Analysis and Calorimetry* 143 (3), 2499-2514 (2021). [IF: 4.626]
2. S. Noreen, S. Waheed, DC. Lu, and D. Tripathi, Heat stream in electroosmotic bio-fluid flow in straight microchannel via peristalsis, *International Communications in Heat and Mass Transfer*, 123 (2021) 105180. [IF: 5.683]
3. Nikhil Vivek Shrivastava, Abhishek Kumar Tiwari, Rakesh Kumar, Santosh Patil, Dharmendra Tripathi, Subham Badhyal, Physiological Loading-Induced Interstitial Fluid Dynamics in Osteon of Osteogenesis Imperfecta Bone, *J Biomech Eng.* 2021 Aug 1; 143(8):081011. doi: 10.1115/1.4050818. [IF: 2.025]
4. J. Akram, N.S. Akbar, & D. Tripathi, Electroosmosis augmented MHD peristaltic transport of SWCNTs suspension in aqueous media, *J Therm Anal Calorim* (2021). <https://doi.org/10.1007/s10973-021-10562-3> [IF: 4.626]
5. J. Akram, , N.S. Akbar, & D. Tripathi, A Theoretical Investigation on the Heat Transfer Ability of Water-Based Hybrid (Ag–Au) Nanofluids and Ag Nanofluids Flow Driven by Electroosmotic Pumping Through a Microchannel. *Arab J Sci Eng* (2021). <https://doi.org/10.1007/s13369-020-05265-0> [IF: 1.711]
6. Rakesh Kumar, Abhishek KumarTiwari, Dharmendra Tripathi, Russel P. Maind, Navin Kumar, Praveer Sihota, Sonu Ambwani, and Niti Nipun Sharma, Anatomical variations in cortical bone surface permeability: Tibia versus femur, *Journal of the Mechanical Behavior of Biomedical Materials*, 113, (2021), 104122. [IF: 3.372]

7. N. K. Ranjit, G. C. Shit, D. Tripathi, Electrothermal analysis in two-layered couple stress fluid flow in an asymmetric microchannel via peristaltic pumping, *J Therm Anal Calorim* (2020). <https://doi.org/10.1007/s10973-020-10380-z> [IF: 4.626].
8. D.S. Bhandari, D. Tripathi and V.K. Narla, Magnetohydrodynamics based pumping Flow model with propagative rhythmic membrane contraction, *Eur. Phys. J. Plus* (2020) 135: 890 [IF: 3.228].
9. Dharmendra Tripathi, Jayavel Prakash and O. Anwar Bég, Peristaltic pumping of hybrid nanofluids in an asymmetric microchannel in presence of electromagnetic fields, *ASME, Journal of Thermal Science and Engineering Applications*, In Press (2020) [IF: 1.544].
10. Javaria Akram, Noreen Akbar, and Dharmendra Tripathi, Comparative study on ethylene glycol based Ag- Al₂O₃ and Al₂O₃ nanofluids flow driven by electroosmotic and peristaltic pumping: A nano-coolant for radiators, *Physica Scripta* 95, no. 11 (2020): 115208. [IF: 1.985].
11. J. Prakash and D. Tripathi, Study of EDL phenomenon in Peristaltic pumping of a Phan-Thien-Tanner Fluid through asymmetric channel, *Korea-Australia Rheology Journal* 32, no. 4 (2020): 271-285. [IF: 1.390].
12. D. Tripathi, J. Prakash, A. K. Tiwari and Rahmat Ellahi, Thermal, microrotation, electromagnetic field and nanoparticle shape effects on Cu-CuO/ blood flow in microvascular vessels, *Microvascular Research* 132 (2020): 104065. [IF: 2.730].
13. J. Akram, N.S. Akbar, and D. Tripathi, Blood-based graphene oxide nanofluid flow through capillary in the presence of electromagnetic fields: A Sutterby fluid model, *Microvascular Research* 132 (2020): 104062. [IF: 2.730].
14. Javaria Akram, Noreen Akbar, and Dharmendra Tripathi, Numerical simulation of Electrokinetically Driven Peristaltic Pumping of Silver-Water Nanofluids in an asymmetric microchannel, *Chinese Journal of Physics* 68 (2020): 745-763. [IF: 2.638].
15. V. K. Narla, Dharmendra Tripathi and OA Beg, Electro-osmotic Nanofluid Flow in a Curved Microchannel, *Chinese Journal of Physics* 67 (2020): 544-558. [IF: 2.638].
16. J. Akram, N.S. Akbar, and D. Tripathi, Numerical study of the electroosmotic flow of Al₂O₃-CH₃OH Sisko nanofluid through a tapered microchannel in a porous environment. *Applied Nanoscience* 10, no. 11 (2020): 4161-4176. [IF: 2.880].
17. Dharmendra Tripathi, J Prakash, MG Reddy, and Rakesh Kumar, Numerical study of electroosmosis induced alterations in peristaltic pumping of couple stress hybrid nanofluids through microchannel, *Indian Journal of Physics*, In Press (2020) [IF: 1.811].

18. Dharmendra Tripathi, V. K. Narla, and Yasser Aboelkassem, Electrokinetic Membrane Pumping Flow Model in a Microchannel, *Physics of Fluids* 32, no. 8 (2020): 082004. [IF: 3.514].
19. A. K. Ansu, R. K. Sharma, D. Tripathi, and V. V. Tyagi, Prediction of thermal properties and reliability testing of binary eutectic mixture of polyethylene glycol 2000 and 10000 as phase change materials, *ChemistrySelect* 5, no. 31 (2020): 9745-9757. [IF: 1.811].
20. D.S. Bhandari, D. Tripathi and V.K. Narla, Pumping flow model for couple stress fluids with a propagative membrane contraction, *International Journal of Mechanical Sciences* 188 (2020): 105949. [IF: 4.631].
21. Sandeep Singh and Kuldeep Sharma, Riemann-Hilbert approach based analytical solutions for strip saturated two unequal collinear cracks in piezoelectric media, *Strength, Fracture & Complexity* (Scopus indexed), 13 (4), 177-195, 2021.
22. Kusum Sharma, Estimation of Error of Approximation in $Lip(p(t), r)$ Class by (Npq.C1) Transform, *IAENG International Journal of Applied Mathematics*, Vol.50, Issue 2, pp 251-255, 27 May 2020.
23. Kusum Sharma, Study of Error of Approximation of Conjugate Fourier Series in Weighted Class by Almost Riesz Means, *International Journal of Applied Mathematics*, Vol. 33, No 5, pp. 867-877, 2020. DOI: 10.12732/ijam.v33i5.9
24. Pankaj Singh Rana and Nitin Sharma, Mathematical modeling and stability analysis of a SI type model for HIV/AIDS, *Journal of Interdisciplinary Mathematics*, Volume 23, Issue 1, pp.257-273, 2020.

Conference Publications/ Paper Presentation

1. D S Bhandari and Dharmendra Tripathi, Viscoelastic fluid flow driven by non-propagative membrane contraction, 2021 *J. Phys.: Conf. Ser.* 1849 012018
2. Dharmendra Tripathi and D. S. Bhandari, Non-Newtonian fluid flow driven by membrane pumping, 65th Congress of Indian Society of Theoretical and Applied Mechanics (ISTAM 2020), December 9-12, 2020.
3. D. S. Bhandari and Dharmendra Tripathi, MHD pumping flow model with membrane contraction, 65th Congress of Indian Society of Theoretical and Applied Mechanics (ISTAM 2020), December 9-12, 2020.
4. Kumar R., Tiwari A.K., Tripathi D., Sharma N.N., Khadiya M. (2021) Fluid–Structure Interaction Modelling of Physiological Loading-Induced Canalicular Fluid Motion in Osteocyte Network. In: Revankar S., Sen S., Sahu D. (eds) *Proceedings of*

International Conference on Thermofluids. Lecture Notes in Mechanical Engineering. Springer, Singapore. https://doi.org/10.1007/978-981-15-7831-1_3

5. Sandeep Singh and Kuldeep Sharma, Complex variable solution for mode-III quadratically varying PS model in piezoelectric media, IOP Conf. Ser.: Mater. Sci. Eng. 1033 012044.
6. D. Amin, D.B. Singh, Vidit Kr. Vats, Strong shock waves in a self-gravitating gas: A power series solution, AIP Conference Proceedings 2336,030004 (2021) <https://doi.org/10.1063/5.0045762>
7. Kusum Sharma presented a paper entitled Study of Error of Approximation in the Weighted Class in International conference on Recent Advances in Computational Mathematics & Engineering at BKBIET during 19-21 March 2021.
8. The manuscript entitled Mathematical Modeling and Case Study Analysis for COVID - 19 Pandemic in India authored by Nitin Sharma, Pankaj Singh Rana and Sunil Singh Negi, is presented by Mr. Pankaj Singh Rana in the “3rd International Conference on Frontiers in Industrial and Applied Mathematics, (FIAM-2020)”, NIT Jamshedpur, India, during 21-22 December, 2020.

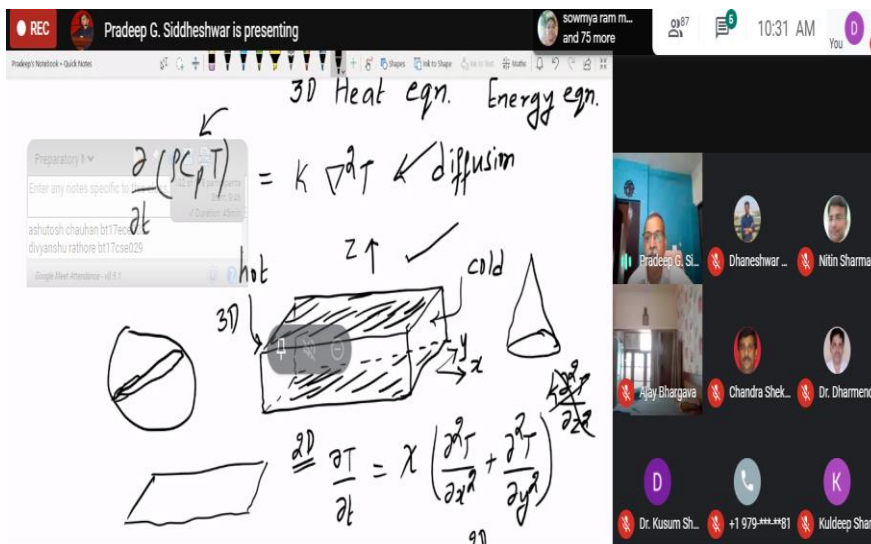
Book/Chapter Publications

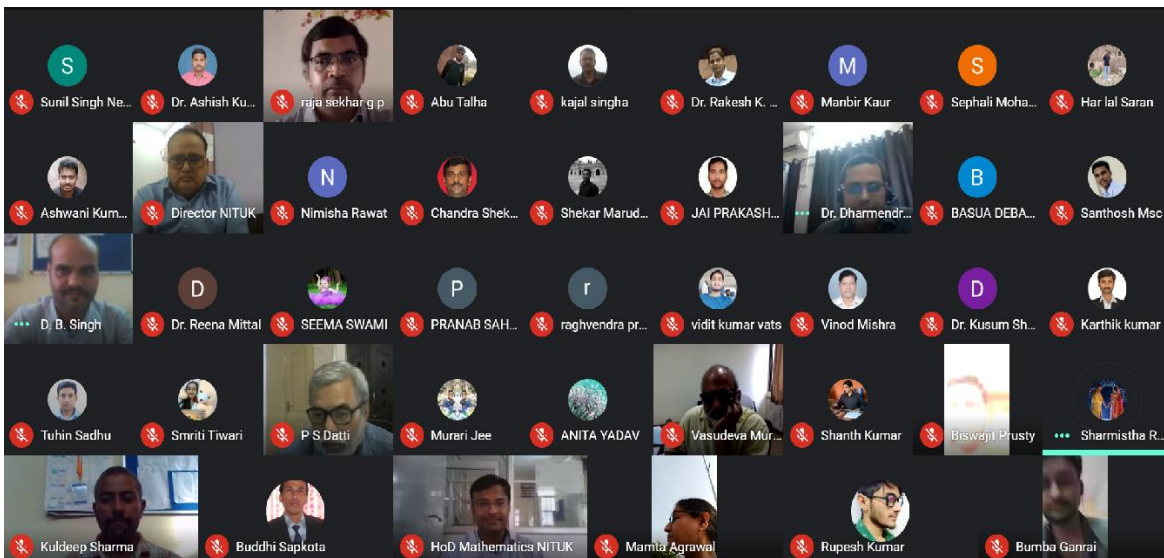
1. D. Tripathi and Ravi K. Sharma, Energy Systems and Nanotechnology, Springer-2021, ISBN 978-981-16-1256-5.
2. Amit Soni, D. Tripathi, Jagrati Sahariya, and Kamal Nayan Sharma, Energy Conversion & Green Nanotechnology, CRC Press (Proposal Accepted)
3. Garvandha M., Narla V.K., Tripathi D., Anwar Bég O. (2021) Modelling the Impact of Melting and Nonlinear Radiation on Reactive Buongiorno Nanofluid Boundary Layer Flow from an Inclined Stretching Cylinder with Cross-diffusion and Curvature Effects. In: Tripathi D., Sharma R.K. (eds) Energy Systems and Nanotechnology. Advances in Sustainability Science and Technology. Springer, Singapore. https://doi.org/10.1007/978-981-16-1256-5_15
4. Tripathi D., Prakash J., Anwar Bég O., Kumar R. (2021) Thermal Analysis of $\gamma\text{Al}_2\text{O}_3/\text{H}_2\text{O}$ and $\gamma\text{Al}_2\text{O}_3/\text{C}_2\text{H}_6\text{O}_2$ Elastico-Viscous Nanofluid Flow Driven by Peristaltic Wave Propagation with Electroosmotic and Magnetohydrodynamic Effects: Applications in Nanotechnological Energy Systems. In: Tripathi D., Sharma R.K. (eds) Energy Systems and Nanotechnology. Advances in Sustainability Science and Technology. Springer, Singapore. https://doi.org/10.1007/978-981-16-1256-5_13

5. Prakash, J., M. Ganeswara Reddy, D. Tripathi, and Abhishek Kumar Tiwari. "A Model for Electro-osmotic Flow of Pseudoplastic Nanofluids in Presence of Peristaltic Pumping: An Application to Smart Pumping in Energy Systems." In Nanotechnology for Energy and Environmental Engineering, pp. 185-213. Springer, Cham, 2020. ISBN 978-3-030-33773-5, 2020

Workshop/Conference Organized

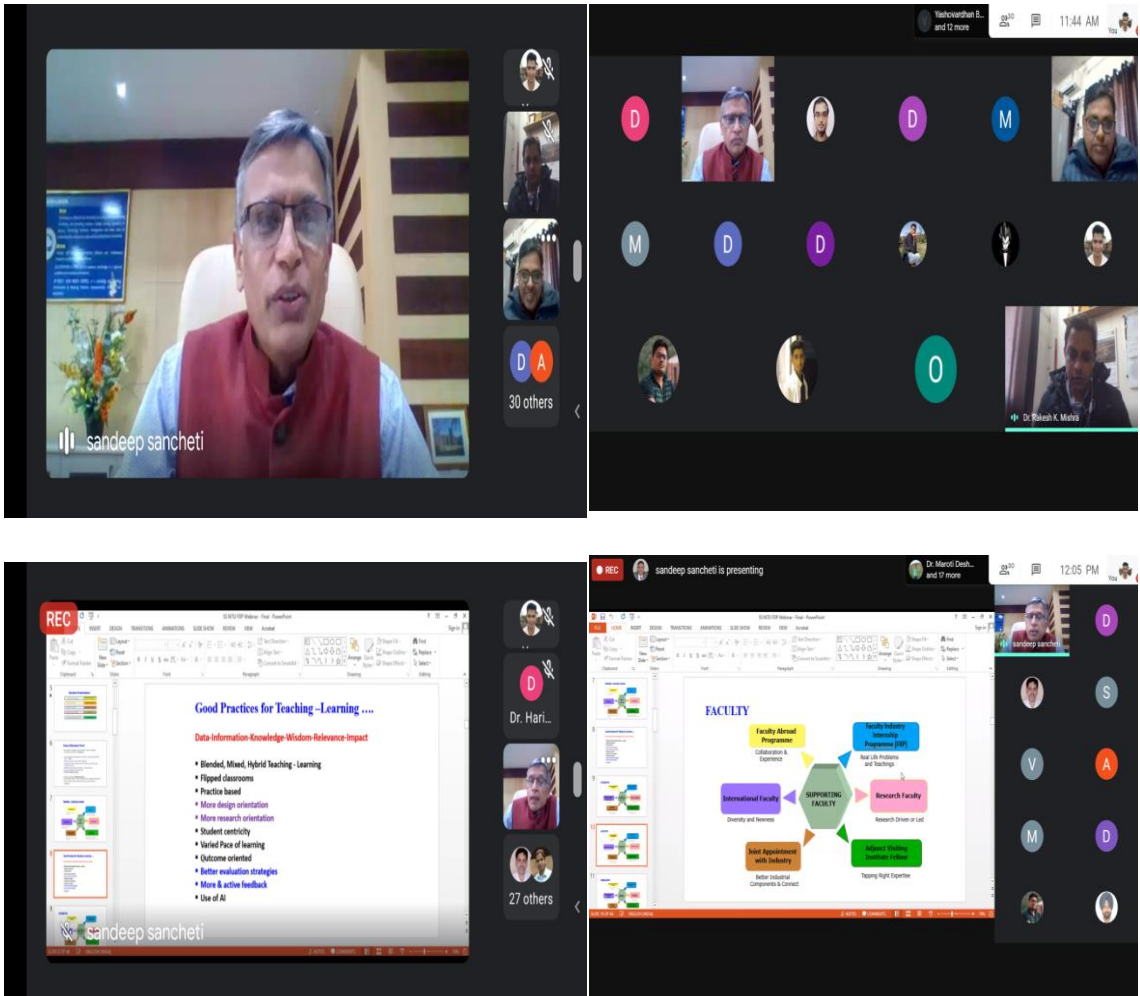
1. TEQIP–III sponsored one-week Workshop on “ODEs, PDEs, and Integral Equations: Their Engineering Context” during September 21-26, 2020 organized by the Department of Mathematics, NIT Uttarakhand.





2. National Conference on “Recent Advances in Physical Sciences (NCRAPS-2020)” jointly organized by Department of Chemistry, Physics and Mathematics, during December 19-20, 2020 at NIT Uttarakhand through virtual mode.
3. Two days Online workshop on Mathematical Modelling and MATLAB Applications (MMMA-2020) organized by Department of Mathematics from 24.08.2020 to 25.08.2020 under twinning activity with SLIET Longowal.
4. TEQIP–III sponsored two-week International Winter School on “Fluid Dynamics, Heat Transfer and Applications” during January 18-29, 2021 organized by Department of Mathematics, NIT Uttarakhand.

5. TEQIP–III sponsored an Expert Talk on “Industry Institute Interaction & Management Capacity Development” on January 8, 2021, organized by the R&C section, NIT Uttarakhand delivered by Prof. (Dr.) Sandeep Sancheti, Vice Chancellor of SRM Institute of Science and Technology. Coordinator: Dr. D. Tripathi



6. A Webinar on Future of Science, Technology, and Innovation (STI): Impacts on Education, Skills and Work on occasion of National Science Day organized by Research & Consultancy Section, NIT Uttarakhand on 28th February, 2021. Convener: Dr. D. Tripathi

7. International Conference on Advances in Mechanical Engineering & Nanotechnology (ICAMEN-2021) jointly organized by Dept. of Mechanical Engineering, Manipal University Jaipur and R&C section NIT Uttarakhand during March 18-19, 2021. Honorary Chair/Chairperson: Dr. D. Tripathi





8. One Week Workshop on Renewable Energy & Sustainable Development organized by Research & Consultancy Section, NIT Uttarakhand during March 01-05, 2021. Convener: Dr. D. Tripathi
9. TEQIP-III Sponsored One Week Online Workshop on How to Improve Employability of Engineering Graduates organized by Research & Consultancy Section and Practical Training & Placement Cell, NIT Uttarakhand during February 24-28, 2021. Convener: Dr. D. Tripathi
10. TECHNOCARE 2021-A National Hackathon on Medical and Healthcare organized by E-CELL, AIC, Manipal University Jaipur and DIC, Research & Consultancy Section, NIT Uttarakhand during February 20-21, 2021. Convener: Dr. D. Tripathi
11. TEQIP-III sponsored Virtual International Workshop on Pandemic and Socio-Economic Determinants: The Uses, Mathematics and Computations behind the Modeling to inform Decision Makers during February 08-12, 2021 organized by the R&C section, NIT Uttarakhand. Convener: Dr. D. Tripathi
12. Workshop on Awareness to Innovation, Startup and Entrepreneurship during January 29- February 02, 2021 organized by the R&C section, NIT Uttarakhand. Convener: Dr. D. Tripathi
13. TEQIP-III sponsored an Expert Talk on Role of Teacher on October 11, 2020 organized by the R&C section, NIT Uttarakhand delivered by Prof. (Dr.) I. K. Bhat, VC, Manav Rachna University. Coordinator: Dr. D. Tripathi
14. One-week workshop on Writing Research Papers & Grant Proposals: Scientific, Technical, and Ethical Practices & Conduct during August 24-28, 2020 which is being organized by the R&C Section, NIT Uttarakhand. Convener: Dr. D. Tripathi
15. Faculty Development Program (FDP) on Outcome Based Education (OBE) System held on July 20-25, 2020 jointly organized by NBA Section & R&C section, NIT Uttarakhand, (Online Mode). Convener: Dr. D. Tripathi

16. TEQIP-III sponsored a Webinar on Gender Bias & Stereotyping on July 28, 2020 organized by ICC, NIT Uttarakhand. Coordinator: Dr. Kusum Sharma
17. Virtual Expert Lecture Series on Women in leadership: Achieving an equal future in a COVID-19 world during 06-08 March 2021 organized by ICC, NIT Uttarakhand. Coordinator: Dr. Kusum Sharma
18. Dr. Nitin Sharma contributed as an Organizing Secretary being a member of organizing team for “2nd International Conference on Recent Trends in Communication & Intelligent Systems” held on virtual platform during 20-21 November, 2021 at Arya College of Engineering & I.T., Jaipur, Rajasthan, India.
19. Dr. Nitin Sharma chaired a session in the 3rd International Conference on Frontiers in Industrial and Applied Mathematics, (FIAM-2020), held at NIT Jamshedpur, India, during 21-22 December, 2020.
20. Organized a one day webinar on National Education Policy (NEP-2020)-Role of Institutions and Faculty Members, under TEQIP III, NITUK. Coordinator: Dr. Nitin Sharma

Workshop/STTP Attended

1. Dr. D. Tripathi attended TEQIP-III Sponsored two Days Workshop on “Outcome Based Education (OBE) System” during September 2-3, 2019 organized by State Project Implementation Unit (SPIU), Uttarakhand.
2. Dr. D. Tripathi attended TechEx-2019, Exhibition of Research Projects-IMPRINT & UAY on 4th August 2019 organized by IIT Delhi and inaugurated by Hon’ble Minister, HRD.
3. Dr. Kuldeep Sharma attended a 5-Day FDP on Deep Learning and Applications from 14th September to 18th September 2020 organized by NIT Warangal.
4. Dr. Kuldeep Sharma attended One-Week Online STC on Numerical Solution of Differential Equations during September 16-20 organized by the Department of Mathematics, NIT Jalandhar.
5. Dr. D. B. Singh attended workshop on Outcome Based Education (OBE) System during July 20-25, 2020 at Nit Uttarakhand.
6. Dr. D. B. Singh attended workshop on Stress Management: A Post Covid-19 Pandemic Perspective during September 14-18, 2020 at NIT Uttarakhand.
7. Dr. Kusum Sharma attended online AICTE recognized Faculty Development Programme on “Operation Research-An introduction” organized by NITTTR, Chandigarh during April 20-24, 2020.

8. Dr. Kusum Sharma attended online workshop on Patent Drafting and Processing with Importance of Trademark and Copyright organized by Journal of Advanced Engineering Research & Powered by Hexacube India during May 06-07, 2020.
9. Dr. Kusum Sharma attended TEQIP-III sponsored workshop on Open-source tools for scientific computing: Scilab, Python, R, and Latex during December 28 to January 1, 2021 organized by IIT Roorkee.

Awards/Recognition:

1. Dr. D. Tripathi recognized by various journals of Elsevier, Springer, AIP, etc. as Guest Editor & Reviewers.
2. Dr. D. Tripathi recognized by the Head of Institution as a letter of Appreciation for excellent work as I/c Registrar of the Institute on 13th November 2020
3. Dr. D. Tripathi listed as top 2% Indian researchers/scientist (World rank 375 & Indian Rank 6) as per Updated science-wide author databases of standardized citation indicators in field of Mechanical Engineering and Transport published on October 16, 2020. (<https://journals.plos.org/plosbiology/article/authors?id=10.1371/journal.pbio.3000918>)
4. Dr. D. Tripathi recognized by the Head of Institution as a letter of Appreciation, for excellent work and contribution for the Institute on 15th August 2020 at NIT Uttarakhand.
5. Dr. Kuldeep Sharma recognized by the Head of Institution as a letter of Appreciation, for excellent work in TEQIP for the Institute on 15th August 2020 at NIT Uttarakhand

08.01.09 Department of Humanities and Social Sciences

With a persistent commitment towards quality education, the Department of Humanities and Social Sciences come into existence in June 2019. Previously, the Department was clubbed with and known as the Department of Sciences and Humanities which been striving to reach the higher goals of global standards since 2010. The department offers subjects for B. Tech, M. Tech. and Ph.D. students. Catering to the academic and extra-curricular needs of the students, the department runs various courses which strengthen and reinforce their multifarious growth in professional attitude, non-verbal and inter-personal behaviour. Several teaching methodologies are employed to facilitate deep understanding of the course contents including “beyond the classroom” exposure, etc. The department conducts workshops, seminars, conferences to give extra edge to professional augmentation of students

from time to time. It also organizes expert lectures inviting eminent experts from IITs, NITs and Central Universities.

AcademicStaff

S.No.	Faculty Profile	Qualifications	Specialization
1.	Dr. Renu Bhadola Dangwal Assistant Professor (Grade-I) & HoD till 24 th January 2021.	M.A., Ph.D.	Ecocriticism, Critical Theories, etc.
2.	Dr. Ajay Kumar Chaubey Assistant Professor (Grade-I) & HoD since 25 th January to March 31 st 2021.	M.A., Ph.D. (PGCTE from EFL-U, Hyderabad)	Literature of the Indian Diaspora, Ecological Humanities, and Popular Culture, etc.

Communication Skills Laboratory

The department has well equipped Communication Skill Laboratory. It is a platform which offers an assortment of tools to sharpen spoken skills of students. It caters to students' unique needs by which each student feels confident, secure and appropriately challenged. The lab is furnished with 30 computers and audio-visual technical tools. Facilitators locate and incorporate a variety of resources to accommodate students via audio-visual, tactile and kinesthetic methods. The English language communication skills laboratory course is a great booster for the students. Some important features of laboratory are:

- Fully interactive lab with teacher to learner, learner to teacher and learner to learner interactions.
- Teachers can address all learners at a time or to a specific learner. A learner can individually communicate with the teacher to ask a question or to clarify a doubt.
- Since all the computers are interconnected in the language lab, the entire students get equal chance to seek the attention of the teacher.
- Volume and speed of the course can be well adjusted as per by the comfort of student. He/she can even refer back to it wherever needed.
- It helps students to learn pronunciation, stress accent, intonation, rhythm, and all other nuances of the phonetics of English language.
- The learners have freedom to record and playback their own voice recordings, assess and re-play it whenever needed. They can perform personal assessments.

- Introduction of earphone/headphone/microphone provides a student his/her privacy that creates a better environment for their speaking practice with-out hesitation.
- The students can also do a periodical self-evaluation to measure the progress as well as evaluate his/her language with that of the expert.



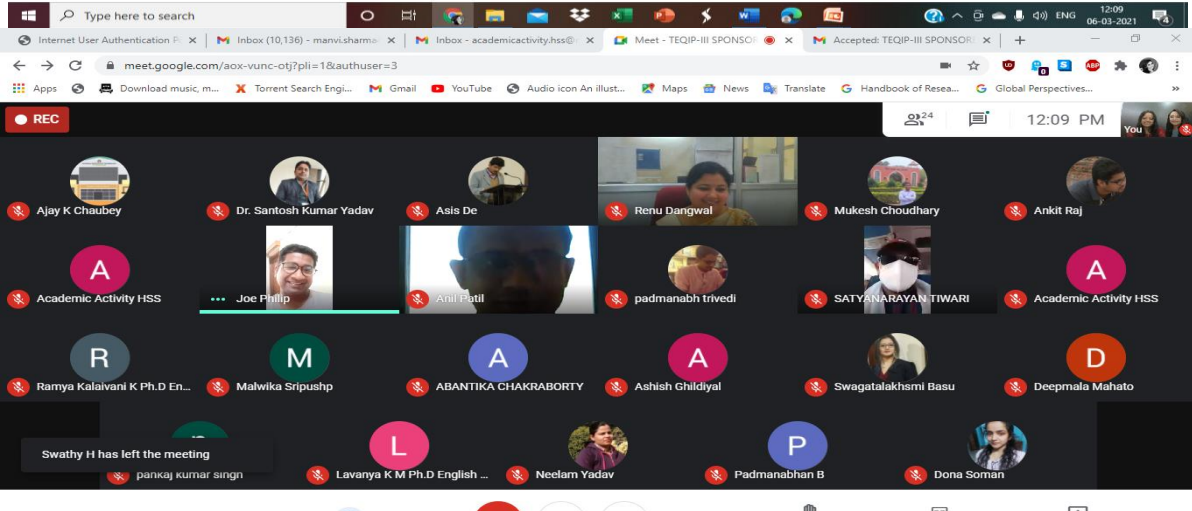
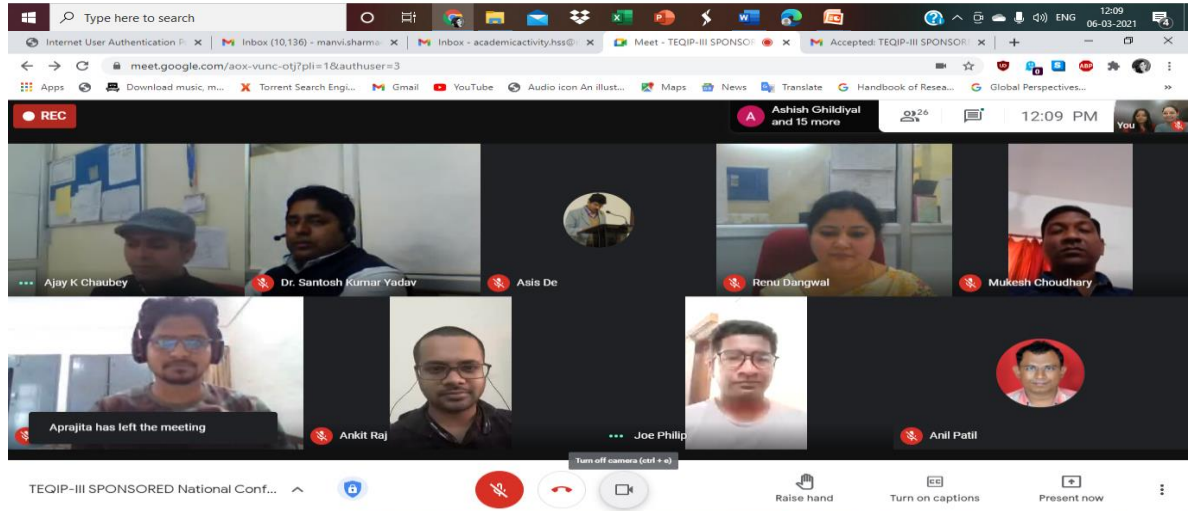
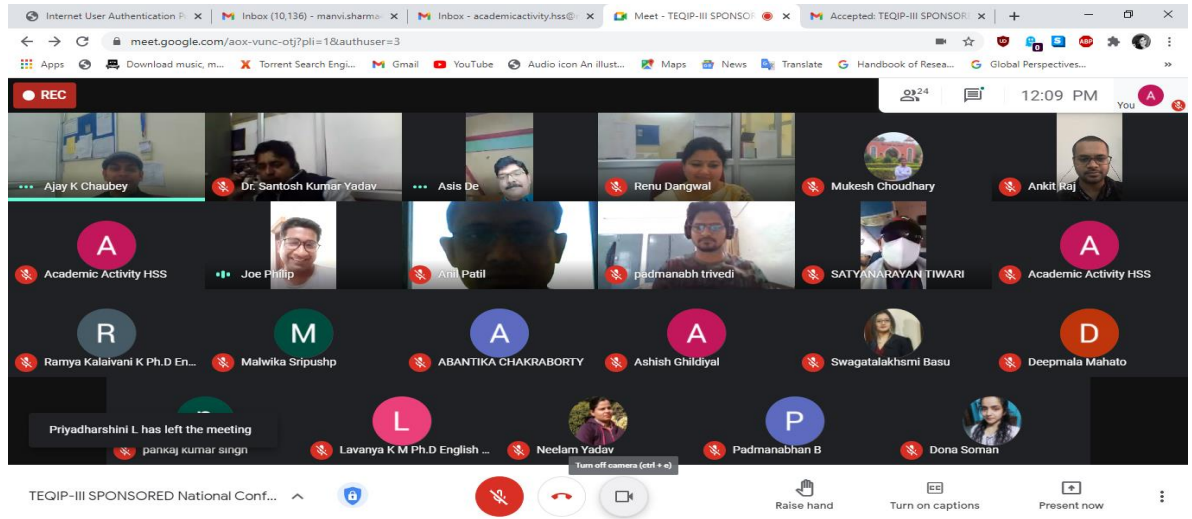
Workshops/Conferences/ CDW Organized:

The department has successfully organized several workshops and conferences of national repute on the subjects of academic and social importance. Some of these are:

1. Five Day Faculty Develop Program (online) on “Recent Pedagogy on ICT Tools in Teaching and Research” organized during 27-31 August 2020 in collaboration with IIT Roorkee.
2. A TEQIP-III Sponsored One Day National Conference on “Sustainable Development Goals in India” (NCSDG 2020) jointly organized by Malaviya National Institute of Technology Jaipur and National Institute of Technology, Uttarakhand in academic collaboration with The Indian Econometric Society (TIES) during September 10-11, 2020, held in Online Mode.
3. Five Day STTP (Online) on “Soft Skills and Personality Development” under TEQIP –III during 17-21 September 2020 in collaboration with NIT Tiruchirappalli.
4. A one-day Workshop on “Effective Writing and Speaking Skills” on February 13, 2021, sponsored by TEQIP-III.
5. Curriculum Development Workshop (Online) on March 11, 2021 for designing MA Curriculum and syllabi.



Some glimpses of the National Conference on “Ecological Humanities: Recent Paradigms” organized by the Department during March 6-7 2021.



PAPER PRESENTATION IN SEMINARS/CONFERENCES:

- Satyanarayan Tiwari & Ajay K Chaubey participated and presented a paper entitled “Mapping Colonial Stereotypes in the Selected Diasporic Novels of the New Millennium: A Critical Study” (co-authored with Mr.) in the International E-Conference on “Migration, Diasporas and Sustainable Development: Perspectives, Policies, Opportunities and Challenges”, jointly organised by Global Research Forum on Diaspora and Transnationalism (GRFDT), New Delhi, India; Migrant Forum in Asia (MFA), Manila, Philippines; Center for Research on North America (CISAN) and UNAM, Mexico during November 2-5, 2020.
- Ajay K Chaubey participated and presented a paper entitled “Transnational Spaces in Amitav Ghosh's *The Circle of Reason*” in the First Online International Conference on “Continuity, Consistency and Innovation in Applied Sciences and Humanities” (ICCIASH-2020) organized by Department of Sciences and Humanities, St. Martin's Engineering College, Dhulapally, Secunderabad, (Telangana State) India during August 13-14, 2020.
- Manvi Sharma and Ajay K Chaubey participated and presented a paper entitled “Climate Change in India: A Wakeup Call from Bollywood” in the 1st Rupkatha International Open Conference Recent Advances in Interdisciplinary Humanities (Virtual), jointly organized by *Rupkatha Journal* on Interdisciplinary Studies in Humanities, IIT-Patna, and Shiksha-O-Anusandhan (Deemed-to-be University), Bhubaneswar during August 20-22, 2020.
- Tiwari, Satyanarayan & Ajay K Chaubey presented a paper entitled “The City as a Protagonist: An Orientalist Reading of Jeet Thayil's *Narcopolis*” in the two-day International E-Conference on “Contemporary Issues in South Asian Literature and Culture Studies” organised by the Department of Languages, Manipal University, Jaipur, Rajasthan (India) during March 30-31, 2021.
- Chaturvedi, Sonalika and Renu Bhadola Dangwal. “Writing Catastrophe: Vulnerability and Resilience in Fictions on Ecological Disaster.” *TEQIP-III Sponsored Online National Conference on Ecological Humanities: Recent Paradigms* organized by NIT Uttarakhand, during March 06-07, 2021
- Soman, Dona and Renu Bhadola Dangwal. “Transcending Human- Nonhuman divide towards a Posthuman sustainability : A Reading of Rabindranath Tagore's “Bolai” and Karthika Nair's *The Honey Hunter*” *TEQIP-III Sponsored Online National Conference on Ecological Humanities: Recent Paradigms* organized by NIT Uttarakhand, during March 06-07, 2021
- Chaturvedi, Sonalika and Renu Bhadola Dangwal. “Living like a Tree: Gender Equality and Ecological Sensibility in Sumana Roy's *How I Became a Tree*.” *TEQIP- III Sponsored Online National Conference on Sustainable Development Goals: The Way Forward Towards Quality Education (G:4), Gender Equality (G:5), Affordable and Clean Energy (G:7)*, jointly organized by MNIT Jaipur and NIT, Uttarakhand, during September 10-11, 2020.

- Joe Philip, Renu Bhadola Dangwal and Vinod Balakrishnan,. “Positioning the Gendered Subaltern: Body, Speech and Resistance in Mahasweta Devi’s Narratives.” Ist Rupkatha International Open Conference on Recent Advances in Interdisciplinary Humanities organized from August 20-2, 2020.

Paper Publications:

- Manvi Sharma and Ajay K Chaubey published a paper entitled “Climate Change in India: A Wakeup Call from Bollywood”in Rupkatha Journal of Interdisciplinary Studies in Humanities (E-ISSN: 0975-2935), Special Conference Issue (Vol. 12, No. 5, 2020. 1-9) (Indexed in the SCOPUS and Web of Sciences).
- Joe Philip, Renu Bhadola Dangwal and Vinod Balakrishnanpublished a paper entitled “Positioning the Gendered Subaltern: Body, Speech and Resistance in Mahasweta Devi’s Narratives.” *Rupkatha Journal on Interdisciplinary Studies in Humanities. Vol 12. No.5 2020. PP 1-9* ISSN 0975-2935(Indexed in the SCOPUS and Web of Sciences).

8.02 LIBRARY

The library has a rich collection of books on Science and Technology, Engineering, Humanities and Social Sciences and also a good collection of Sports, Yoga, English and Hindi Fiction. The library has four stack rooms with subject-wise arrangement of books on the shelves according to the Universal Decimal Classification Scheme. The library has one reading room which remains open 24x7 for the students and the staff members.



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Wed Aug 29 2018 10:02:51 GMT+0530 (India Standard Time)

राष्ट्रीय प्रौद्योगिकी संस्थान,
उत्तराखण्ड
National Institute of Technology,
Uttarakhand

HOME ABOUT ADMINISTRATION ACADEMIC DEPARTMENTS FACILITIES STUDENT LIFE TEQIP - III CENTER
INSTITUTE VIRTUAL TOUR CONTACT US

INTRODUCTION PEOPLE SERVICES E-RESOURCES SEARCH OPAC IMPORTANT LINKS

LIBRARY AND INFORMATION CENTRE

The library has open access system along with a reading room facility. The Library houses a total collection of approx. 35,800+ printed books (with more than 6000 titles) which includes Text books and Reference books in the field of Engineering and Technology, Sciences and Humanities, English Literature and Fiction. The library has a rich collection of E-books (i.e. 26,457 titles) procured from various renowned publishers and the library subscribes various online databases to increase and enhance the quality of academic and research work. The library subscribes 55 magazines for the students as magazines plays an important role in an educational institution or organization and supply the variety of news on a regular basis (i.e. weekly, monthly etc.) and keep the users updated about the latest news and happenings taking place in our country as well as in the world at large. The library's has Online Public Access Catalogue to search all the bibliographic records available in the library through a web based search i.e. Libsys 10 WebOPAC.

Show desk

Library Webpage

Library Working Hours:

The library remains open on all days of the year except on holidays of National and Religious importance (i.e. Republic Day, Holi, Independence Day, Gandhi Jayanti, Diwali and Dusshera). The library opens from 08:00 am to 08:00 pm (i.e. Monday-Sunday).



LIBRARY RESOURCES:

Total Collection:

Books	36,346
Standards	514
CDs/DVDs	04
NPTEL Video Lectures	135
Online Databases	06
Online Books	26,457

- **Text Book and Book Bank Collection:**

The text books of the prescribed syllabus and other recommended books are kept in the Text Book Section along with separate Book Bank collection for use and easy access the users.

- **Reference Collection:**

The Library has a collection of General reference books including Encyclopedias, Dictionaries, Directories, Handbooks, Bibliographies, and Atlases etc. and these are available for reference within the library premises and are not for lending.

- **Hindi Collection:**

The Library has built up a good collection of Hindi Literature to increase the use of Rajbhasha. Hindi Books are kept in front area near Reference collection in the Library to promote its usage.

- **Audio-Visual Collection:**

A good collection of Educational videos (i.e. NPTEL video courses) are available for the users on varied subjects and are made accessible via FTP server of the Institute. Also, there is a collection of CDs/DVDs in the library covering various subject areas like academic, entertainment, Information Technology and Competitive exams etc.

- **Electronic Journals Collection:**

The library subscribed various online journals during this year from renowned publishers on the basis of Annual Subscription which can be accessed 24X7 by the Library users.

- **Electronic Books Collection:**

There are around 26,457 titles of E-books procured by the library from various renowned publishers like Elsevier, Tata McGraw Hill, Wiley, Pearson, ASME Press, IEEE-MIT Press, IEEE-Wiley, Springer and ICE publishing on perpetual basis (i.e. lifetime) which can be accessed 24x7 by the users of the Institute.

- **Computer and Networking Facilities**

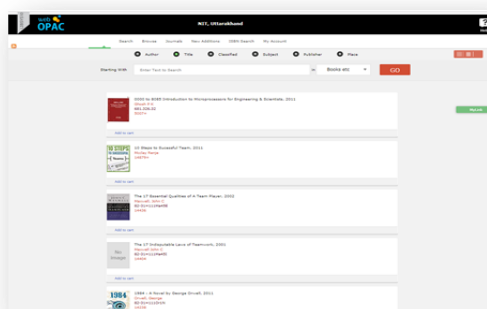
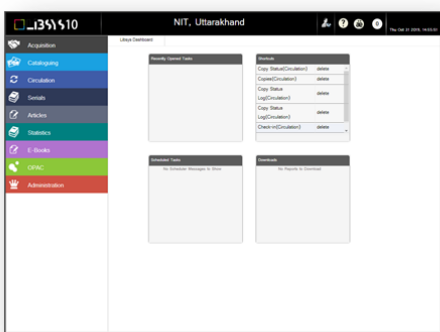
The library is connected to the campus LAN and Wi-Fi facility. The library server works under Windows 10 environment.

Library has LAN connectivity with fibre optic cable (10/100 mbps) through the Computer Department and is connected to Web Server (Duel Xeon) - providing network facility.



- **In-house Activities:**

The Library uses LIBSYS 10 (Web Centric) software package which is an integrated multi-user library automation management system that supports all in-house activities of the library. All in-house activities of the library like acquisition; cataloguing, circulation, etc. are fully computerized through LIBSYS Software (Library Management Software). The database of the entire library acquisitions is being updated on regular basis along with details of recently acquired books. The details of all the Library patrons are maintained in the software along with their 'Image Database'. The bar-coding of all library resources is in final stages. The library has shifted to Web OPAC facility this year under which all the bibliographic details of the library collection can be accessed from Internet 24x7 on all week days by the users.



LIBSYS 10 Web Centric Software

LIBSYS 10 WEBOPAC

Library Services and Facilities:

- **Book Bank:**

The Library provides Book Bank facility to the B.Tech. and M.Tech. students. Under the Book Bank facility, the set of textbooks are issued to the individual student for entire semester (i.e. for six months).

- **Reader's Assistance:**

The library provides assistance to the users about the location of Books and assists in accessing of e-Journals and e-Books.

- **Newspapers and Catalogue:**

The library subscribed 05 (4 Hindi and 1 English) newspapers including daily and weekly papers. The Library display Catalogues for the users to help them in selection of books for Book Recommendations.



- **Newspaper Clippings:**

The library maintains and keeps the record of News clips of the news related to the Institute.

- **Plagiarism Detection Software:**

Institute Library provides similarity check software like Turnitin and Urkund that allows you to detect similarity from project work, academic paper, article, dissertation/theses, or any other research or innovation-related work.

- **Email Alert:**

The Library provides 'Email Alert Service' for the Circulation (Issue/Return) and various other activities of the library. Two Dot matrix printers are installed in the library for printing the Circulation slips to keep the separate issue/return record of the users.

- **Orientation Programme:**

The library orientation programme is conducted every year at the beginning of the session for the newly admitted students to familiarize them with the facilities and services available in the library for the effective and maximum use of the library resources.

- **Membership:**

The Membership of the Institute's Library is open to all the Students, Faculty members, Research Scholars, Officers and Technical/Non-Technical Supporting Staff of the Institute.

- **Library Advisory Committee:**

There is library advisory committee which consists of the Chairman, all the HODs and I/c Assistant Librarian as the member Secretary. The library committee meets from time to time to lay down the policies and to review the working conditions for smooth functioning of the library.

8.03 Computer Centre

The Institute has Computer Centre as a centralized facility for the Institute. It has worldwide connectivity through Internet. Computer Centre aims at providing required and updated information about the emerging trends and technologies.

The Computer center is maintained by the Department of Computer Science and Engineering and is located near student hostels. The students can access the Internet in computer center from 8:00 in the morning to 8:00 in the evening. The computer center has two powerful servers from Dell and IBM. Central Computing facilities are listed below:

1. **Internet Connectivity:** Whole Campus, Departments and Hostels are covered with Internet Connectivity of Leased Line of 1 Gbps from NKN and provided by BSNL.
2. **Wi-Fi Campus:** The whole NITUK Campus is connected via Wi-Fi. The Wi-Fi is available 24*7*365.
3. **Servers:** The Institute has 2 high Capacity Servers and 1 Network Storage Device installed in the Central Computing Centre.
 - a. **Server 1 :** 4-Dell M610 Blade Servers
 - b. **Server 2 :** 4-IBM Blade Servers
 - c. **Storage :** Dell Power Vault NX3200 (6TB)
4. **Network Security :** Cyberoam 1500ing XP

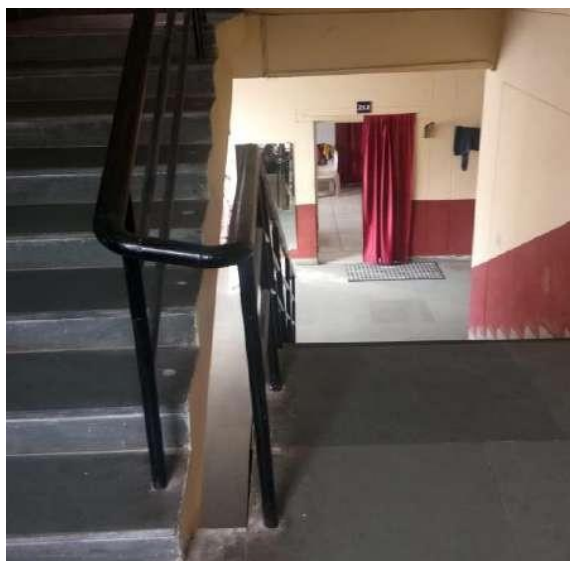
8.04 Hostels

The National Institute of Technology, Uttarakhand has 07 hostels (05 Boys and 02 Girls) in Srinagar Garhwal (Uttarakhand). Based on the principle of "home away from home", hostels available on the campus provide all basic facilities to the students. Institute has comfortable residential facilities for 299 students in Campus (rooms available on sharing basis: two/three seater). The details of the hostels along with the capacity are as follows:

S.No.	Name of Hostel		Type	No. of Rooms	No. of Seats	Strength of the Hostel
1.	NITUK Hostel-1	Parent Campur (Srinagar Garhwal)	Boys	15+7	2/3 seater	51
2.	NITUK Hostel-2		Boys	22	3 seater	66
3.	NITUK Hostel-3		Girls	23	3 seater	69
4.	NITUK Hostel-4		Boys	18	3 seater	54
5.	NITUK Hostel-5		Boys	36	2 seater	72
6.	NITUK Hostel-6		Girls	14	3 seater	42
7.	NITUK Hostel-7		Boys	19	3 seater	57
Total			-	157	-	411

A year-wise hostel system is preferably followed for allocating the hostel rooms to the students. Hostels are fully Wi-Fi connected with emergency/continuous power supply through DG set and equipped with water purifiers, water coolers, geysers and telephone etc. These security cameras for necessary security check and surveillance installed in each hostel. A centralized mess facility is provided to the students (except first year) residing in the hostels and separate mess facility for first year students is available at NITUK Hostel-5. Hostel rooms are furnished with chairs, tables, bunk beds and lockers. Students get ample opportunities to avail all the indoor and outdoor games facilities such as Carrom Board, Chess, Table Tennis, Volleyball, badminton along with a gymnasium facility for the students to maintain their fitness. A laundry facility is provided to all the residents within the campus. In particular for girls' hostel, washing machine facility is also provided for washing & drying the clothes.

For the smooth-functioning of daily routines and proper care, Girls' Hostel has a team of Warden, and Matron. Matron takes good care of health issues of girls residing in the hostel along with the nurse available in the Institute Dispensary for 24 hours.



For the personal and professional development of the students, counseling facility is also provided by the experts on the campus. It offers orientation programs on topics such as academic stress reduction, inter-personal relations, time management, study and revision skills, mental health and well being etc.

Regarding the health of the students residing in the hostel 24hrs vehicle facility is available without any charges for medical check-up/treatment and also In case of emergency (during late night hours).

All the hostels are administered by a Chief Warden along with a team of Wardens, Assistant Registrar (Hostel), Superintendent (Hostel), Matron, and senior students as senior residents. The Chief Warden and a team of Wardens are responsible for improving the facilities and environment of the hostels. Their main role is to coordinate the working of all the hostels, maintain the discipline in the hostels and implement all policy matters related to the hostels.

Name of the Staff	Location of Hostels	Designation	Mobile Number
Dr. IM Nagpure	NITUK Campus, Srinagar (Garhwal)	Chief Warden	+91-8126139069 Email:imnagpure@nituk.ac.in
Dr. M.S. Khatri		Warden (Hostel-01 & 05)	+91-9557750893 Email:mikhail@nituk.ac.in
Dr. Kusum Sharma		Warden (Hostel-03 & 06)	+91-9557750899 Email:kusum31sharma@nituk.ac.in
Dr. Vikas Kukhsal		Warden (Hostel-02)	+91-9557750887 Email:vikaskukshal@nituk.ac.in
Dr. D.B. Singh		Warden (Hostel-04 & 07)	+91-9897507849 Email:dbsingh@nituk.ac.in
Dr. Dungali Sreehari		Assistant Registrar (Hostel)	+91-8979567912 Email:sreehari@nituk.ac.in
Mrs. Neha Raturi		I/c Superintendent (Hostel)	+91-8194024275 Email:neharaturi@nituk.ac.in

8.05 Dispensary

The dispensary provides complete free basic medical facilities for the students and staff members of the institute on 24 x 7 and 7 days. In Dispensary Section, there are four nursing staff is available throughout the day and a visiting doctor from Government hospital (Srikot) offers daily service during evening (7 pm to 8 pm).





- ❖ The Institute has facility to avail Ambulance service for 24hrs during emergency/ any health issue and further, the ambulance is used shift patient to higher center such as Rishikesh, Dehradun and Haridwar etc. During Covid -19 periods Ambulance also served in Local govt. Hospital (Combined Medical Hospital) at Srinagar.



 ***Facilities Available***

The following accessories has been procured and installed in the institute ambulance

❖ *Oxygen Cylinder*

❖ Oxygen is widely used for the treatment of a number of acute and chronic health conditions. Oxygen treatment is used in an ambulance in order to manage emergency situation



❖ *Wheel Chair*

❖ Wheelchair is used for whom walking is difficult or impossible due to illness (physiological or physical), injury, or disability Purpose of description.



❖ *Suction Machine*

❖ Suction machine is appliances that are used to remove substances such as blood, saliva, mucus, and vomit from a person's airway and prevent pulmonary aspiration and facilitate breathing.



❖ *Laryngoscope*

❖ Doctors use this device to look into throat and larynx, or voice box.



❖ *Stethoscope*

- ❖ The stethoscope is an acoustic medical device for auscultation, or listening to internal sounds of an animal or human body.



❖ *Torch*

- ❖ Torch use for examination of patients.



❖ *Cervical Collar*

- ❖ It is use for injury of neck, cervical pain to support neck.



Precautionary Measurements for Novel COVID-19

- ❖ It is procured hand Sanitizers and masks and distributed to employees of the institute to prevent from Corona Virus (COVID-19).



- ❖ It is Procured non-contact thermal scanners to measure of body temperature at the entry main gates of the Institute.



❖ **NEBULIZER MACHINE**

To be use when difficulty in breathing



❖ *Medicines*



❖ *Masks*



Issued to all the employess of the Institute against COVID-19.

8.06 OTHER FACILITIES

The temporary campus of the Institute has an ATM of the State Bank of India for the convenience of the students and staff members. The campus also has an auditorium. The Institute has installed sanitizer vending machines at both of the campuses (ITI and Polytechnic) for the protocols, as and when issued by the Government of India and the state Govt. of Uttarakhand, to be followed to keep Covid-19 viruses at bay. The e-rickshaw is operated between the two campuses to ferry the Divyang students. The water coolers have also been placed in both the aforementioned campuses to provide hygienic drinking water to the students, faculty and staff.

09.00 TRAINING AND PLACEMENT**09.01 PLACEMENT DATA**

Since Aug 2019, T&P Cell could manage to arrange placement drives with as many as 23 Companies. This year total 26 companies visited the campus virtually and a total of 111 UG students could be placed through drive till date.

Following data sheet describes placement offers during 2020-21.

Total Students Registered with T&P Cell: 220

Placed with Single offers: 111 (06 students got 02 offers)

Highest Package: 19 LPA

Median Package: 06.00 LPA

Average Package: 5.88 LPA

S. No	Name	Roll No	Branch	Company
1	Shivangi Singh	BT17CIV010	CIV	Capgemini
2	Naman Kumar Palliwal	BT17CIV032	CIV	L&T ECC
3	Manish Ghildiyal	BT17CIV030	CIV	TCS Ninja
4	Vishnu Joshi	BT17CIV040	CIV	Infosys
5	Satyam Kumar	BT17CSE014	CSE	Lowe's India
6	Shivam Singla	BT17CSE036	CSE	Lowe's India
7	Devbrat Anand	BT17CSE048	CSE	Cvent
8	Yogeshwar Chaturvedi	BT17CSE023	CSE	Publicis Sapient
9	Jyoti Kumari Jangid	BT17CSE046	CSE	Publicis Sapient
10	Chirag Rawat	BT17CSE061	CSE	Tata Consultancy Services
11	Qamar Ali Ansari	BT17CSE009	CSE	Infosys

12	Kimi Pandre	BT17CSE007	CSE	C DAC
13	Saundarya Khatri	BT17CSE054	CSE	Deloitte
14	Harshit Raj	BT17CSE052	CSE	Deloitte
15	Alok Singh Narvariya	BT17CSE059	CSE	ITH technologies
16	Nikesh Thapa	BT17CSE005	CSE	Loyalty Juggernaut
17	Anmol Goyal	BT17CSE028	CSE	Loyalty Juggernaut
18	Harshita Choudhary	bt17cse030	CSE	Loyalty Juggernaut
19	Pankaj Singh	BT17CSE041	CSE	Loyalty Juggernaut
20	Prabhat	BT17CSE049	CSE	Loyalty Juggernaut
21	Tanya Sinha	BT17CSE060	CSE	Swiftace AI Private Limited
22	Ankit Singh Dungriyal	BT17CSE004	CSE	Infovity
23	Vishal Ranjan	BT17CSE017	CSE	Infovity
24	Prem Prakash Yadav	BT17CSE034	CSE	Infovity
25	Robin Bisht	BT17CSE011	CSE	Capgemini
26	Rohit Bhatt	BT17CSE031	CSE	Capgemini
27	Amanpreet Kaur	BT17CSE040	CSE	Capgemini
28	Paresh Joshi	BT17CSE016	CSE	L & T InfoTech, L 2
29	Vipul Saklani	BT17CSE025	CSE	L & T InfoTech L 2
30	Lata Pangtey	BT17CSE018	CSE	L & T InfoTech L 1
31	Rohan Singh	BT17CSE022	CSE	L & T InfoTech L1
32	Himanshu Patel	BT17CSE010	CSE	Virtusa
33	Rishabh Gupta	BT17CSE045	CSE	Virtusa
34	Sharma Pooja Balrambhai	BT17CSE058	CSE	Virtusa
35	Yash Sharma	BT17CSE006	CSE	Invenio
36	Manish Kumar Meena	BT17CSE008	CSE	Invenio
37	Shankalp Kumar	BT17CSE047	CSE	Infosys

38	Alok Ranjan Chaudhary	BT17CSE039	CSE	InfoObject
39	Shubham singh	BT17CSE035	CSE	InfoObject
40	Karan Chaurasia	BT17CSE024	CSE	Sagacious IP
41	Shubham Aswal	BT17CSE012	CSE	TCS Ninja
42	Ashutosh Kumar Agrahari	BT17CSE056	CSE	TCS Ninja
43	Jay Aditya Nautiyal	BT17CSE015	CSE	Infosys
44	Himani Jeengar	BT17CSE027	CSE	Infosys
45	Ravindra Yadav	BT17CSE021	CSE	Infosys
46	Akhilesh Kumar Shah	BT17CSE013	CSE	Samsung
47	Pankaj Mahtolia	BT17CSE001	CSE	Samsung
48	Ajay Sharma	BT17CSE032	CSE	Samsung
49	Vikash kumar singh	BT17CSE038	CSE	MPS
50	Vinay Unal	BT17ECE022	ECE	ZS Associates
51	Saurabh Rawat	BT17ECE024	ECE	ZS Associates
52	Shagun Sharma	BT17ECE035	ECE	ZS Associates
53	Animesh Sharma	BT17ECE036	ECE	ZS Associates
54	Vaibhav Tiwari	BT17ECE043	ECE	ZS Associates
55	Shubham Chaudhary	BT17ECE059	ECE	Publicis Sapient
56	Sumitesh Naithani	BT17ECE062	ECE	Publicis Sapient
57	Sachin Choudhary	BT17ECE041	ECE	Uniacco
58	Neha Hasija	BT17ECE011	ECE	Deloitte
59	Vikas Kumar	BT17ECE038	ECE	Deloitte
60	Rimjhim Gupta	BT17ECE052	ECE	Deloitte
61	Tuhin Upadhyay	BT17ECE044	ECE	Deloitte
62	Vivek Gupta	BT17ECE014	ECE	Deloitte
63	Pragya Tomar	BT17ECE006	ECE	Capgemini

64	Sakshi Sindhwal	BT17ECE013	ECE	Capgemini
65	Kshitij Gusain	BT17ECE056	ECE	Capgemini
66	Sathyam Rajpal	BT17ECE053	ECE	L& T Construction
67	Yogamber Singh Negi	BT17ECE058	ECE	L&T ECC
68	Tarun Kumar	BT17ECE051	ECE	EPAM RD
69	Fauzan Waseem	BT17ECE054	ECE	L & T InfoTech L 1
70	Ganesh Agarwal	BT17ECE063	ECE	L & T InfoTech L1
71	Gaurav Sharma	BT17ECE026	ECE	Infosys
72	Sakshi Choudhary	BT17ECE008	ECE	TMEIC
73	Vaibhav Bisht	BT17ECE015	ECE	Sagacious IP
74	Sumit singh rawat	BT17ECE021	ECE	Sagacious IP
75	Abhijeet Kumar Gupta	BT17ECE017	ECE	TCS Ninja
76	Ranjeet Prakash Rai	BT17ECE034	ECE	TCS Ninja
77	Manish Kumar	BT17ECE060	ECE	TCS Ninja
78	Mohd Aarish Siddiqui	BT17ECE061	ECE	TCS Ninja
79	Mohit Verma	BT17ECE064	ECE	TCS Ninja
80	Tanya Verma	BT17ECE020	ECE	Infosys
81	Saurabh Negi	BT17ECE037	ECE	Infosys
82	Vatsala Shukla	BT17EEE031	EEE	Capgemini
83	Mini shakya	BT17EEE051	EEE	Tredance Analysis
84	Nitin Kumar Paliwal	BT17EEE036	EEE	Tredance Analysis
85	Maneesh Kumar	BT17EEE012	EEE	L& T Construction
86	Deepak Palyal	BT17EEE044	EEE	L& T Construction
87	Aditi Govil	BT17EEE050	EEE	L& T Construction
88	Ravi Baliyan	BT17EEE030	EEE	L& T Construction
89	Yogesh Singh	BT17EEE047	EEE	L&T ECC

90	Praveen Kumar	BT17EEE053	EEE	Invenio
91	Kamlesh Yadav	BT17EEE048	EEE	TMEIC
92	Anmol Kumar	BT17EEE033	EEE	TMEIC
93	Govind Yadav	BT17EEE056	EEE	TMEIC
94	Garapati Satya Veera Sunanda	BT17EEE034	EEE	TCS Ninja
95	Chaitanya Naidu Surla	BT17EEE026	EEE	Infosys
96	Marut Dhiman	BT17EEE001	EEE	Infosys
97	Anshul Kumar Singh	BT17MEC022	MEC	ZS Associates
98	Deepak Khani	BT17MEC043	MEC	Capgemini
99	Shomanshu Singh	BT17MEC025	MEC	JARO
100	Rizul Singh Tomar	BT17MEC042	MEC	Tredance analysis
101	Vikash Kumar Gupta	BT17MEC048	MEC	Tredance analysis
102	Kartik Sharma	BT17MEC006	MEC	Tredance analysis
103	Shivam Pandey	BT17MEC016	MEC	L& T Construction
104	Rajkumar	BT17MEC055	MEC	L& T Construction
105	Harsh Adhikari	BT17MEC008	MEC	L& T Construction
106	Suneet Mungali	BT17MEC041	MEC	Suzuki
107	Gaurav sharma	BT17MEC047	MEC	Suzuki
108	Sunil Saini	BT17MEC024	MEC	Suzuki
109	Honey Chauhan	BT17MEC033	MEC	Infosys
110	Neeraj Negi	BT17MEC029	MEC	Asahi India Glass Limited
111	Ajay Yadav	BT17MEC013	MEC	Asahi India Glass Limited

09.02 STUDENTS' INTERNSHIP

Internship List					
S. No	Name	Roll	Branch	Company Name	Stipend
1	Anmol Goyal	BT17CSE028	CSE	Loyalty Juggernaut	15,000
2	Harshita Choudhary	BT17CSE030	CSE	BNY Mellon	30,000
3	Jyoti Kumari Jangid	BT17CSE046	CSE	Elocity Technologies	25,000
4	Alok Singh Narvariya	BT17CSE059	CSE	ITH Technologies	22,000
5	Chirag Rawat	BT17CSE061	CSE	Unicommerce	20,000
6	Krishankant Mani	BT17ECE040	ECE	Vantage System	37,500
7	Sathyam Rajpal	BT17ECE053	ECE	Unicommerce	20,000
8	Pankaj Singh	BT17CSE041	CSE	Loyalty Jaggernaut	15,000
9	Neha Hasija	BT17ECE011	ECE	Cataleya Pvt. Ltd.	15,000
10	Neel Ratn	BT17ECE032	ECE	Webasko Web Service	20,000
11	Ayush Vatsal	BT17ECE057	ECE	Golcha Group	10,000
12	Shubham Aswal	BT17CSE012	CSE	Golcha Group	12,000
13	Tarun Kumar	BT17ECE051	ECE	Bonami Software Pvt. Ltd.	15,000

9.03 GATE QUALIFIED STUDENTS

STUDENT'S GATE SCORE

S.No.	Name of Student	Gender	category	Mark s	Rank	paper	Qualifying Degree
1.	Mohit Kumar Meena	Male	ST	45.2	3806	EC	Electronics & Communication

2.	Sakshi Sindhwal	Female	Gen	45	8750	EC	Electronics & Communication
3.	Vivek Gupta	Male	Gen	40.33	2046	EC	Electronics & Communication
4.	Saurabh Rawat	Male	Gen	44.67	906	EC	Electronics & Communication
5.	Suchit Kumar	Male	Gen	30.67	4577	EC	Electronics & Communication
6.	Ranjeet Prakash Rai	Male	Gen	33.64	7182	CSE	Electronics & Communication
7.	Rimjhim Gupta	Female	Gen	27.67	6374	EC	Electronics & Communication

Top Five students from the Department of Electrical Engineering in GATE 2021 are

S. No.	Student Name	Roll Number	B.Tech. Batch	Gate Score	All India Rank
1.	Yatharth Pandey	BT17EEE004	2017-2021	766	396
2.	Dayitva Gupta	BT17EEE023	2017-2021	695	923
3.	Piyush Kumar	BT17EEE011	2017-2021	585	2575
4.	Anmol Kumar	BT17EEE033	2017-2021	517	4246
5.	Vatsala Shukla	BT17EEE031	2017-2021	498	4784

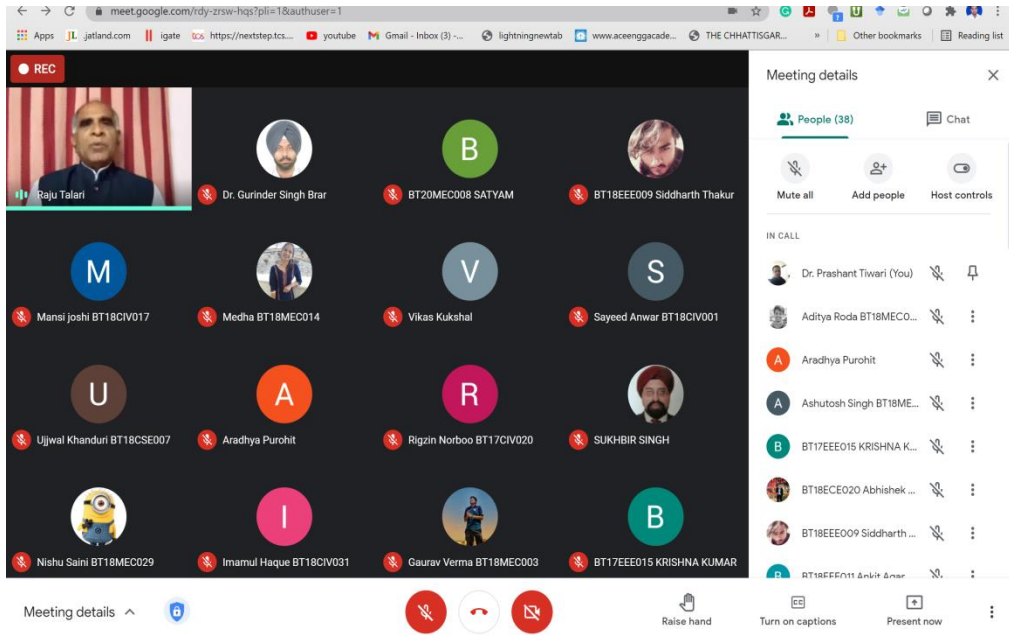
09.04 List of Companies conducted Placement Drives for NIT Uttarakhand

S. No	Visited Company	S. No	Visited Company	S. No	Visited Company
1	Low,s India through-Hack	27	Eduthrill	53	Ather Energy, apli
2	Capgemini	28	S2TECH	54	Sagaicious Resarch
3	L & T Infotech	29	TMEIC	55	Helium
4	Loyalty Juggernaut	30	Deolite	56	Invenio
5	ZS Assocites	31	Jaro	57	Blogvault

6	Infosys Campus	32	Samsung	58	Spark minda
7	Infosys -- Hackwithinfy	33	Goldman	59	AIS
8	Cvent	34	Exmyb	60	ACXIOM
9	RAAM Group	35	Adobe	61	infovity
10	ITH Technologies	36	Aptean	62	Apisero
11	C- DAC	37	Expertrec.com	63	techbeam
12	InfoEdge	38	Spark minda	64	Uolo Edtech Pvt Ltd
13	TCS	39	Internsala	65	Uniacco
14	WhiteHat Jr	40	Intel	66	Moschip Technologies
15	L&T Cons and Non Const	41	Infoobjects	67	Swiftace AI Private Limited
16	publicissapient	42	Freshersworld	68	Visudh Ajivam Pvt Ltd
17	TechnipFMC	43	Sunera Tech	69	EPAM RD
18	Samsung SDS	44	Vedantu	70	CGI
19	Virtusa	45	Suzuki	71	Suzuki
20	AM/Nippon Steel	46	ESSI	72	KRIBHCO
21	Evolutionary Systems Pvt. Ltd.	47	Blitzjobs	73	Vysion Technology
22	OPTYM	48	Fintech banking	74	MPS Limited Noida
23	Suzlon Energy Ltd	49	Wealth Clinic	75	Bio Urja
24	Expertrec-Cloud infra	50	Tredance	76	Albatronix
25	Lemon VB	51	Ebizone		
26	Tata Consultancy Services	52	Nvidia		

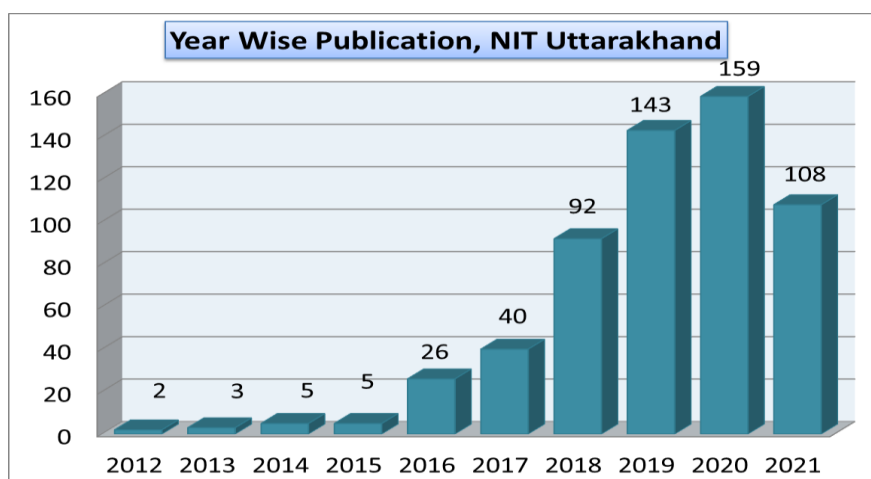
09.05 EXPERT LECTURE ON CAREER PLANNING FOR UG STUDENTS

Event Name	Nature of Event	Details/ Expert	Date
Corversia	Interaction with MD/CEO Level officials	Mr. R C Goel (Superannuated as Executive Director - Chief of Engineering Services M/S Oil & Natural Gas Corporation Limited)	21st Jan 2021
		Mr. Vipin Sharma (worked as Director Engineering, Indian Airlines and Air India, strategic Business Unit MRO Head in Air India)	28th Jan 2021
		Mr. Sujeet Samaddar (CEO & Dir ShinMaywa India, Sr Cons NITI Aayog. Now Hony Secy SAMDeS)	11th Feb 2021
		Mr. Suverna Raju (Former CMD Hindustan Aeronautical Limited)	8th April 2021
One day Interview Training	Interview techniques and resume building	1. Anurag Sharma Consultant Learning From Ant	29th August 2020
Placement Workshop	One Week Online Workshop on "How to Improve Employability of Engineering Graduates?"	1. Mr. Manoj Kumar, HR CVENT 2. Mrs. Richa Bhadra, Assistant Vice President, Expertrons 3. Mr. Sambit Mohanty, HR L&T 4. Dr. Vivek Maurya, EMD, Adhita Biosciences Private Limited 5. Prof. Ravi Kant Mishra, TPO Head, SLIET Longowal 6. Prof. Somesh Sharma, Mechanical Department, NIT Hamirpur 7. Shri. Satyaranjan Sahoo, NALCO 8. Prof. Inderdeep Singh, M.I.E.D, IIT Roorkee 9. Dr. Dharmendra Tripathi, Dean(R&C), NIT Uttarakhand	21-26 Feb 2021
Online Lecture	Session on Softskills	1. Mr. Rakesh K Ranjan, Vice President HR, Vodafone Idea Ltd	19th Oct. 2020



10.00 RESEARCH AND DEVELOPMENT ACTIVITIES**Research and Consultancy Team (2020-2021):**

Dr. Dharmendra Tripathi	:	Dean (Research & Consultancy)
Dr. Rakesh K. Mishra	:	Associate Dean (Research & Consultancy)
Dr. Vikas Kukshal	:	Coordinator, Innovation & Incubation
Dr. Gaurav Kumar	:	Member, Innovation
Dr. Krishan Kumar	:	Member, Startup
Dr. Abhinav Kumar	:	Member, Incubation
	:	
Dr. Pankaj Kumar Pal	:	Coordinator, IPR Cell
Mr. Hitesh Sharma	:	Member, IPR Cell
Dr. Maroti Deshmukh &	:	Coordinator, Industry-Institute Interaction and Brand Building
Dr. Jagrati Sahariya	:	Coordinator, Industry-Institute Interaction and Brand Building
	:	
Dr. Yogesh Kumar	:	Coordinator, Community Development Initiative
Prajapati	:	Member, Community Development Initiative
Dr. Abhinav Kumar	:	Coordinator, Unnat Bharat Abhiyan (UBA)
Dr. Bibhash Kumar	:	
Dr Pawan Kumar Rakesh	:	Coordinator, Design Innovation Center (DIC)

Research Publications (2020-21):

Year wise publications (including journals and conference) of NITUK, source: Scopus

Memorandum of Understanding Signed:

Sr. No.	Details	Date
1.	MNIT Jaipur, Rajasthan, India	30-06-2020
2.	Indian Institute of Technology Delhi, India	13-07-2020
3.	All India Institute of Medical Sciences (AIIMS) Rishikesh	21-07-2020
4.	CSIR-Indian Institute of Petroleum (CSIR-IIP), Dehradun, India	03-08-2020
5.	National Highways Authority of India (NHAI)	13-08-2020
6.	Bharat Heavy Electricals Limited (BHEL), Haridwar, India	02-09-2020
7.	Semi-Conductor Laboratory (SCL) – ISRO, Mohali, India	23-09-2020
8.	Indian Institute of Technology Roorkee, India	24-09-2020
9.	Institute of Informatics & Communication, University of Delhi, New Delhi for Implementation of Non-SaaS SAMARTH ERP(SHSM) system	26-11-2020
10.	Indian Institute of Technology Kanpur, India	07-12-2020
11.	HNB Garhwal University	16-03-2021





Events/Meetings Organized By the R&C:

Workshops:

- One Week Workshop on ***“Renewable Energy & Sustainable Development”*** during March 01-05, 2021 organized by R&C Section, NIT Uttarakhand.
- One Week Workshop on ***“How to improve Employability of Engineering Graduates”*** from February 23 -27, 2021 organized by R&C Section and T&P Cell, NIT Uttarakhand.
- One Week International Workshop on ***“Pandemic and Socio-Economic Determinants: The Uses, Mathematics and Computations behind the Modelling to inform Decision Makers”*** during February 08-12, 2021 organized by the R&C Section, NIT Uttarakhand
- One Week Workshop on ***“Awareness to Innovation, Startup and Entrepreneurship”*** during January 29- February 02, 2021 organized by the R&C section, NIT Uttarakhand.
- One-Week Workshop on ***“Writing Research Papers & Grant Proposals: Scientific, Technical, and Ethical Practices & Conduct”*** during August 24-28, 2020 organized by the R&C Section, NIT Uttarakhand

Expert Lectures:

- Expert Talk on ***“Role of Teacher”*** on October 11, 2020 which by Prof. I. K. Bhat, VC, Manav Rachna University.
- Expert talk on ***“Industry Institute Interaction and Management Capacity Development”*** on January 08, 2021 by Prof. Sandeep Sancheti, Vice Chancellor, SRM University Chennai.
- Expert Lecture on ***“Latest trends in Remote Sensing and GIS based Techniques”*** on January 16, 2021 by Mr. Sanjay Kumar Dewali.

- Expert Lecture on "*Smooth transition from College life to professional life and How to succeed in Professional work environment*" on February 06, 2021 by Mr. Manish Jha. Business Excellence Practice, NBC Bearings, A.K. Birla Group.

International Conferences:

- 2nd International Conference on "*Advances in Mechanical Engineering and Nanotechnology*" (ICAMEN-2020) during February 28-29, 2020 jointly organized by Manipal University Jaipur, and R&C Section, NIT Uttarakhand.
- International Conference on "*Innovative Engineering Design 2020 (ICOIED 2020)*" jointly organized by Design Innovation Centres of National Institute of Technology Uttarakhand & Indian Institute of Technology Roorkee and The Institution of Engineers, at Dehradun during January 18-20, 2020.
- *International Conference on advance in Mechanical Engineering & Nanotechnology (ICAMEN-2021)*, during March 18-19, 2021.

Faculty Development Program:

- Faculty Development Program (FDP) on "*Outcome Based Education (OBE) System*" held during July 20-25, 2020 organized by R&C Section, NIT Uttarakhand.

Panel Discussion:

- Panel Discussion on "*Natural Disaster and Other Challenging Problems*" in Uttarakhand February 13, 2021 organized by R&C section, NIT Uttarakhand.

Activities under Community Development Programme:

- A "*Cloth Donation Drive*" was organized by Community Development Cell, R&C Section, NIT Uttarakhand during February 10th -15th, 2021.

राष्ट्रीय प्रौद्योगिकी संस्थान, उत्तराखण्ड
National Institute of Technology, Uttarakhand

CLOTH DONATION DRIVE - 2021

"It's not about how much you do, but how much love you put into what you do that counts" — Mother Teresa

- ✓ Cloth Donation Drive to be carried out in ITI and Polytechnic Campus, NIT Uttarakhand, Srinagar.
- ✓ Any sort of cloth items (in good condition) will be accepted.
- ✓ Cloth Donation is open to all.

Start Date: 10th February, 2021 (11:00 AM onwards)
End Date: 15th February, 2021 (till 04:00 PM)

Drop Off Locations:

- Entrance of Mechanical Engg. Department (ITI Campus)
- Entrance of Civil Engg. Department (ITI Campus)
- Entrance of Hostel Section (Polytechnic Campus)
- Entrance of Sports Section (Polytechnic Campus)

Organized By
COMMUNITY DEVELOPMENT, R&C SECTION

Contact Details:

Dr. Anshul Sharma Coordinator, Community Development 9418736393 anshul@nituk.ac.in	Mr. Abhinav Kumar Co-Coordinator, Community Development 8430586247 abhinav.kumar@nituk.ac.in
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➤ **“Visit of School Children” :**

Students of Girls Inter College, Srinagar visited NIT Uttarakhand on 27th February, 2021 under “Beti Bachao Beti Padhao” initiative by Ministry of Women & Child Development, Govt. of India. The students visited the laboratories of the NIT Uttarakhand. The faculty of NIT Uttarakhand gave overview of various labs and equipment.



Some of the glimpse of the Visit of School Students at NIT Uttarakhan

National Hackathon:

➤ **“TECHNOCARE 2021-A National Hackathon on Medical and Healthcare”** organized by E-CELL, AIC, Manipal University Jaipur and DIC, Research & Consultancy Section, NIT Uttarakhand during February 20-21, 2021.

National Science Day Celebration:

➤ Webinar (Expert Lecture) on **“Future of Science, Technology, and Innovation (STI): Impacts on Education, Skills and Work”** on Occasion of National Science Day on February 28, 2021.

Details of the Consultancy Projects Sanctioned/Ongoing (2020-2021):

Sr. No.	Party Name	Name of Project Investigator	Co-PI	Amount	Date of Sanction of Project
1.	M.G. Contractor Pvt. Ltd	Dr. Aditya Kumar Anupam	-	3,02,080	29.07.20
2.	M/s Rahee Infratech Limited, Camp Office Lachmoli, Srinagar	Dr. Shashank Bhatra	Dr. Muskan Mayank	₹ 5,900.00	13.12.20
3.	LNA Infraprojects Private Limited, Vidhya Nagar, Jaipur	Dr. Aditya Kumar Anupam	-	₹ 59,000.00	09.01.21
4.	M/s Rahee Infratech Limited, Camp Office Lachmoli, Srinagar	Dr. Laiju A.R.	Dr. Muskan Mayank	₹ 44,604.00	14.01.21

Events Organized under DIC, NITUK:

- DIC Competition: CoVIDscape challenge on 21st June 2020 in association with DIC IIT Roorkee.
- Five Days Virtual Workshop on Awareness to Innovation, Startup and Entrepreneurship, (29 January - 02 February 2021) Organized by Research and Consultancy Section, National Institute of Technology Uttarakhand, Srinagar (Garhwal), Uttarakhand.
- A National Hackathon on Medical and Healthcare (TECHNOCARE 2021) being organized by E-CELL, AIC, MUJ and DIC NIT Uttarakhand on February 20, 2021.

Ongoing Project under DIC

- DIC, NIT Uttarakhand is working into two different projects, namely, (a) Development of tri-wheel trolley for hilly terrain (b) Gold evacuation unit.

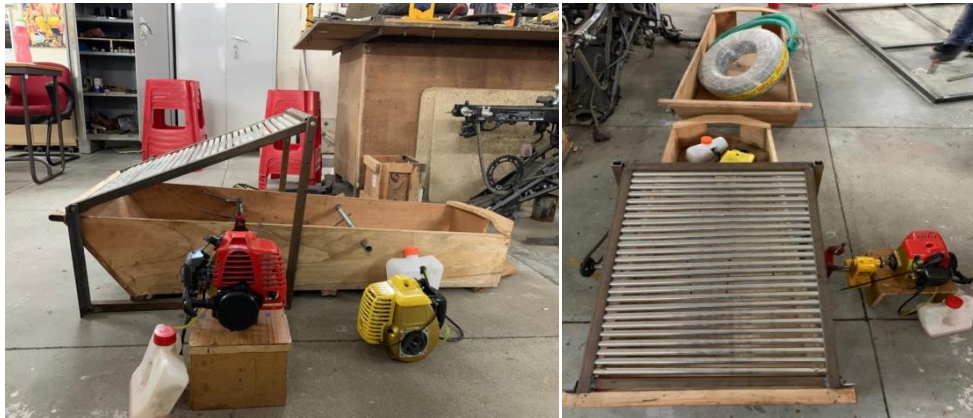
(a) Development of tri-wheel trolley for hilly terrain

- The developed biocomposites are fully biodegradable, which are made of biopolymers and natural fibers. The different types of natural fibers such as Himalayan pine needle, silk fiber, and bauhinia vahlii fiber, have been collected from the Himalayan forest of Uttarakhand. The frame of the tri-wheel trolley has been designed and fabricated successfully. The steering and braking mechanism of tri-wheel trolley is under design and development stage. The design and analysis of multipurpose tri-wheel trolley for hilly terrain are under process.

**(b) Gold Evacuation Unit:**

- As per the report of Geological Survey of India (GSI) dated 30/03/2017, gold associated with copper mineralisation are available in the Uttarakhand state. The gold values recorded from bedrock and stream sediment samples from these areas 475 parts per billion and 1.42 parts per million, respectively. From the preliminary study, it was observed that the

small particles of gold were available in the sand particles of Alaknanda River, Srinagar Garhwal. Therefore, a gold evacuation unit has been proposed to develop in the DIC, NIT UK. A letter has sent to District Magistrate, Pauri for further approval and direction.



Gold Evacuation Setup

Institution's Innovation Council:



**National Institute of Technology
Uttarakhand**



(a) Vision:

To establish a vibrant and sustainable ecosystem between the academics and industry for nurturing Creativity, Innovation and Entrepreneurship.

(b) Mission:

- Providing a platform of technical experts for hand holding, training and mentoring programs.
- Nurturing and supporting creativity and Innovative technology-based start-ups.
- Developing progressive mechanisms for the budding entrepreneurs and leading ideas.

Journey of IIC established at NITUK:

The Institute participated in the activities initiated by MoE's Innovation Cell (MIC) since the launch of the Intuition Innovation council (IIC) in the year 2018. Before the formation of IIC at NIT Uttarakhand in the year 2018, the Entrepreneurship Development and Innovation Cell was functional at the Institute level. The Institute organized various activities related to

Innovation, entrepreneurship and Start-ups in IIC 1.0. A group of students came up with the idea of a Start-up “Home market” due to the program launched by the MIC. Subsequently, IIC NIT Uttarakhand was actively involved fulfilling the objective through IIC 2.0. Several speakers from successful Start-ups were invited for the mentoring sessions. The students and the faculty of The Institute actively participated in the activities involved by the MIC and IIC NIT Uttarakhand. The pandemic initially affected the activities planned in the year 2020, but the members of IIC made all possible efforts to help and support the students in nurturing their innovative ideas. The Institute is following the IIC annual calendar as well as organizing the other activities and updating the details in the IIC portal on a regular interval. Under IIC 3.0, the Institute has organised various expert talks, mentoring sessions and idea presentations. The students of the Institute as well as from other Institutes were involved in the various activities organized by the IIC NIT Uttarakhand. IIC NIT Uttarakhand would like to acknowledge the MIC for providing such a platform in the direction of Innovation and Start-ups.

• **Diversified representation in the IIC established at the institute from industry, Interdisciplinary & Departments/ Units etc.**

The IIC NIT Uttarakhand comprises members from diversified field. The Compositions of IIC include faculty and student members from all areas of Science and Engineering. The external members belong from the Incubation centre, reputed industry/Institutions and successful Start-ups.

NITUK Institution’s Innovation Council (2020-2021):

President	: Dr. Dharmendra Tripathi
Convener	: Dr. Rakesh Kumar Mishra
Innovation activity coordinator (Faculty)	: Dr. Vikas Kuksal
Start-up activity coordinator (Faculty)	: Dr. Krishan Kumar
Internship coordinator (Faculty)	: Dr. Kamal Kumar
IPR activity coordinator (Faculty)	: Dr. Pankaj Kumar Pal
Social Media Coordinator (Faculty)	: Dr. Abhimanyu Kumar
ARIIA Coordinator (Faculty)	: Dr. Gaurav Kumar
NIRF coordinator (Faculty)	: Dr. Dharmendra Tripathi
Members	: Dr. Maroti Deshmukh

Members	:	Dr. Jagrati Sahariya,
Members	:	Mr. Hitesh Kumar
Members	:	Dr. Abhinav Kumar
Funding for Start-ups	:	Dr. M.V.N.K. Prasad
Policy Making	:	Mr. Azam Ali Khan
Assisting new Start-ups	:	Mr. Chainmay Jain

A. Portfolio/graphical/Tabular representation of Resource strength (human capital and Physical capital) of the IIC institution

Total No. of IIC Members	:	34
Total No. of IAs	:	02
Total No. of faculty Mentors	:	12
Pre-Incubation Units	:	NIL
Incubation Units	:	NIL
IP Facilitation Unit	:	01

B. Highlight Facilities, Infrastructure of Pre-Incubation & Incubation kind and Student bodies/clubs engaged in promotion of Innovation and Entrepreneurship in the campus.

Students Representatives, IIC NITUK (2020-2021):

Innovation Coordinator	Start-up Coordinator	Internship Coordinator	IPR Coordinator (s)	Social Media Coordinator (s)
Yaswanth Kumar Kalla (BT17EEE029)	Divyanshu Rathore (BT17CSE029)	Esha Sachan (BT18CSE012)	Santosh Kumar Singh (MT19EEE009)	Ambreesh Jaiswal (BT20EEE018)
	Ramanand	Abhishek Mehra	Ravi Shankar Bind	

	(BT18CSE003)	(BT18CSE012)	(MT20CIV011)	
	Satyam Singh Gurjar (BT20MEC008)			
	Rohit Rai (BT20EEE005)			
General Members	Ayush Vatsal (BT17ECE057)	Vikas Kumar (BT17ECE038)	Kanha Khatri (BT18CSE025)	Nikhil Singhal (BT18CIV030)
	Siddharth Thakur (BT18EEE009)	Afzal Ali (BT19MEC005)	Apoorv Arora (BT19EEE009)	Praveen Kumar Singh (BT19ECE012)
	Siddarth Saxena (BT19EEE017)	Sunil Prajapat (BT19MEC001)	Hansa Saini (BT20CSE013)	

Innovation and Entrepreneurship Development Cell (IEDC), NITUK (2020-2021):

Secretary : Vedant Mangain (BT18ECE030)

Treasurer : Meenu Yadav (BT18CSE021)

Event Coordinators:

1. Yatharth Pandey (BT17EEE004)
 2. Navita Nautiyal (BT19MEC012)
-

Public Relations Coordinator (s):**Web development & Designing Coordinator (s):**

1. Aman Khandelwal
(BT18ECE027)
 2. Anurag Sisodiya (BT18CSE022)
 3. Aryaman Jaiswal (BT19ECE018)
-

C. Highlight Achievements:

Number and Different types of I&E and IPR activities Conducted	11
No. of student's & faculty ideas generated	11
No. of student's & faculty Innovation/prototypes developed	NIL
No. of IPs generated, published and granted	06
No. of Student & Faculty Start-ups/Ventures established-	NIL

Amount spent on promotion and awareness generation on Innovation Entrepreneurship in the campus	1,72,000/-
Amount grant or fund supported to student & Faculty lead Innovations, start-ups and IPR	NIL
No. of Technology Transfer and Commercialisation happened	NIL

D. Highlight few best IIC Faculty/Student members and their achievements/Rewarded for the innovations at different forum

Highlights of some achievements of the students on different forums

(i) Name of the event: Innovation Challenge CoVIDscape

Organizer: Design Innovation Center, IIT Roorkee

Date of event: June 2020

Participant's details: K Yashwant Kumar (BT17EEE029)
Chaitanya Naidu Surla (BT17EEE026)
Yuvraj Choudhary (BT17EEE025)
Jitendra Parihar (BT17EEE018)

Achievement/Award: Scored 7th Rank in CoVIDscape, A design challenge competition organised by DIC, IIT Roorkee

(ii) Name of the event: Design Rush'21

Organizer: E Cell IIT BHU

Date of event: 6th September 2021

Participants details: Aryan Singh (BT20ECE016)
Saket Joshi (BT20ECE001)

Achievement/Award: Secured third position in Logo Making.

E. Highlight selected best Innovations & images with mention of inventor/innovation name

Following is the list of the selected best Innovations in the idea competition organized in the institute on 2nd February 2021.

S. No.	Name	Field	Topic of Innovation	Position
1.	Neha (MT19CSE004)	Economics	Renting garbs	First
2.	Rahul Kumar Singhania (MT19CSE003)	Environment, Economics	Rescue recyclables	Second
3.	Anurag Sisodiya (BT18CSE022)	Agriculture	Vrakshant - A digital Platform for Farmers	Third

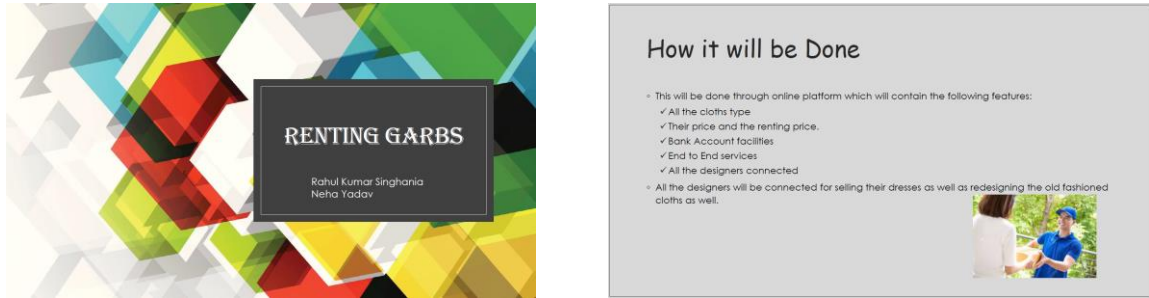


Figure 1. Idea presented on “Renting Garbs”



Figure 2. Idea presented on “Rescue Recyclables”

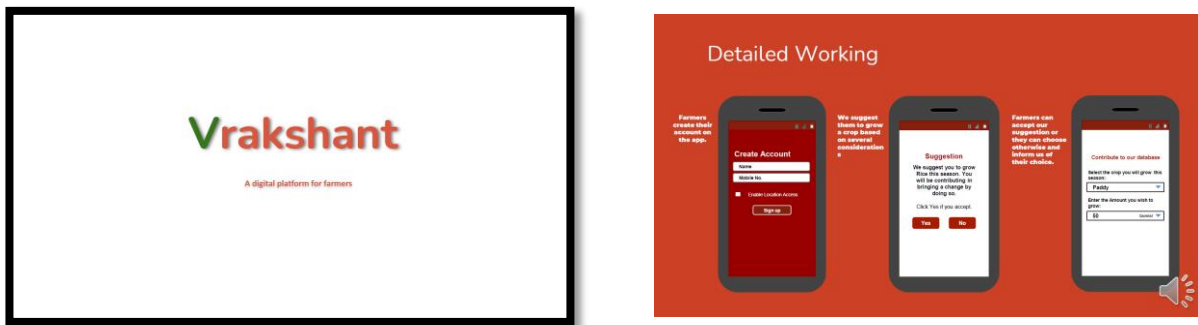


Figure 3. Idea presented on “Vrakshant- A digital Platform for Farmers”

Participation of IIC-institute in various programs of Central and Stage Govt. Highlighting especially for the schemes or programs

- RIIA- NIT Uttarakhand has participated in ARIIA 2019 (for academic year 2018-19), ARIIA 2020 (for academic year 2019-20) and ARIIA 2021(for academic year 2020-21). Verification and Evaluation process for ARIIA 2021 is ongoing.
- ISP Adoption status - Trained Faculty, Policy Formulation, Policy Implementation: The Institute is in a process of formulation of Start-up policy.
- Smart India Hackathon etc.: NIL

A
N

F. Detail of Social Media & Connections of IIC institute

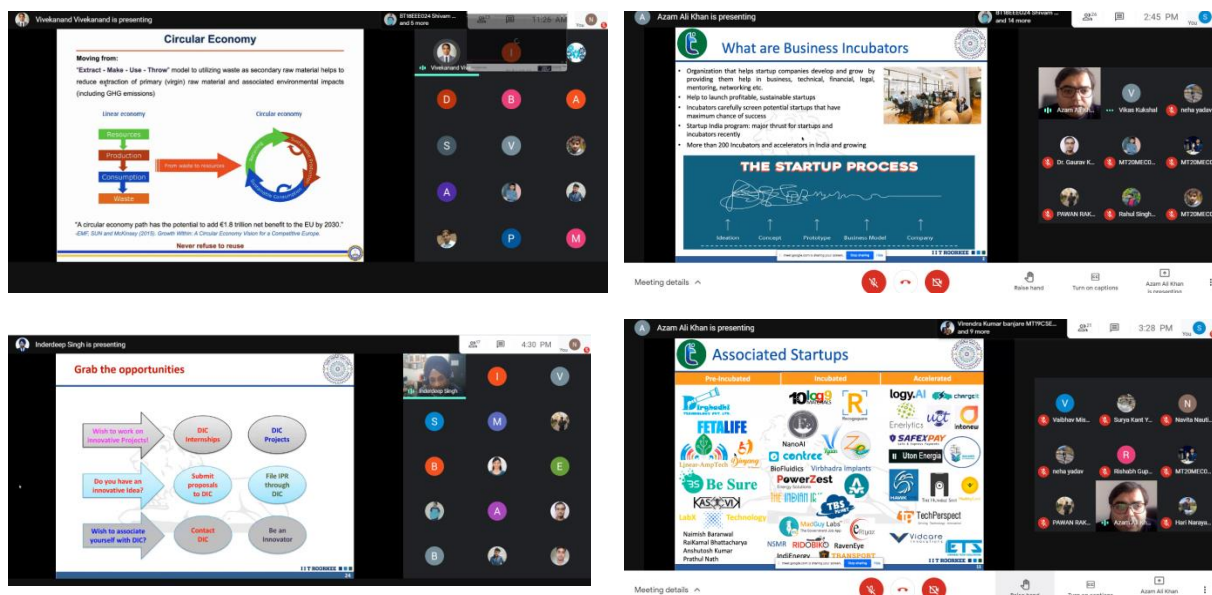
- Facebook : <https://www.facebook.com/nituttarakhand123/>
- Twitter : https://twitter.com/NIT_Uttarakhand

- Instagram : https://www.instagram.com/nit_uttarakhand/
- Youtube : <https://www.youtube.com/channel/UCkP7bJkN7WLDqxLJkDNib4w/> featured

G. Activities:

- Five Days Virtual Workshop on “Awareness to Innovation, Start-up and Entrepreneurship” (January 29 to February 02, 2021)

The highlights for the lecture are as follows:



Technocare Hackathon (February 21-22, 2021):

TECHNOCARE was jointly organized by E-Cell, NIT Uttarakhand and AIC MUJ on 21st and 22nd of February, 2021. Health problem is an issue that is rising at an alarming rate in India as well as the world. Techno-care required students to work on overcoming the major problems that are hindering the country’s growth towards becoming a healthier nation. The hackathon was open to all the enthusiasts from colleges and schools across India. The participants were divided into two categories i.e., Track 1 having school students (9th to 12th standard) and Track 2 having college students (Higher Educational Institution’s (HEI) students) were expected to figure out ideas and concepts related to the theme and build a prototype on the problem statement to test their application skills. There were two tracks for two different age groups, for which we had 177 participations from different parts of the country. The participants were provided with one-to-one mentorship. Winners of track one were given a cash prize of ₹25,000, ₹15,000 and ₹10,000 for first, second and third places respectively. Winners of track two were awarded with cash prizes of ₹50,000, ₹25,000, ₹15,000 for the same

Type of Activity	Name of Speaker	Topic	Date
Expert Talk	Sanjay Kumar Dewali, Scientist F and Additional Director, DGRE of DRDO, Government of India.	Latest Trends in Remote Sensing and GIS based Techniques	16 th January,2021
	Mrs. Nupur Agarwal, CMO & Cofounder, Kiwi Kisan Window Pvt. Ltd	Social Entrepreneurship	30 th January, 2021
	Mr. Chinmay Jain CTO, WL Payments & NIT Uttarakhand alumni	Startup-Hurdles	30 th January, 2021
	Mr. Hardik Rawat, Founder CEO, Jaivik Digital	Agriculture Technology Infusion with Government Funding Support	31 st January, 2021
	Prof. Rajat Agarwal, Professor, Department of Management Studies, IIT Roorkee	Process of Innovation	31 st January, 2021
Virtual visit to incubation center and mentorship talk	Mr. Azam Ali Khan CEO, TIDES, IIT Roorkee	Incubation & entrepreneurship: Scope & Opportunities	1 st February, 2021
Idea competition	Idea presented by NITUK student	Start-up and entrepreneurship	2 nd February, 2021

Under NIRF Section:

Applied for the NIRF Ranking and secured 186th rank in the NIRF-2021 Ranking.

10.01 RESEARCH SCHOLARS IN VARIOUS DEPARTMENTS

NIT Uttarakhand started offering Ph.D. programs in all the disciplines since Spring 2014. Currently ninety-nine students are pursuing their doctoral degree at NIT Uttarakhand. The names of the research scholars and their respective departments and guides are as follows:

Dept. of Civil Engineering

1. Mr. Pramod Tiwari
Supervisor: Dr. Kranti Jain, Assistant Professor
2. Mr. Bichitra Singh Negi
Supervisor: Dr. Kranti Jain, Assistant Professor
3. Mr. Ayush Joshi
Supervisor: Dr. Kranti Jain, Assistant Professor
4. Mr. Mahavir Singh Rawat
Supervisor: Dr. Smita Kaloni, Assistant Professor
5. Mr. Praveen Kumar Yadav
Supervisor: Dr. Kranti Jain, Assistant Professor
6. Mr. Manish Singh Kushwaha
Supervisor: Dr. A.K. Anupam, Assistant Professor
7. Mr. Ashuendra Singh
Supervisor: Dr. Smita Kaloni, Assistant Professor
8. Ms. Shradha V. Kivade
Supervisor: Dr. Vikas Pratap Singh, Assistant Professor
9. Ms. Uden Kiroung Sherpa
Supervisor: Dr. A.K. Anupam, Assistant Professor

Dept. of Computer Science and Engineering

10. Mr. Vivek Kumar Singh
Supervisor: Dr. Nitin Kumar, Assistant Professor
11. Ms. Manisha
Supervisor: Dr. Nitin Kumar, Assistant Professor
12. Mr. Arun Singh Bhadwal
Supervisor: Dr. Kamal Kumar, Assistant Professor
13. Mr. Devendra Prasad
Supervisor: Dr. Praveen Kumar, Assistant Professor

14. Mr. Shiv Naresh Shivhare
Supervisor: Dr. Nitin Kumar, Assistant Professor
15. Ms. Prabhjot Kaur
Supervisor: Dr. Nitin Kumar, Assistant Professor
16. Ms. Soni Chaurasia
Supervisor: Dr. Kamal Kumar, Assistant Professor
17. Mr. Neeraj Rathore
Supervisor: Dr. Maheep Singh, Assistant Professor
18. Mr. Arvind Kumar Vishwakarma
Supervisor: Dr. Deshmukh Maroti Bhujangrao, Assistant Professor
19. Mr. Shubhashish Goswami
Supervisor: Dr. Abhimanyu Kumar, Assistant Professor
20. Mr. Gaurav Sharma
Supervisor: Dr. Maheep Singh, Assistant Professor
21. Mrs. Parul Saini
Supervisor: Dr. Krishan Kumar, Assistant Professor
22. Mr. Arjun Singh Rawat
Supervisor: Dr. D. Maroti Bhujangrao, Assistant Professor
23. Mr. Amit Panwar
Supervisor: Dr. Abhimanyu Kumar, Assistant Professor
24. Mr. Alok Negi
Supervisor: Dr. Krishan Kumar, Assistant Professor
25. Mr. Sachin Choudhary
Supervisor: Dr. Abhimanyu Kumar, Assistant Professor
26. Mrs. Bhawana Parihar
Supervisor: Dr. Deshmukh Maroti Bhujangrao, Assistant Professor
27. Mr. Baldivya Mitra
Supervisor: Dr. Maroti Deshmukh, Assistant Professor
28. Mr. Kushal Gupta
Supervisor: Dr. Surendra Singh, Assistant Professor

Dept.ofElectronicsandCommunicationEngineering

29. Mr.YogendraPratapPundir
Supervisor:Dr.Pankaj KumarPal, Assistant Professor
30. Mr.RajeshSaha
Supervisor:Dr.Pankaj KumarPal, Assistant Professor
31. Mr. VarunKumarKakkar
Supervisor:Dr.Pankaj KumarPal, Assistant Professor
32. Mr. LalitKumarGariya
Supervisor:Dr.Hariharan Muthusamy,Assoicate Professor
33. Mr. ManeeshKumarSingh
Supervisor:Dr.SarikaPal, AssistantProfessor
34. Mr. RishiNigam
Supervisor:Dr.ShivaKumar Tadepalli, Assistant Professor
35. Mr. B.K.Hemant
Supervisor:Dr.Tajinder Singh Arora ,Assistant Professor
36. Mr. ArvindKumar
Supervisor:Dr.Tajinder Singh Arora ,Assistant Professor
37. Mr. SachinTiwari
Supervisor:Dr. Tajinder Singh Arora ,Assistant Professor
38. Ms. Ruchi Juyal
Supervisor:Dr. Hariharan Muthusamy ,Associate Professor
39. Mr. ArvindBisht
Supervisor:Dr. Pankaj Kumar Pal,Assistant Professor
40. Mr. RajeevKumar
Supervisor: Dr.Sarika Pal,AssistantProfessor
41. Mr. VipinKumarVerma
Supervisor: Dr.SarikaPal,AssistantProfessor
42. Mr. AvinashBhatt
Supervisor:Dr.Tushar Goel,AssistantProfessor
43. Mr. SatendraPathak
Supervisor:Dr.Tushar Goel,AssistantProfessor

Dept.ofElectricalEngineering

44. Mr.AnkitUniyal
Supervisor:Dr.Mahiraj Singh Rawat, Assistant Professor

45. Mr.RuchirPandey
Supervisor:Dr.Sourav Bose, Assistant Professor
46. Mrs.HimaniKala
Supervisor: Dr. Mahiraj Singh Rawat, Assistant Professor
47. Mr.RakeshThapliyal
Supervisor: Dr. Sourav Bose, Assistant Professor
48. Mrs.EktaGairola
Supervisor: Dr. Mahiraj Singh Rawat, Assistant Professor
49. Mrs.ChandniBansal
Supervisor: Dr. Sourav Bose, Assistant Professor
50. Mr.PrankitGupta
Supervisor: Dr. Sourav Bose, Assistant Professor
51. Mr.AshutoshBiswal
Supervisor: Dr. Prakash Dwivedi, Assistant Professor
52. Mr.AbhijeetSah
Supervisor: Dr.Sourav Bose, Assistant Professor
53. Mr.AshutoshBhatt
Supervisor: Dr. Prakash Dwivedi, Assistant Professor
54. Mr.SatyaveerSinghNegi
Supervisor: Dr. Prakash Dwivedi, Assistant Professor
55. Mr.AshishMaithani
Supervisor: Dr. Prakash Dwivedi, Assistant Professor
56. Mr.Ritesh Kumar Jha
Supervisor: Dr. Tripurari Nath Gupta, Assistant Professor
- Dept. of Mechanical Engineering**
57. Mr.Lalit Ranakoti
Supervisor: Dr. Pawan Kumar Rakesh, Assistant Professor
58. Mr.AdgaleTusharBalkrishna
Supervisor: Dr.Anshul Sharma, Assistant Professor
59. Mr.PrabhakarBhandari
Supervisor: Dr. Yogesh Kumar Prajapati, Assistant Professor
60. Mr.MayankPokhriyal
Supervisor: Dr. Pawan Kumar Rakesh, Assistant Professor

61. Prabhakar Zainith
Supervisor: Dr. Neeraj Kumar Mishra, Assistant Professor
62. Bhoopendra Pandey
Supervisor: Dr. Yogesh Kumar Prajapati, Assistant Professor
63. Mr.AnkitVarshney
Supervisor: Dr.NirajKumarMishra, Assistant Professor
64. Mr.AnuragMaheshwari
Supervisor: Dr. Yogesh Kumar Prajapati, Assistant Professor
65. Mr.VineetSingh
Supervisor: Dr. Vinod Singh Yadav, Assistant Professor
66. Mr.Neeraj Gupta
Supervisor: Dr. Apurba Mandal, Assistant Professor
67. Mr.Ravinder Singh
Supervisor: Dr. Vikas Kukshal, Assistant Professor
68. Mr.Siddharth Kumar
Supervisor: Dr. Anshul Kumar, Assistant Professor
69. Mr.Vivek Bahuguna
Supervisor: Dr. Pawan Kumar Rakesh, Assistant Professor
70. Mr.Gulraj Singh
Supervisor: Dr. Gurinder Singh Brar, Associate Professor
71. Mr.Nishant Kumar
Supervisor: Dr. Vinod Singh Yadav, Assistant Professor
72. Mr.Amit Kumar
Supervisor: Dr.Lalta Prasad, Associate Professor
73. Mr.Arun Uniyal
Supervisor: Dr. Yogesh Kumar Prajapati, Assistant Professor
74. Mr. Pramod Prabhakar Bijlwan
Supervisor: Dr. Lalta Prashad, Associate Professor
75. Mr.Shaurya Bhatt
Supervisor: Dr. Pawan Kumar Rakesh, Assistant Professor
76. Mr.Hari Narayan Singh
Supervisor: Dr. Sanat Agarwal, Associate Professor

77. Mr.RajeshKumar
Supervisor: Dr. Pawan Kumar Rakesh, Assistant Professor

78. Mr.Himanshu Sah
Supervisor: Dr. Lalta Prashad, Associate Professor

79. Mr. Prasoon Choudhary
Supervisor: Dr. Gurinder Singh Brar, Associate Professor

80. Mr.Ashu Kumar
Supervisor: Dr. Gurinder Singh Brar, Associate Professor

81. Mr.Ayush Painuly
Supervisor: Dr. Niraj Kumar Mishra, Assistant Professor

82. Mr. Ganesh Kumar Sharma
Supervisor: Dr. Vikas Kukshal, Assistant Professor

Dept.ofPhysics

83. Mr. Hardepinder Singh
Supervisor: Dr. Hardeep Kumar, Assistant Professor

84. Ms. Pragya Varshney
Supervisor: Dr. I.M. Nagpure, Assistant Professor

Dept.of Chemistry

1. Mr. Zafar Iqbal
Supervisor: Dr. Saroj Ranjan De, Assistant Professor

2. Ms.Asha Joshi
Supervisor: Dr. Saroj Ranjan De, Assistant Professor

3. Ms.Vaishali Singh
Supervisor: Dr. Rampal Pandey, Assistant Professor

4. Mr. Mohammad Masood Zafar
Supervisor: Dr. Rakesh Kumar Mishra, Assistant Professor

5. Ms.HimaniSharma
Supervisor:Dr.Kamal Kant Tiwari, AssistantProfessor

6. Mr.SandeepSingh
Supervisor: Dr. Saroj Ranjan De, Assistant Professor

7. Mr.SandeepJoshi
Supervisor: Dr.Rampal Pandey, AssistantProfessor

8. Ms.Rashmi Raghav
Supervisor: Dr.Kamal Kant Tiwari, Assistant Professor

Dept. of Mathematics

1. Mr. Danish Amin
Supervisor: Dr. Dheerendra B. Singh, Assistant Professor
2. Mr. Pankaj Singh Rana
Supervisor: Dr. Nitin Sharma, Assistant Professor
3. Mr. Dinesh Singh Bhandari
Supervisor: Dr. Dharmendra Tripathi ,Associate Professor
4. Mr.SunilSinghNegi
Supervisor: Dr. Nitin Sharma, Assistant Professor
5. Mr. Vidit Kumar Vats
Supervisor: Dr. D. B. Singh, Assistant Professor
6. Mr. Ashish Kumar
Supervisor: Dr. Kuldeep Sharma ,Assistant Professor
7. Ms. Rajlaxmi Rath
Supervisor: Dr. Kuldeep Sharma, Assistant Professor

Dept. of Humanities and Social Sciences

1. Mr. Joe Philip
Supervisor:Dr.Renu Bhadola Dangwal,Assistant Professor
2. Ms.DonaSoman
Supervisor: Dr. Renu Bhadola Dangwal,Assistant Professor
3. Mr. Satyanarayan Tiwari
Supervisor: Dr. Ajay KumarChaubey,Assistant Professor
4. Ms.Sonalika Chaturvedi
Supervisor: Dr. Renu Bhadola Dangwal, Assistant Professor
5. Ms. Manvi Sharma
Supervisor: Dr. Ajay Kumar Chaubey, Assistant Professor

10.02 : Details of the Sponsored Research Projects Completed/Ongoing/Sanctioned (2020-2021):

S.No	Title & Scope of The R&D Project	Year in which started	Budgeted Project Cost (Rs. In Lakhs)			Remarks* (Status Completed/Not Completed)
			Capital (Rs.)	Recurring (Rs.)	Total	
1	Regioselective Synthesis of Fused Polyaryl Compounds via Nucleophilic Addition to Borylbenzynes: Application to the Synthesis of Topopyrone C & D	2015	8,60,000/-	10,00,000.00	18,60,000.00	Completed
2	Synthesis and development of polymeric compounds (phenylated quinolone based) for OLED (Organic light emitting devices) applications.	2015	5,00,000.00	17,49,000.00	22,49,000.00	Completed
3	Synthesis, Structural and Photocatalytic Aspects of Photoactive MOFs	2013	12,25,000.00	22,75,000.00	35,00,000.00	Completed
4	Development and Analysis of Cancelable Biometric Template Generation for Person Identification	2018	1,00,000.00	109,000.00	209,000.00	Not Completed
5	Secrete Sharing Based Encryption Technology for Multimedia over Cloud	2019	12,00,000.00	5,70,000.00	17,70,000.00	Not Completed
6	Study of FeRh epitaxial films and hetero-structures for spintronics applications	2020	-----	13,40,000.00	13,40,000.00	Not Completed
7	Special Manpower Development Programme- Chip to System Design	2014	30,00,000.00 *(allocated to CEERI Pilani for procurement	94,09,000.00 (including Manpower Salary)	124,09,000.00	Not Completed
8	“Fabrication and characterization of Cobased CoPt/Pt multilayered films by electrodeposition “	2020	Nil	45,000.00	45,000.00	Not Completed
9.	Solar powered robust E-Rickshaw control with bidirectional DC-DC converter using regenerative cycle boost charging	2019			30,02,000.00	Not Completed
10.	Design and Innovation Centre	2018	50,00,000.00	50,00,000.00	100,00,000.00	Not Completed

Details of the Submitted Projects (2020-21):

Sl.No	Title & Scope of The R&D Project	Duration of the project	Budgeted Project Cost (Rs. In Lakhs)			PI/Co-PI
			Capital	Recurring	Total	
1.	Structural, electronic and momentum density investigations of novel materials applicable in energy conversion and storage	3 Years			28.23	Dr. Jagrati Sahariya
2.	Study of structural, physical and electronic properties of cost-effective nanomaterials used in personal protective equipment for occupational safety and health purposes during COVID-19 pandemic	1 Year			23.29	Dr. Jagrati Sahariya
3.	Experimental and theoretical investigations for optoelectronic, thermoelectric and electron momentum densities of novel materials for energy storage and conversion applications	3 Years			41.67	Dr. Jagrati Sahariya
4.	Development and Performance Evaluation of Mullite Matrix Composite for High Temperature Applications	3 Years	12.0	4.08	16.08	Dr. Gurinder Singh Brar
5.	A Numerical Investigation into Cold Formed Shaped Component of Steel	1 Year	4.00	2.00	6.00	Dr. Gurinder Singh Brar
6.	Evaluating the State of Stress and Strain in Tube Flaring Process	3 Years	11.50	18.00	29.50	Dr. Gurinder Singh Brar

7.	Intelligent Conflict Avoidance System to Enhance Pedestrian Safety through AI Techniques over Cloud	3 years	32.00	40.00	72.00	Dr. Krishan Kumar
8.	Fluorescent Detection of Biomolecules: A Supramolecular Approach towards Practical Applications	03 Years	-	06.00	06.00	Dr. Rampal Pandey
9.	“Development of highly stable and efficient Phosphate and Aluminates based phosphors towards White LED applications	03 Years	5 L	19.5 L	24.5 L	Dr. Indrajit M. Nagpure
10.	Microwave Drilling of Polymeric based Materials and Ceramic based Materials Microwave drilling process is being investigated to drill micro hole in polymeric based materials like Polymer matrix composites and ceramic based material like alumina, zirconia etc. Microwave drilling set up will be developed by using single mode cavity with inverter technology facility to have better control on optimum power required during drilling operation. Further, an automated system will be also integrated with experimental set up to provide feed to drill micro hole in materials. Effect of parameters like power, tool material, tool shape, dielectric media like Transformer oil, Argon etc.	03 Years	15L	23.8748L	38.8748L	Dr. Gaurav Kumar

	on plasma formation and its shape will also be investigated.					
11.	<p>Inferring Mechanobiological Pathway Mediated Regulation of Post-Menopausal Osteoporosis” under the scheme</p> <p>Scope: The investigators hypothesize that post-menopausal osteoporosis in women adversely affects long bone microarchitecture. This may significantly influence biomechanical and biochemical stimuli responsible for bone remodeling and mechanotransduction. For example, microarchitectural changes in osteoporotic bone may reduce loading-induced fluid flow in lacunar-canalicular system through which bone cells especially osteocytes coordinate the homeostasis</p>	03 years	50.504 00	10.10080	60.60480	Dr. Dharmendra Tripathi
12.	Pine Cone Based Biochar as Sustainable Multifunctional Materials	02 years	3.50	5.74	09.24 L	Dr. Rakesh K. Mishra
13.	Functionalized Biochar As Sustainable Multifunctional Catalytic Material For Organic Transformation	03 years	11.29	34.74344	46.03344	Dr. Rakesh K. Mishra
14.	Electrodeposition of Co based soft magnetic thin films for potential application in high density data storage	3 years	7.98	16.75	24.78	Dr. M. S. Khatri

10.03: Details of Patents:

S. No.	Department	Patent Title	Patent Application No. / Patent No.
1.	ECE	Highly-Directional Compact SemicircularAngular-Phased Antenna Array in 9.35-42.89 GHz	201811035222
2.	MECH	A Solar heating apparatus	201911
3.	Mathematics	An Economical, Automated, Non-Invasive Device For Spinal Curvature Measurement	201911003426
4.	CE	A hybrid iron sulfide impregnated anion exchanger (HISIIX) for selective removal of hexavalent chromium from contaminated water	201911024268
5.	Chemistry	Co(NO ₃) ₂ Autocatalyzed Decarboxylation of Itaconic Acid Leads to the Formation of Methacrylic Acid and Co(II)-MOFs: Fluorescent Co(II)-MOFs Detect Hg ²⁺ , Fe ³⁺ and Cu ²⁺ Ions	201811018132
6.	MEC	"A System And A Micromachining Process Using Cow Urine (Gau-Mutra)"	201811040311A
7.	Chemistry	Fluorescence Readout for Identification of Hg ²⁺ by Anthraimidazoledione Based Probe in Real Water Samples	201711019223
8.	ECE	Open vs. enclosed spatial environment classification for a mobile or wearable device using microphone and deep learning method	US Provisional Patent Application no. 62/789,406
9.	ECE	Method and apparatus for determining probabilistic context awareness of a mobile device using a single sensor and/or multi-sensor data fusion	US Patent Publication No. 9870535
10.	ECE	Context awareness of a smart device through sensing transient and continuous signals	US Patent Publication No. 20190227096
11.	ECE	Method for generating a personalized classifier for human motion activities of a mobile or wearable device user with unsupervised learning	US Patent Application No. US15/600,057

12.	ECE	Method and apparatus for energy efficient probabilistic context awareness of a mobile or wearable device user by switching between a single sensor and multiple sensors	US Patent Application No. US 15/299,656
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10.04 : Swayam/NPTEL/MOOCs (2020-21):

S.No.	Faculty Name	Department	Designation	Enrolled (Yes/No)	Certified (Yes/No)
1.	Dr. Tajinder Singh Arora	Electronics Engg.	Assistant Professor	Yes	Yes
2.	Mr. Vivek Kumar	Electronics Engg.	Trainee Teacher	Yes	Yes

10.05 CONTINUING EDUCATION PROGRAMME**Publications by the Faculty members of the Various Departments**

1. Krishan Kumar, [Text Query based Summarized Event Searching Interface System using Deep Learning over Cloud](#), Multimedia Tools and Applications (Core-B, IF- 2.600, Q1, SCI/E), Volume 80, Issue 7, pp. 11079–11094, January 2021. DOI: 10.1007/s11042-020-10157-4.
2. Rama Krishna Koppanati, Krishan Kumar, [P-MEC: Polynomial congruence based Multimedia Encryption technique over Cloud](#), IEEE Consumer Electronics Magazine (IF- 3.789, Q1, SCI/E), Volume 10, Issue 5, pp. 41-46, June 2020. DOI: 10.1109/MCE.2020.3003127.
3. Shikhar Sharma, Krishan Kumar, Navjot Singh, [Deep Eigen Space Based ASL Recognition System](#), IETE Journal of Research (Core-C, IF-2.333, Q3, SCI/E), Volume 36, Issue 3, pp. 265-274, July 2020, DOI: 10.1080/02564602.2018.1454347.
4. Parveen Kumar, Ambalika Sharma, "Segmentation-free writer identification based on convolutional neural network", Computers and Electrical Engineering, Elsevier, 2020.
5. Alok Negi, Prachi Chauhan, Krishan Kumar, Rishabh S. Rajput, [Face Mask Detection Classifier and Model Pruning with Keras-Surgeon](#), 5th IEEE International Conference on Recent Advances and Innovations in Engineering (ICRAIE'20), December 2020, pp. 1-6, DOI: 10.1109/ICRAIE51050.2020.9358337. Jaipur (India).
6. Ankit Uniyal, Saumendra Sarangi and Mahiraj Singh Rawat, A novel strategy for Voltage and Frequency Regulation in high RE penetrated Microgrids, Arabian Journal for Science and Engineering, Springer, 2021. (SCI-E)

7. Gupta, TN, Singh, B, Kewat, S. Robust control for seamless operation of wind-BES microgrid. *Int Trans Electr Energ Syst.* 2021;e12838. <https://doi.org/10.1002/2050-7038.12838>.
8. T. N. Gupta, B. Singh and S. B. Q. NAQVI, "Multi-Objective Control of Solar PV-BES Microgrid", *Journal of The Institution of Engineers (India): Series B* (DOI: 10.1007/s40031-021-00598-2)-2021.
9. Uniyal, A., Sarangi, S. & Rawat, M. S. Optimal Dump Load Allocations in High RBDG Penetrated Microgrid for Voltage and Frequency Regulation. *Arab J Sci Eng* 46, 1511–1528 (2021).
10. Singh, R., Kukshal, V., & Yadav, V. S. (2021). A Review on Forward and Inverse Kinematics of Classical Serial Manipulators. In *Advances in Engineering Design* (pp. 417-428). Springer, Singapore.
11. Prasad, S., Mishra, V., Khoj, V., & Kukshal, V. (2021). Finite Element Modeling and Analysis of Natural Fiber-Reinforced Composite. In *Advances in Engineering Design* (pp. 321-327). Springer, Singapore.
12. Rana, J. and Agrawal, S. (2021), "Physical Modelling of Terrain Using Different File Formats: A Review". In: Rakesh P.K., Sharma A.K., Singh I. (eds), *Advances in Engineering Design: Lecture Notes in Mechanical Engineering*, Springer, Singapore, Feb 2021, pp. 311-319.
13. Carbon-doped Titanium Dioxide Nanoparticles for Visible Light Driven Photocatalytic Activity. Charu Negi, Pankaj Kandwal, Himani Sharma, Gautam Dalapati, Charu Dwivedi, *Applied Surface Science*, 554 (2021), 149553.
14. Europium(III) permeation through a flat sheet supported liquid membrane containing CMPO with iso-decanol phase modifier: Experimental and modeling studies. Rohit Kumar, Seraj A. Ansari, Pankaj Kandwal, P.K. Mohapatra, *Chemical Engineering Research and Design*, 168 (2021) 307-316.
15. Selective permeation of 90Y from a mixture of 90Y/90Sr through diglycolamide impregnated supported liquid membranes. Rohit Kumar, S.A. Ansari, Pankaj Kandwal, P.K. Mohapatra, *Applied Radiation and Isotopes*, 170 (2021) 109604.
16. Effect of pH and Boric Acid on Magnetic Properties of Electrodeposited Co Nanowires, Shivani Agarwal and M. S. Khatri, *Proc. Natl. Acad. Sci., India, Sect. A Phys. Sci.* (2020).
17. Structural, Optical and Decay Properties of Zinc (II) 8-Hydroxyquinoline and Its Thin Film, Deepshikha Painuly, R. Singhal, P. Kandwal, I M Nagpure, *Journal of Electronic Materials*, 49 (2020) 6096-6106.
18. Structural, electronic and optical modeling of perovskite solar materials $ASnX_3$ (A = Rb, K; X = Cl, Br): First principle investigations, Karina Khan, Amit Soni, Jagrati Sahariya, *Materials Chemistry and Physics* 262 (2021) 124284.
19. Role of intermediate band and carrier mobility in Sn/Fe doped CuAlS₂ thin film for solar cell: An ab-initio study, Aditi Gaur, Karina Khan, B.R. Bhagat, Jagrati Sahariya, Amit Soni, *Alpa Dashora, Solar Energy* 215 (2021) 144-150.
20. Density functional investigations to study effect of M = (Ge, Sn) doping on opto-electronic response of ZnSi(1 - x)MxP₂, Karina Khan, Aditi Gaur, Ushma Ahuja, Amit Soni,

Jagrati Sahariya, *Optik - International Journal for Light and Electron Optics*, 208 164570 (2020).

21. D. Tripathi, J. Prakash, M.G. Reddy and J.C. Misra, Numerical Simulation of Double Diffusive Convection and Electroosmosis during Peristaltic Transport of a Micropolar Nanofluid on an Asymmetric Microchannel, *Journal of Thermal Analysis and Calorimetry* 143 (3), 2499-2514 (2021). [IF: 4.626]

22. S. Noreen, S. Waheed, DC. Lu, and D. Tripathi, Heat stream in electroosmotic bio-fluid flow in straight microchannel via peristalsis, *International Communications in Heat and Mass Transfer*, 123 (2021) 105180. [IF: 5.683].

23. Nikhil Vivek Shrivastava, Abhishek Kumar Tiwari, Rakesh Kumar, Santosh Patil, Dharmendra Tripathi, Subham Badhyal, Physiological Loading-Induced Interstitial Fluid Dynamics in Osteon of Osteogenesis Imperfecta Bone, *J Biomech Eng.* 2021 Aug 1; 143(8):081011. doi: 10.1115/1.4050818. [IF: 2.025]

24. J. Akram, N.S. Akbar, & D. Tripathi, Electroosmosis augmented MHD peristaltic transport of SWCNTs suspension in aqueous media, *J Therm Anal Calorim* (2021). <https://doi.org/10.1007/s10973-021-10562-3> [IF: 4.626].

25. J. Akram, N.S. Akbar, & D. Tripathi, A Theoretical Investigation on the Heat Transfer Ability of Water-Based Hybrid (Ag–Au) Nanofluids and Ag Nanofluids Flow Driven by Electroosmotic Pumping Through a Microchannel. *Arab J Sci Eng* (2021). <https://doi.org/10.1007/s13369-020-05265-0> [IF: 1.711].

26. Joe Philip, Renu Bhadola Dangwal and Vinod Balakrishnan published a paper entitled “Positioning the Gendered Subaltern: Body, Speech and Resistance in Mahasweta Devi’s Narratives.” *Rupkatha Journal on Interdisciplinary Studies in Humanities*. Vol 12. No.5 2020. PP 1-9 ISSN 0975-2935 (Indexed in the SCOPUS and Web of Sciences).

27. Manvi Sharma and Ajay K Chaubey published a paper entitled “Climate Change in India: A Wakeup Call from Bollywood” in *Rupkatha Journal of Interdisciplinary Studies in Humanities* (E-ISSN: 0975-2935), Special Conference Issue (Vol. 12, No. 5, 2020. 1-9) (Indexed in the SCOPUS and Web of Sciences).

11.00 : EVENTS, CURRICULAR AND CO-CURRICULAR ACTIVITIES

11.01 CULTURAL ACTIVITIES

Celebration of Day on 15th August 2020 (Independence Day)

National Institute of Technology, Uttarakhand celebrated Independence Day-2020 on January 15th, 2020. Few glimpses for the same are as follows:



1. Celebration of Day on 02nd October 2020 (Gandhi Jayanti)

National Institute of Technology, Uttarakhand celebrated Gandhi Jayanti-2020 on October 02nd, 2020. Few glimpses for the same are as follows:



2. **National Youth Festival 2021**

National Institute of Technology, Uttarakhand celebrated the national youth parliament festival 2021 on January 12th, 2021. Few glimpses of the events are as follows:



3. Celebration of Day on 26th January 2021 Republic Day

National Institute of Technology, Uttarakhand celebrated Republic Day-2021 on January 26th, 2021. Few glimpses for the same are as follows:



4. Matribhasha Diwas Celebrations

To promote the use of mother tongue, Matribhasha Diwas was celebrated on 21st February. The main objective of this celebration is to highlight the linguistic diversity in our country, encourage usage and learning of other Indian languages alongwith their mother languages. Under Ek Bharat Shreshtha Bharat, on the occasion of Mathribhasha Diwas, NIT Uttarakhand has organized the Elocution and Quiz competitions combinedly for the students of NIT Karnataka and NIT Uttarakhand on 24th and 25th February 2021. In the Elocution and Quiz competitions, a total of 21 and 47 students were registered. Details of the competitions and its winners are mentioned below:

S.No.	Event Name	Topic	Prize	Name of the Student	Name of the Institute
1.	Elocution Competition	Linguistic Diversity in India (In Hindi)	I	Salim Ali	NITK
			II	Rohit Khoja	NITK
			III	Navita Nautiyal	NITUK
2	Quiz Competition	Indian Languages & Their History (In Hindi)	I	Navita Nautiyal	NITUK
			II	Ashish Kumar	NITK
			III	Saumya Pandey	NITK

11.02 SPORTS ACTIVITIES

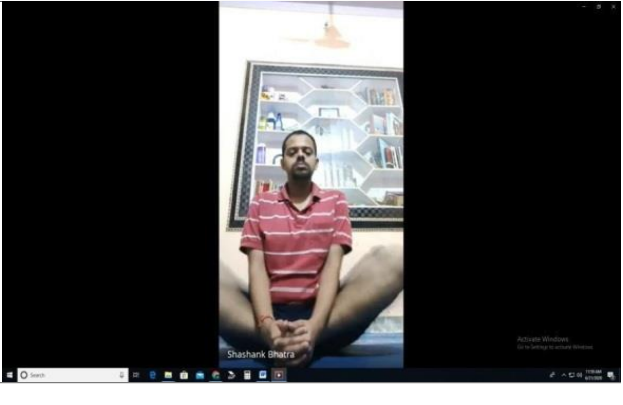
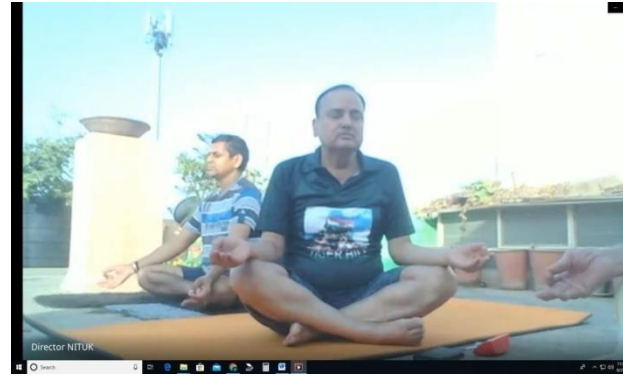
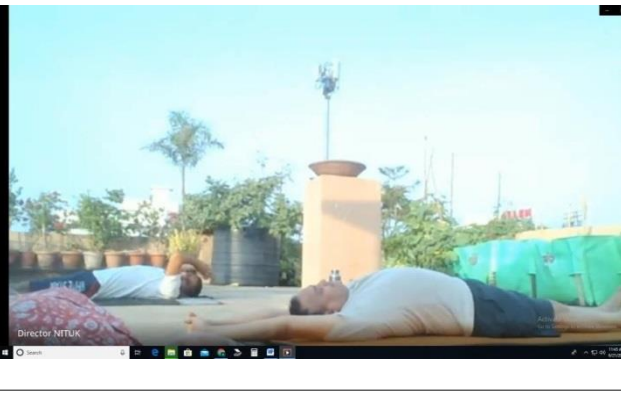
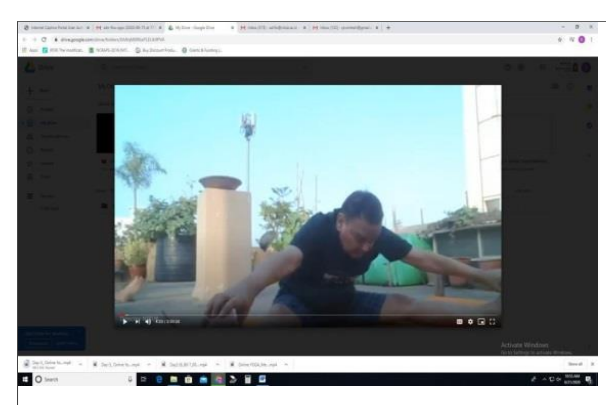
1. Fit India Movement

To encourage all the people for staying physically fit Govt. of India launched Fit India Movement on 29th August 2019. It is a nation-wide campaign that aims at encouraging people to include physical activity and sports in their everyday lives. Fit India would be a success only when it becomes a people's movement. To make India a great nation, it is possible by making a healthy person, healthy family and healthy society. It is essential that a culture of physical fitness has to be inculcated in every student, teaching & non-teaching staff etc. in order to promote healthy & positive environment along with learning. To view the same for all the students, faculty & staff, NIT Uttarakhand live telecasted the Launch of "Fit India Movement" in the Auditorium and has taken fitness pledge, which was administered by the prime minister. To promote the same, students, faculty & staff of NIT Uttarakhand walked for minimum of 10000 steps. In this regards faculty, staff and students were participated in Fit India Freedom Run at ITI playground at 6.30 am on 30/09/2020 (Wednesday) and 12 Minute run at 7.15 am on 20/03/2021 (Saturday). After the same a Cricket match between faculty and students was also organized. Few glimpses of the events are as follows:



2. Yoga Activity at NIT Uttarakhand

To support with intense zeal and enthusiasm to the steps of Government of India (GOI) and The Ministry of Human Resource and Development (MHRD), National Institute of Technology Uttarakhand has organized online YOGA/Meditation activity for nine (09) days. During the course of this 09 days activity the main expert was “Aacharya Rajendra Ji Joshi” who gave extensive YOGA / Meditation training to the entire faculty and staff members of NIT Uttarakhand. In addition, everyday Hon’ble Director, NIT Uttarakhand has also been giving YOGA/Meditation exercise training to the entire NIT Uttarakhand fraternity. A couple of staff members of NIT Uttarakhand who were pre-trained from elsewhere, have demonstrated lucrative YOGA/Meditation postures. On the day-3, Senior Gastroenterologist Dr. Udawat has joined the activity and taught about nutritional foods and habits to improve the immune system. It is worth mentioning that the strength of participants has been appreciable (avg. 95 participants) during all 09 days. Few glimpses for the same are as follows:



3. COVID 19 Awareness Camp

As the notice of MHRD, A group of eight faculties from NIT Uttarakhand, Srinagar (Garhwal) visited the near by villages namely

1. Khandha
2. Chamranda
3. Dandani
4. Bacheli
5. Amkoti

We have discussed with the village president about the COVID-19 and rules implemented in their village against it.

Observations made:

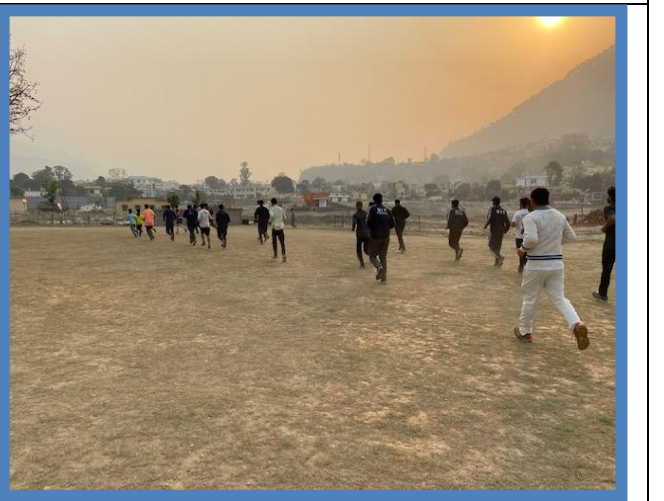
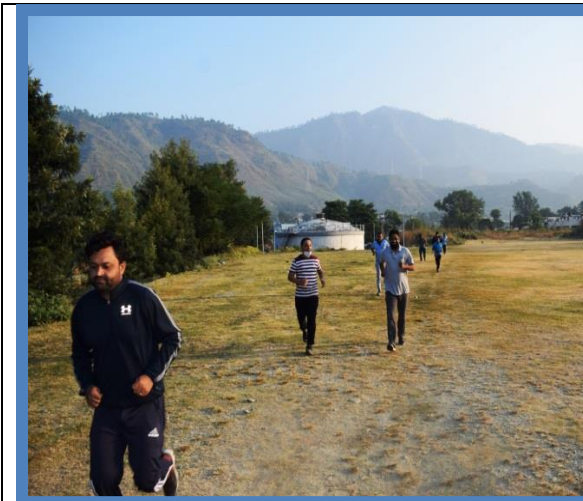
- ❖ People in the villages are aware of the COVID-19.
- ❖ They are moving the people, coming from outside the villages, to quarantine for 14 days.
- ❖ Few people are not wearing the face masks.
- ❖ All the people are staying at the home itself.
- ❖ People are maintaining social distance.

Suggestions given:

- ❖ Intimated to the stores shop people to sell their products only for the people coming with face masks.
- ❖ Suggested to the stores shop people to wear the face mask and don't allow more people into the shop at a time. Maintain social distance at the shops.
- ❖ Suggested to install Aarogya Setu App in their smartphones.
- ❖ Distributed face masks to the shop dealers.

To people to wash their hands frequently.

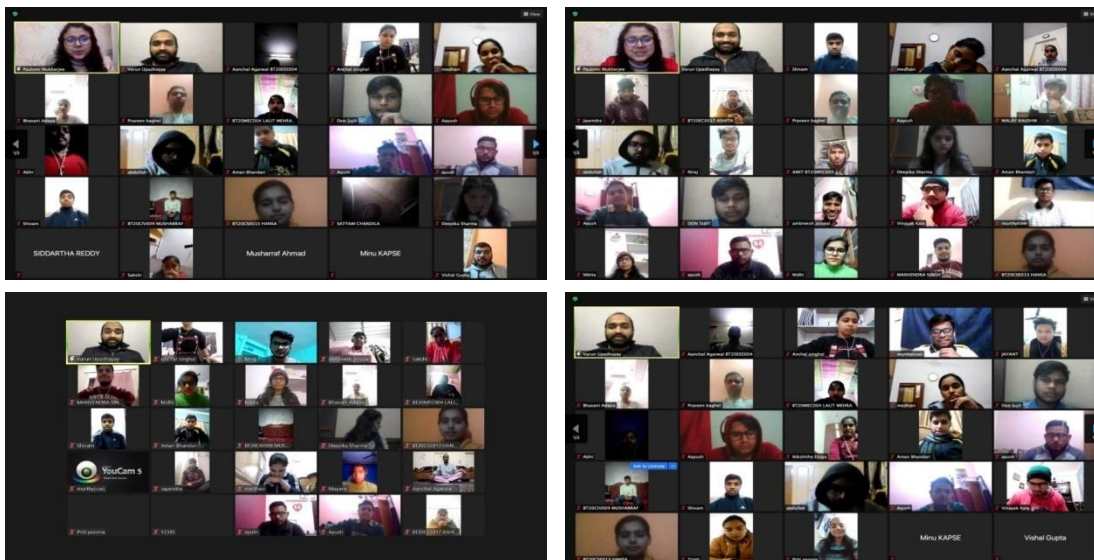






11.03 STUDENT EXCELLENCE & LEARNING PROGRAM (SELP) 04-09 January 2021

A powerful life-skills program that charges the youth with a fresh breath of vigor, enthusiasm, excellence and responsibility, SELP (Student Excellence & Learning Program) enables you to absorb all the freshness and positivity around you. SELP is a fun, dynamic workshop for college students and young professionals that can give their life the boost of energy they have been looking for. To get the most out of life, we need to increase energy, conserve the energy we have, and manage our time well. The Institute sponsored SELP workshop was conducted from January 04-09, 2021 via online mode over Zoom App. More than 100 students registered for the workshop. During this workshop, many different activities were performed which helped attendees in boosting their confidence, understanding human relations, improving communication skills and ultimately, gaining the peace of mind. The activities that were performed included the world-renowned breathing technique “Sudarshan Kriya”, yoga, pranayama and many other fun games, each teaching a different lesson. Practicing the knowledge & techniques talked in the course has effectively brought about profound and sustainable, attitudinal and behavioral changes. Some of the experiences shared by the students are “This program benefitted us practically in all aspects of life. It helps us to work on our mind and body which benefits in efficient lifestyle.”



11.04 2nd Alumni Meet-2021 on 16th January 2021

National Institute of Technology, Uttarakhand organized 2nd Alumni Meet-2021 on January 16, 2021 in online mode. The program began with invocation by Dr. Sarika Pal, Alumni Co-coordinator, NIT Uttarakhand. She welcomed the virtual gathering. She informed that the event was registered by more than 159 alumni of NITUK from not only India but also from

different parts of the world which included Australia, USA, and Canada etc. Dr. Prakash Dwivedi, I/C Dean Student Welfare & AD (SW) addressed and urged the alumni to contribute in enhancing Knowledge and skill domains of current students by conducting guest lectures, webinars, and seminars. He thanked the Institute leadership for providing all the necessary support and direction for the Institute to organize this virtual Alumni meet. He also thanked the alumni for their active participation which is one of the key factors in perception criteria of NIRF. The various developments related to different sections at our Institute were briefed by respective deans: Dr. G.S. Brar (Dean Academic Affairs), Dr. Dharmendra Tripathi (Dean Research & Consultancy), Dr. Vikas Pratap Singh (I/C Dean Planning & Development) and Dr. Ram Pal Pandey (Asso. Dean Faculty Welfare).

Dr. Satish Kumar, I/C Director, NIT Uttarakhand expressed his happiness on overwhelming response from the alumni. He opined that alumni should come forward for providing all the necessary support and directions for their juniors in the form of funding, motivational lectures and placements etc. He also expressed that NITUK will continue to grow in spite of the prevailing situation.

Dr. R.K. Tyagi, Chairman (BoG), NITUK expressed his happiness about the organizing the Alumni meet in short span of time. He also expressed that alumni can contribute in a big way in taking their alma matter to the next level by instituting awards, prizes, joint projects and donation to the corpus fund.

Alumni team of the Institute had prepared video showcasing journey of NITUK.

Some of alumni from each pass out batch of B.Tech and M.Tech expressed their views about the Institute and alumni meet. Ms. Amrita Sharma (Gold Medalist 1st Batch), currently working at Rockwell Automation, USA inspired her juniors through motivational speech. Mr. Mohd Azeem currently working at Juggernaut India Pvt. Ltd elaborated how Institute thread connects the alumni even in business world with examples. Our B.Tech. Alumni Ms. Anuja Singh (Pursuing Ph.D from IIT Bombay), Ms. Priyanka Sharma (Intel Corporation Ltd., USA), Mr. Parth Kahtri (ONGC), Mr. Aniket Gupta (Pursuing Ph.D from University of Notre Dame, Indiana), and Mr. Piyush Kumar (Software developer, Amazon) recalled their Institute memories. Our M.Tech. Alumni Mr. Abhishek Kumar (Micron Technologies), Mr. Diwakar Mishra (Intel Technology India Pvt. Ltd) and Ms. Pranoti Gogulwar (Intel NXP, Noida) shared about Institute contribution for their positions.

Mr. Nitanshu Chauhan, Alumni Coordinator, Department of Electronics Engineering, NITUK proposed vote of thanks to all people involved in the successful conduct of the event. Prior to the online alumni meet, the links for the live streaming of the event via YouTube, Facebook and Twitter were shared to the alumni, existing students, Institute faculty and staff members through various social media platform and mail was also sent to all registered alumni. In total 2879 people accessed online streaming of Online Alumni meet-2021 via Facebook (1619), YouTube (1146) and Twitter (114).



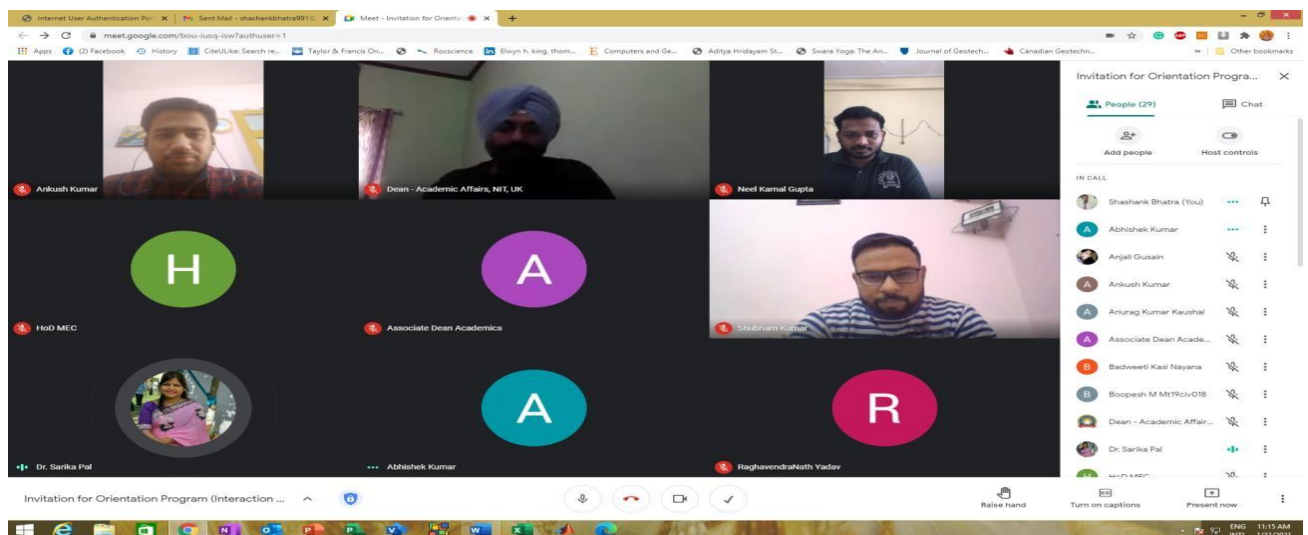


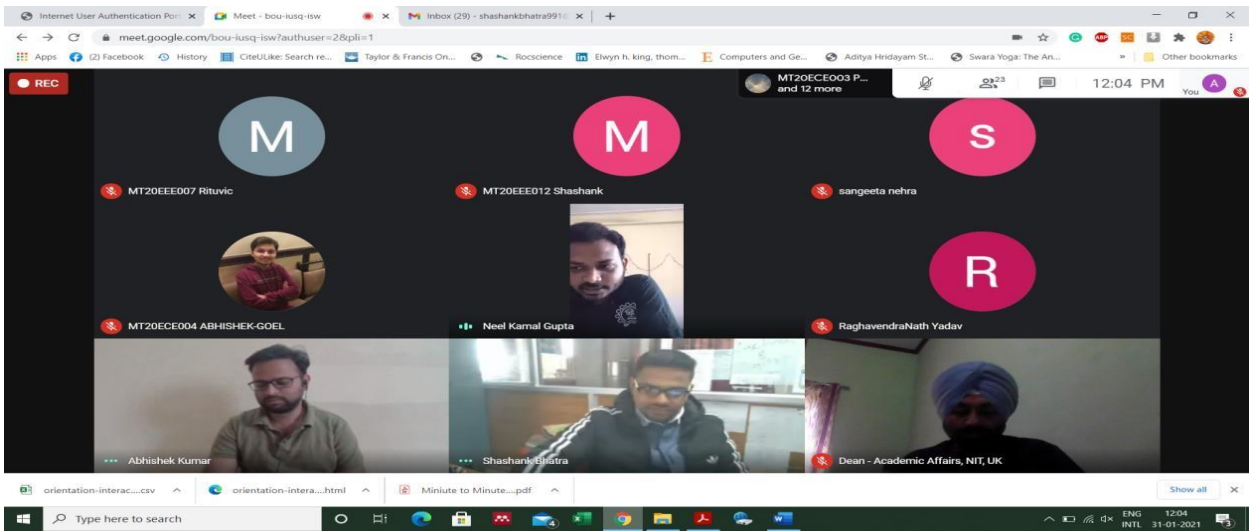
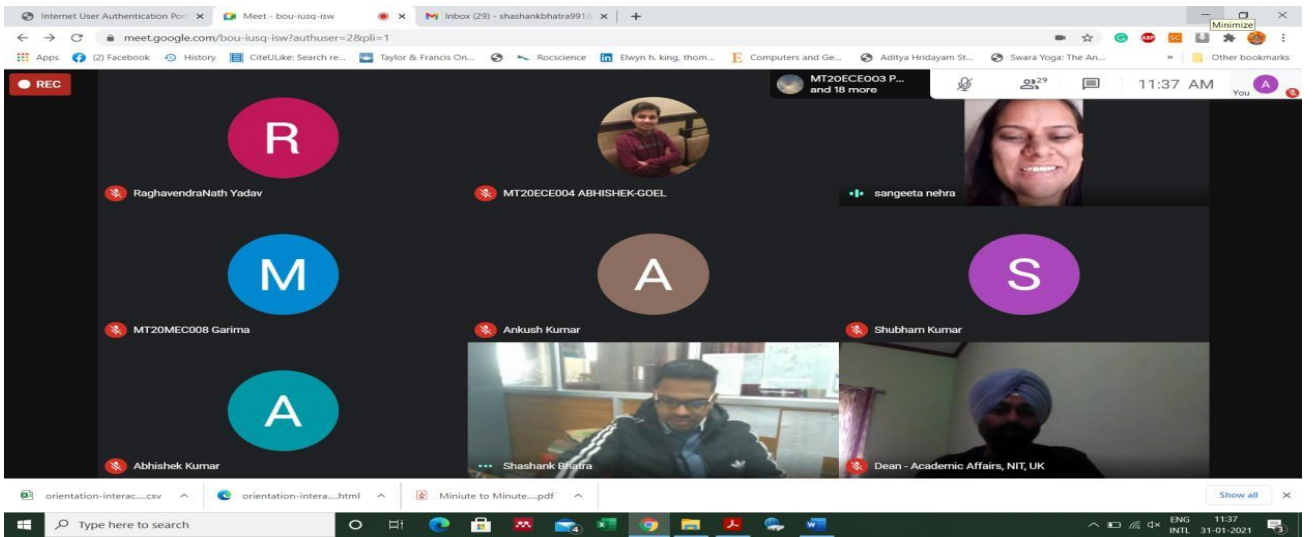
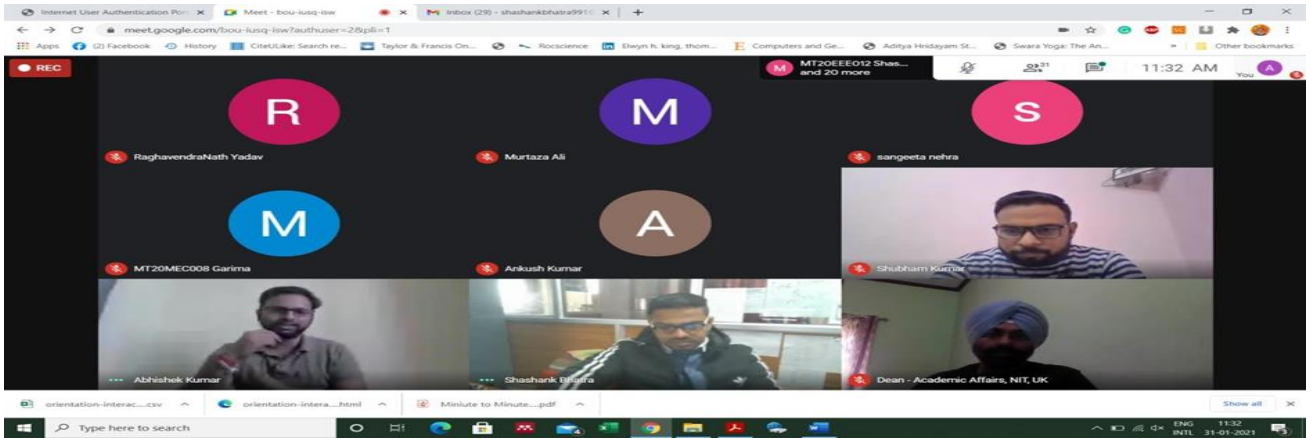
A. Alumni Orientation Program (Interaction with) for all the PG Students

As discussed during the 2nd Alumni Meet, it was planned to organize the interaction of existing PG students with the Alumni (PG students who are currently associated with reputed organizations) for motivation, guidance, and learning from the professional experience. Five (05) Alumni, one from each engineering discipline were invited for the same. Brief Summary of the Program At the outset, Dr. Shashank Bhatra, AD (Academic-PG & PhD) and faculty in Civil Engineering Department, NIT UK, welcomed all the Deans, Associate Deans, HoDs, Alumni Coordinator, PG Alumni Representatives, faculties and students. Followed by address of Dean (Academic Affairs), Dr. Gurinder Singh Brar and Alumni Coordinator, Dr. Sarika Pal. Further, PG Alumni Representatives interacted with the students one by one according to their branches.

5. First of all, Mr. Ankush Kumar, M.Tech. Civil Engineering (Batch 2016- 2018), presently working in Accerte Consultancy Engineers Pvt. Ltd., (HOGurgoan) Patna, shared his experience with the students and discussed the various issues he faced during his journey.
6. Secondly, Mr. Shubham Singh, M.Tech. Computer Science Engineering (Batch 2016-2018), Associate Consultant, Capgemini Bangalore, discussed about few platforms to practice and enrich coding skills like Hackerearth.com, hackerrank.com, codechef.com, geeksforgeeks.org.
7. Thirdly, Mr. Abhishek Kumar, M.Tech. Electronics and Communication Engineering (Batch 2016-2018), currently associated with Micron Technologies, mentioned about his professional experience and highlighted various career opportunities.
8. Fourthly, Ms. Sangeeta Kumari, M.Tech. Electrical and Electronics Engineering (Batch 2016-2018), presently pursuing Ph.D. in Power Electronics from MNIT JAIPUR, deliberated upon various career opportunities in the field of academic research, different exams and eligibility criterion that need to be fulfilled for the same.
9. Finally, Mr. Neel Kamal Gupta, M.Tech. Mechanical Engineering (Batch 2016-2018), presently pursuing Ph.D. from IIT Bombay, shared his research experience during his days at NIT Uttarakhand. He also mentioned about the research approach adopted under the supervision of his supervisor and discussed about how to overcome the various challenges faced by most of the students at NIT Uttarakhand.

Few glimpses of the events are as follows:

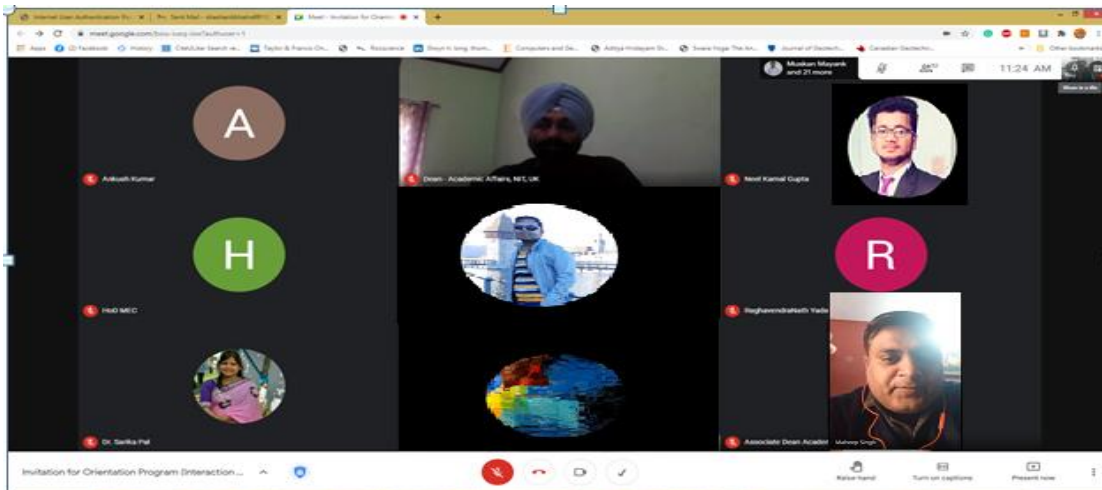




B. Alumni Orientation Program (Interaction with) for all the UG Students

Academic and Alumni Affairs Section, NIT Uttarakhand has organised an Orientation Program for B.Tech. 2020 batch students on Sunday, 07th February 2021 to have their Interaction with Alumni. The purpose of the program is the motivation and encouragement of the newly admitted students by their alumni's, Mr. Rohit Singh Nitwal from 2015 batch, Civil Engineering and at present Pursuing Ph.D. from IISc. Bangalore, Mr. Abhishek Singh from 2016 batch, Computer Science & Engineering and at present working at De Shaw Inc. Bangalore, Mr. Aniket Gupta from 2016 batch, Electronics Engineering and at present pursuing Ph.D. from University of Notre-Dame, Indiana, Mr. Ankit Saini, from 2010 batch, Electrical Engineering, working as Software Development Engineer-III, Fiserv, Gurgaon and Mr. Anu Kumar Singh, from 2015 batch, Mechanical Engineering and at present pursuing PGDM from NITI, Mumbai. Alumni's addressed the students and shared their experiences at NIT Uttarakhand during their degree program, shared their success mantra's, spoken about how to overcome various hurdle's and told about the right approaches that the students should follow to get good opportunities in jobs and higher studies.

Few glimpses of the events are as follows:



12.00 NOTABLE ACHIVEMENTS

12.01. Faculty Achievements:

- Bibhash Kumar obtained PhD Degree in Geotechnical Engineering from IIT Roorkee.
- Laiju A R obtained Ph. D Degree in Environmental Engineering from IIT Roorkee.
- Muskan Mayank obtained Ph. D Degree in Hydraulics Engineering from IIT Roorkee.
- Dr. Krishan Kumar has been elevated as Senior Member, IEEE USA (April 2020).
- Dr. Krishan Kumar has been appointed as an Editor at IETE Journal of Research (SCIE) March 2021.
- Dr. Parveen Kumar completed Ph.D. from IIT Roorkee in July 2020.
- Dr. Pankaj Kumar Pal, Assistant Professor, ECE, got his project entitled Special Man Power Development Programme Chip to System Design (SMDP–C2SD)” sponsored by MeitY, GoI worth 16,90,860124.09 lacs.
- Singh, R., Kukshal, V., & Yadav, V. S. (2021). A Review on Forward and Inverse Kinematics of Classical Serial Manipulators. In *Advances in Engineering Design* (pp. 417-428). Springer, Singapore.
- Prasad, S., Mishra, V., Khoj, V., & Kukshal, V. (2021). Finite Element Modeling and Analysis of Natural Fiber-Reinforced Composite. In *Advances in Engineering Design* (pp. 321-327). Springer, Singapore.
- Rana, J. and Agrawal, S. (2021), “Physical Modelling of Terrain Using Different File Formats: A Review”. In: Rakesh P.K., Sharma A.K., Singh I. (eds), *Advances in Engineering Design: Lecture Notes in Mechanical Engineering*, Springer, Singapore, Feb 2021, pp. 311-319.
- Dr. Rampal Pandey received an "International Outstanding Scientist Award" from VDGGOOD professional association on 12th Oct. 2020.
- Dr. Rampal Pandey has been granted Patent by The Govt. of India on 23rd Sep. 2020.
- Dr. Rampal Pandey has been granted Patent by The Govt. of India on 4th Jan. 2021.
- Project titled as “Development and DFT Investigations of Nanoalloy Grafted MXene Nanocomposites for Gas Sensing Applications” submitted to CRG (DST) in March 2021 by Dr. Pankaj Kandwal as Co-PI (under consideration).
- Project titled as “Development of Rigorous Model for Mass Transfer of Metal ions through Supported Liquid Membranes” submitted to MATRICS (DST) in March 2021 by Dr. Pankaj Kandwal as PI (under consideration).
- Project entitled “Functionalized biochar as sustainable multifunctional catalytic material for Organic transformations” submitted to CRG (DST) by Rakesh K. Mishra (CRG/2021/007036). Total Budget: [46,03,344 INR](#); Status: Accepted for Evaluation.
- Project entitled “Pine Cone Based Biochar as Sustainable Multifunctional Materials” to UCOST Uttarakhand. Total Budget: 9,24,000 INR.
- Manvi Sharma and Ajay K Chaubey. “Climate Change in India: A Wakeup Call from Bollywood” in *Rupkatha Journal of Interdisciplinary Studies in Humanities* (E-ISSN:

0975-2935), Special Conference Issue (Vol. 12, No. 5, 2020. 1-9) (Indexed in the SCOPUS and Web of Sciences).

- Joe Philip, Renu Bhadola Dangwal and Vinod Balakrishnan,. “Positioning the Gendered Subaltern: Body, Speech and Resistance in Mahasweta Devi’s Narratives.” Rupkatha Journal on Interdisciplinary Studies in Humanities. Vol 12. No.5 2020. PP 1-9 ISSN 0975-2935.

12.02. Notable Achievement by the students

- Rahul Goswami batch B. Tech. 2016-20 got selected in Google with CTC 31 Lac
- Ayushi Agarwal, batch B. Tech. 2016-20 got selected for MS at University of California, San Diego, USA.
- Himanshu Patel batch B. Tech. 2017-21 secured GATE Score 519 in GATE 2021.
- Harshita Choudhary batch B. Tech. 2017-21 got selected for internship at BNY Mellon.
- Jyoti Kumari Jangid batch B. Tech. 2017-21 got selected for internship at Elocity Technologies.
- Alok Singh Narvariya batch B. Tech. 2017-21 got selected for internship at ITH Technologies.
- Chirag Rawat batch B. Tech. 2017-21 got selected for internship at Unicommerce.
- Anmol Goyal and Pankaj Singh batch B. Tech. 2017-21 got selected for internship at Loyalty Jaggernaut.
- Shubham Aswal batch B. Tech. 2017-21 got selected for internship at Golcha Group.

13.00 CONCESSIONS FOR SCs, STs AND PWD STUDENTS**13.01 CONCESSION TO STAFF**

The reservation policy of Government of India is adapted in recruitment of the staff of NIT Uttarakhand. Concessions and benefits are made applicable to reserved categories viz SCs, STs, OBCs, EWSs, and PWDs& ESMs.

14.00 TECHNICAL EDUCATION QUALITY IMPROVEMENT PROGRAMME (TEQIP-III)

Brief Overview of TEQIP-III

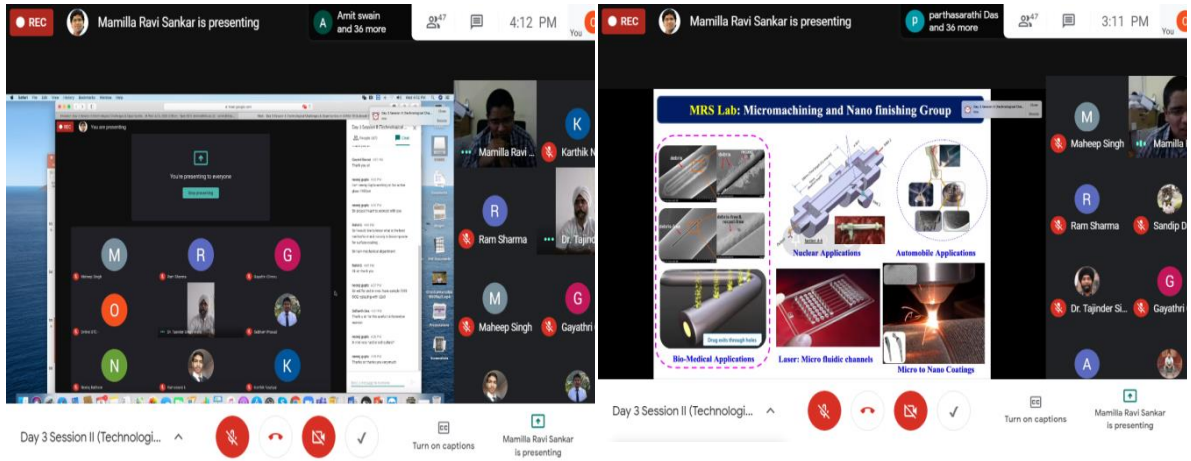
Technical Education Quality Improvement Programme of Government of India (TEQIP) is being implemented as a World Bank assisted project to improve the quality of technical education system in the country. National Project Implementation Unit (NPIU) has implemented this project across the country. Third phase of Technical Education Quality Improvement Programme (referred to as TEQIP-III) is fully integrated with the Twelfth Five-year Plan objectives for Technical Education as a key component for improving the quality of Engineering Education in existing institutions with a special consideration for Low Income States and Special Category States and support to strengthen few affiliated technical university improve their policy, academic and management.

TEQIP III at NIT Uttarakhand

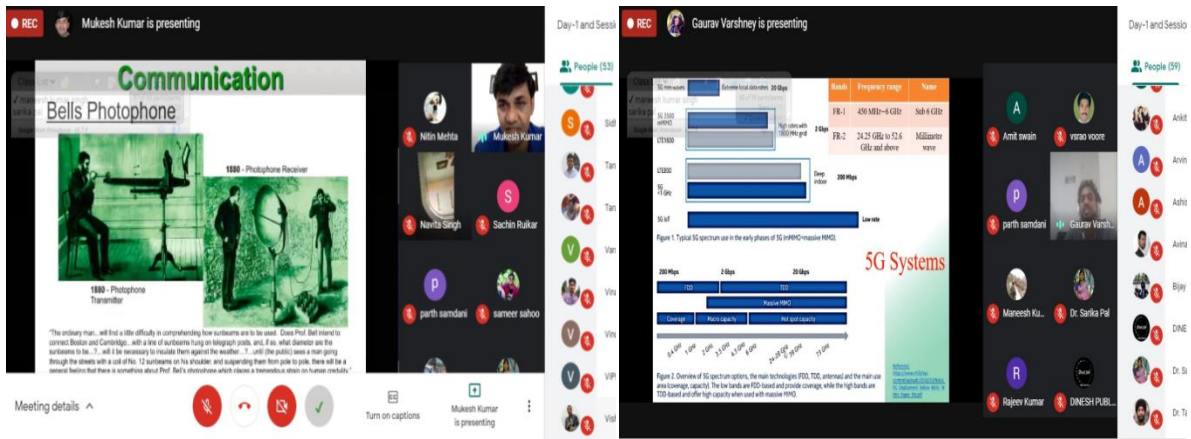
Institute has achieved revolutionary progress under the TEQIP-III scheme which became functional in July 2018. The Institute has ensured to bring quality education by implementing several measures following the guidelines of NPIU. TEQIP support has been extended to almost all the academic activities and events such as faculty & staff training, skill development and employability of the students, participation of faculties and students in conferences, workshop short term courses. To encourage the students for the GATE exam, GATE registration fee has been reimbursed to the students. Moreover financial support has also been given to the students for their project works, industrial visit and participation in various Techno-cultural programs across the country. Six full time PhD scholars are also being sponsored under this programme. Additionally, major thrust was also given for the development of classes and laboratory infrastructure. It is also a matter of great pride that to advance our laboratories and create advanced research facilities, we have procured 30 items that includes equipment and software worth rupees 4.6 crore. All these equipment and software have become part of our laboratories and utilized for academic and research purposes. With the help of TEQIP III support, the Institute has also organized a remarkable number of workshops, national and international conferences, and faculty development programs in various disciplines. In the past three years, the Institute has successfully organized 83 such events under TEQIP III.

Following Workshops/STCs/STTP/Conferences were sponsored from TEQIP-III:

1. Online Five Days STC on “Technological Challenges & Opportunities in COVID-19 Outbreak” during 06-10 July, 2020 organized by CSE Department.

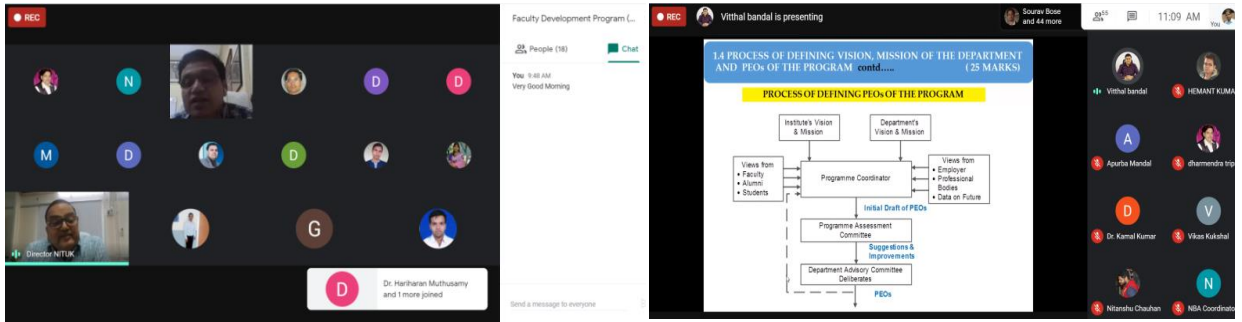


2. Online Five Days STC on “Recent Trends in Wireless Communication” during 20-24 July, 2020 under Twinning Activities with SLIET Longowal organized by ECE Department..

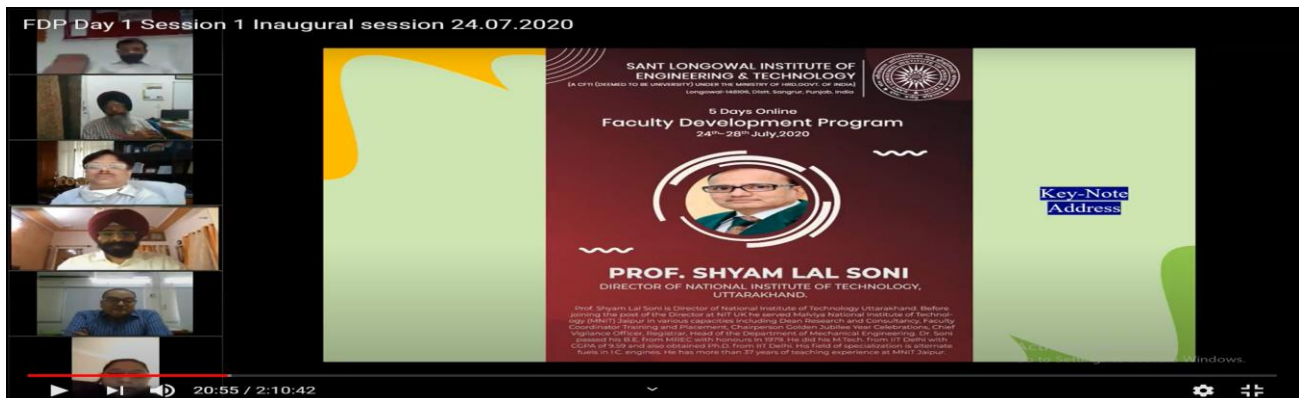
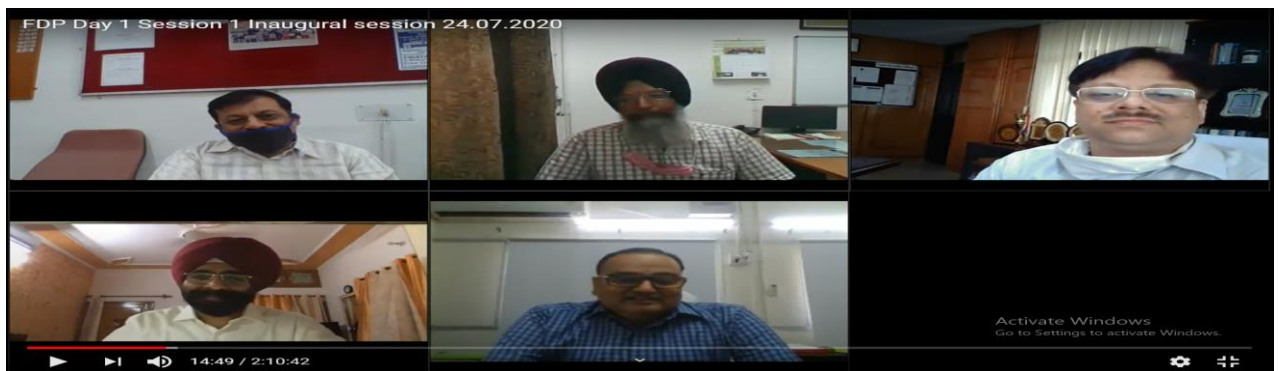


3. Online Training on “Computational Techniques and Programming” during 20-25 July, 2020 under Twinning Activities organized by ME Department.

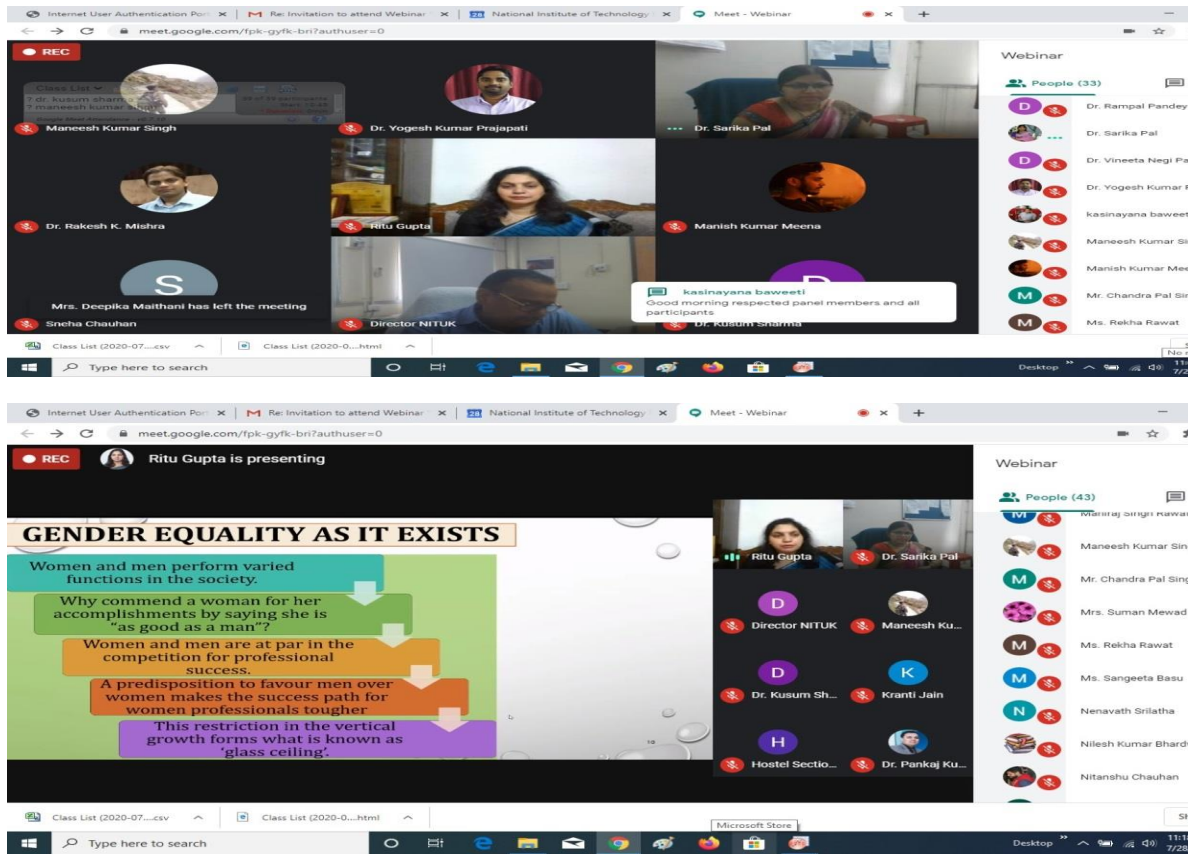
4. One Week Online FDP on “Outcome Based Education System” during 20-25 July, 2020 organized by NBA Section.



5. Five Days Online FDP on “Faculty Development for New Tomorrow: Readiness for teaching and learning post COVID-19” during 24-28 July, 2020 under Twinning Activities organized by EEE Department.

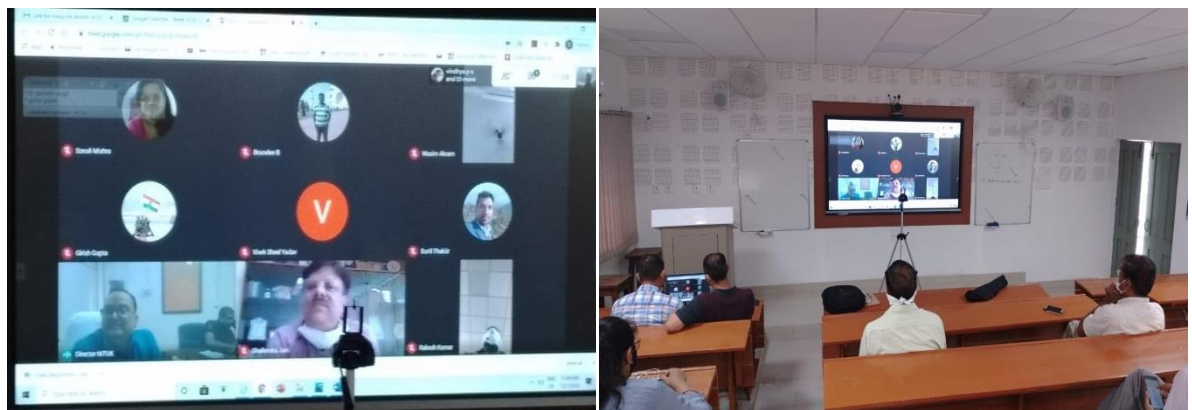


6. Online webinar on “Gender BIAS and Stereotyping” from 28 July, 2020.

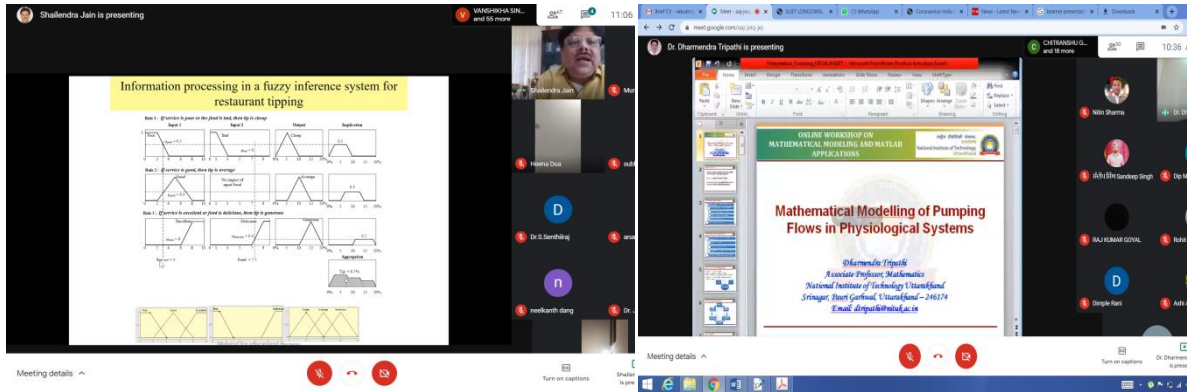


7. Online Five Days STTP on “Recent Advances in Artificial Intelligence” during 27-31 July, 2020 under Twinning Activities with SLIET Longowal organized by CSE Department.

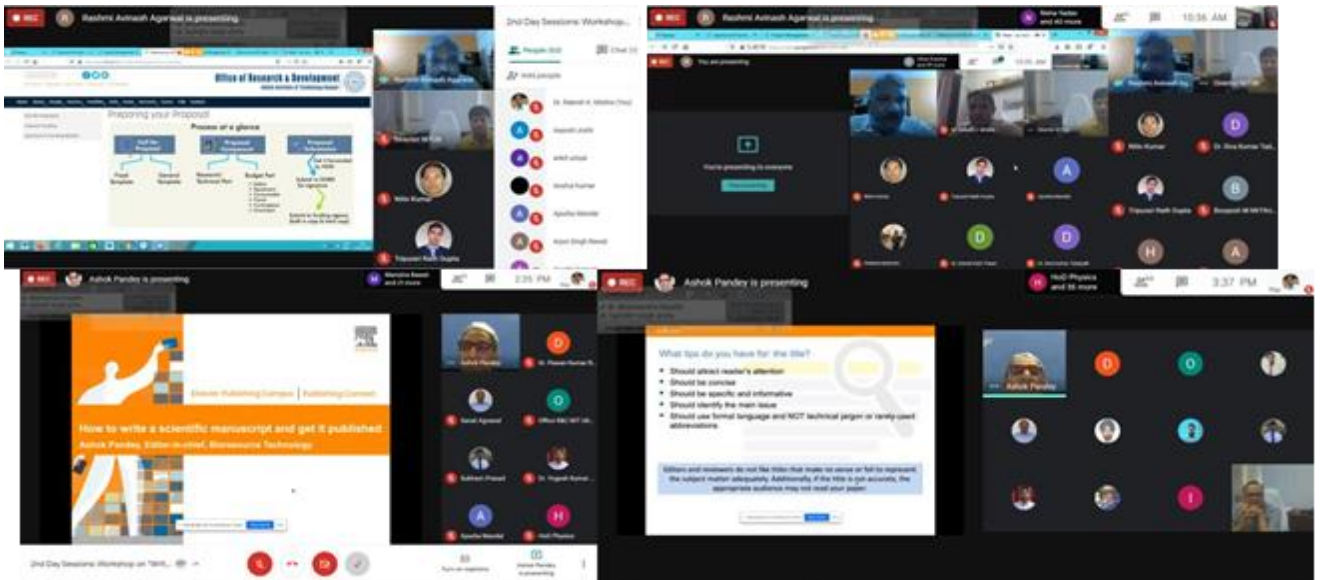
8. Online FDP on “2D Graphics in Scientific Report” during 27-31 July, 2020 under Twinning Activities organized by ME Department.



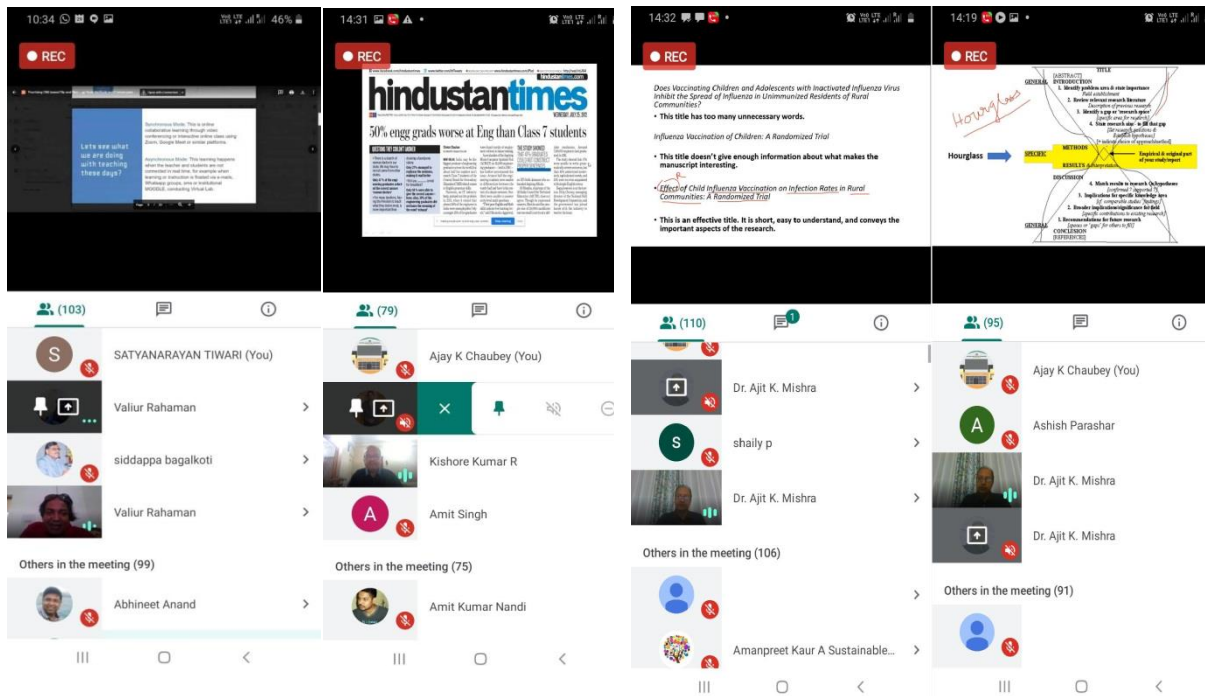
9. Two Days Online Workshop on “Mathematical Modeling and Matlab Applications” during 24-25 Aug, 2020 under Twining Activity with SLIET Longowal.



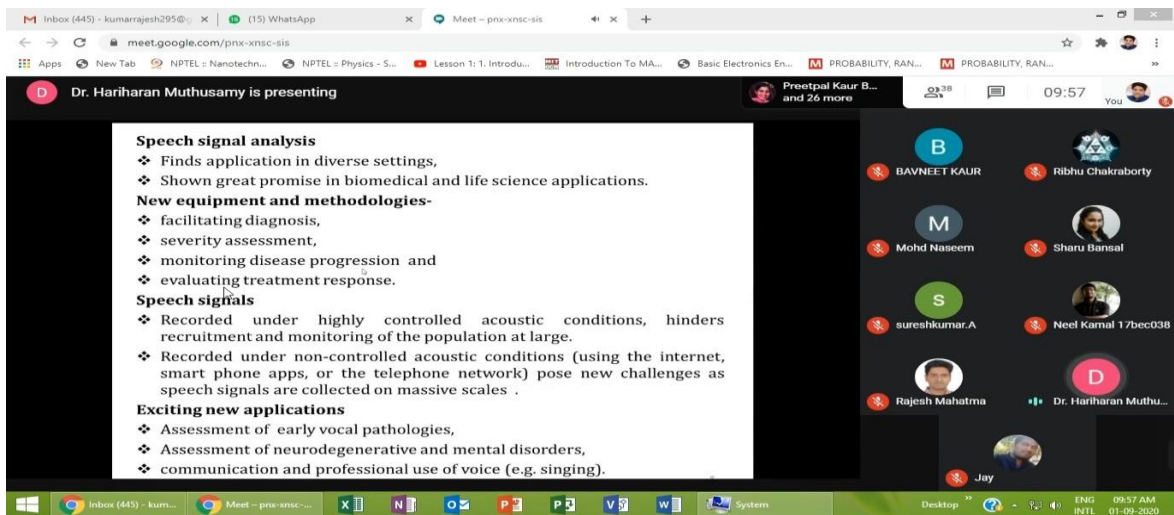
10. One Week Workshop on “Writing Research Papers & Grant Proposals: Scientific, Technical, and Ethical Practices & Conduct” during 24-28 Aug, 2020 organized by R&C Section.

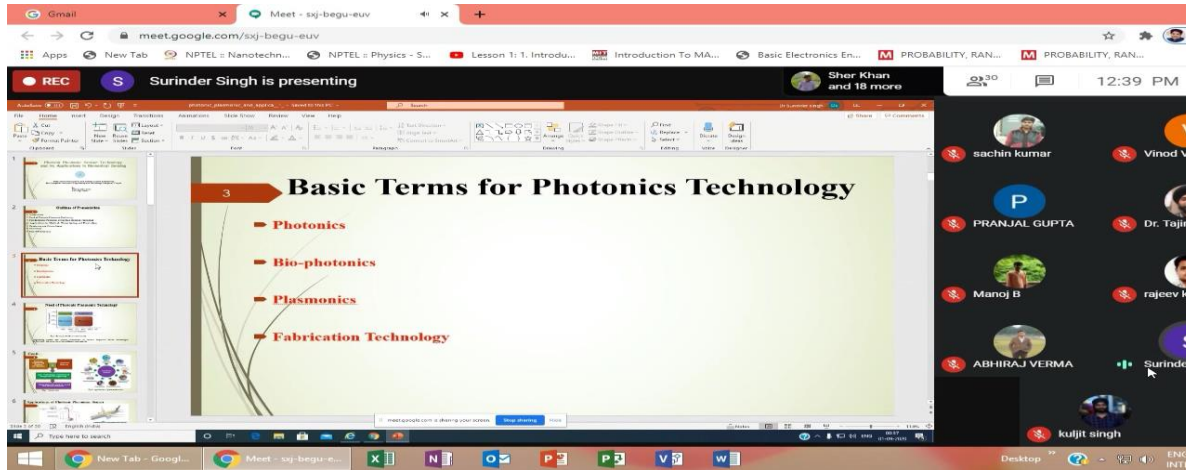


11. Five Days Online FDP “Recent Pedagogy and ICT Tools in Teaching & Research” during 27-31 Aug, 2020 under Twining Activity organized by CSE Department.

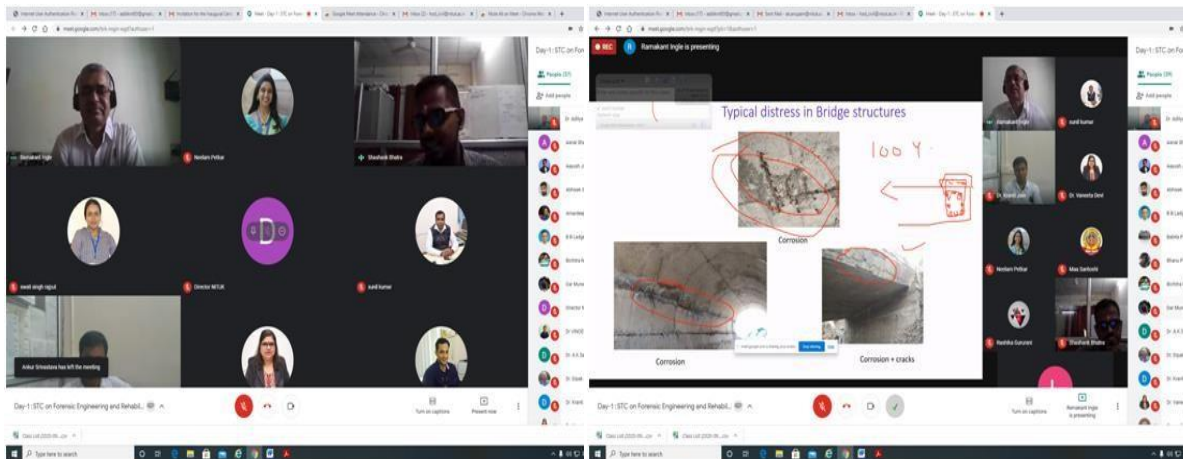


12. Online One Week STTP on “Intelligent Systems and Networks (ISN-2020)” during 31 Aug, 2020 to 04 Sep, 2020 under Twining Activity organized by ECE Department.

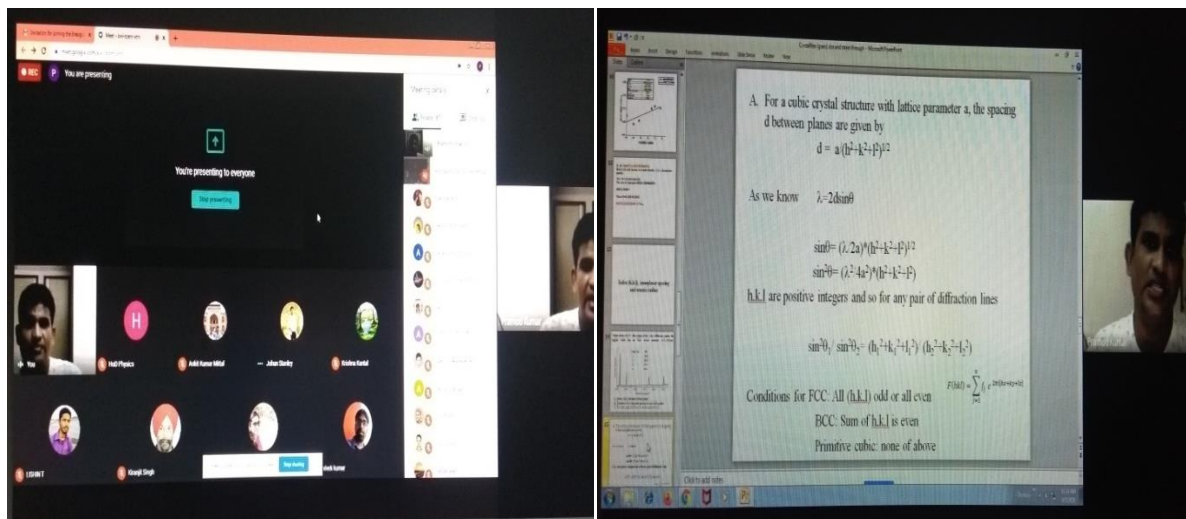




13. Online Five Days STC on “Forensic Engineering and Rehabilitation of Structures” during 05-09 Sep, 2020 organized by CE Department.



14. Online STC on “Materials Synthesis and Characterization Techniques” from 07-11 Sep, 2020 under Twining Activity organized by Physics Department.



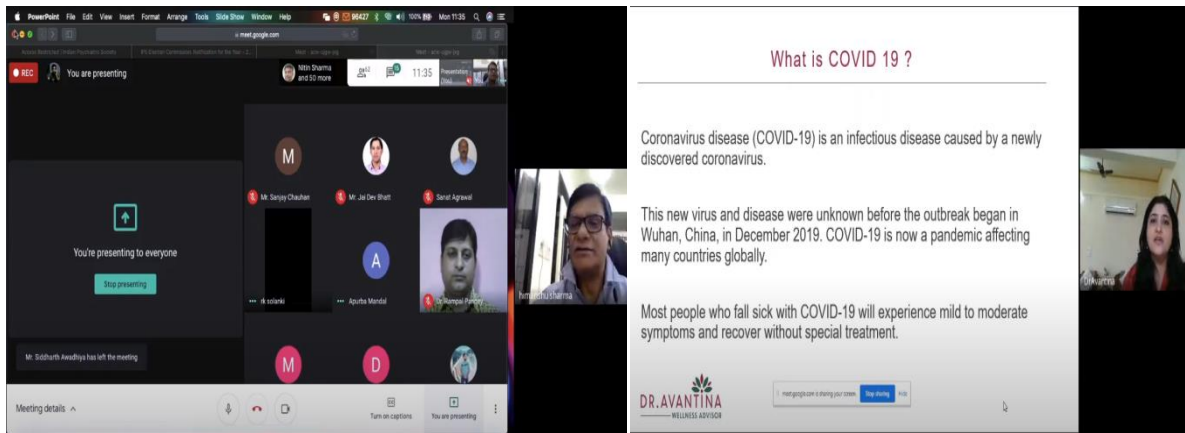
- 15. Online Workshop on “Smart Materials (concept, Design and Applications)” from 07-11 Sep, 2020 organized by Chemistry Department.
- 16. One week Online STTP on “Recent Trends in Instrumentation Engineering” from 07-11 Sep, 2020 under Twinning Activities organized by EEE Department.



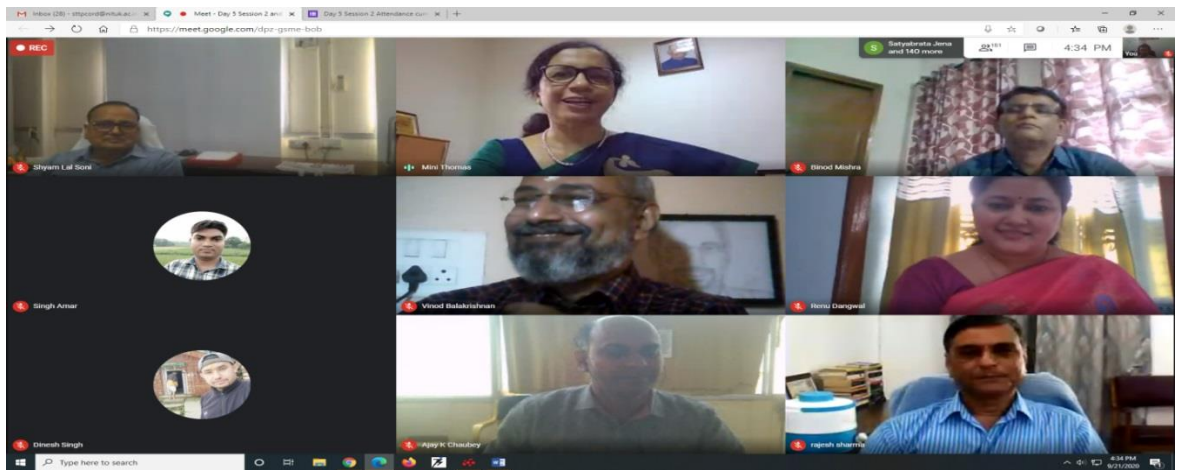
- 17. Online National Conference on “Sustainable Development Goals: The Way Forward Towards Quality Education (G:4), Gender Equality (G:5), Affordable and Clean Energy (G:7) in India” from 10-11 September, 2020 organized by Chemistry Department.



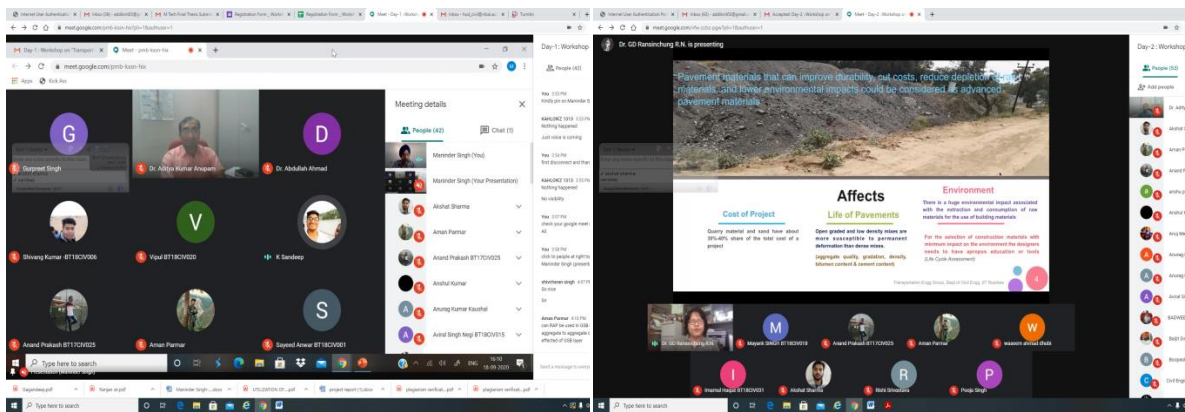
18. One Week FDP on “Stress Management: A Post Covid-19 Pandemic Perspective” from 14-18 Sep, 2020 organized by FW Section.



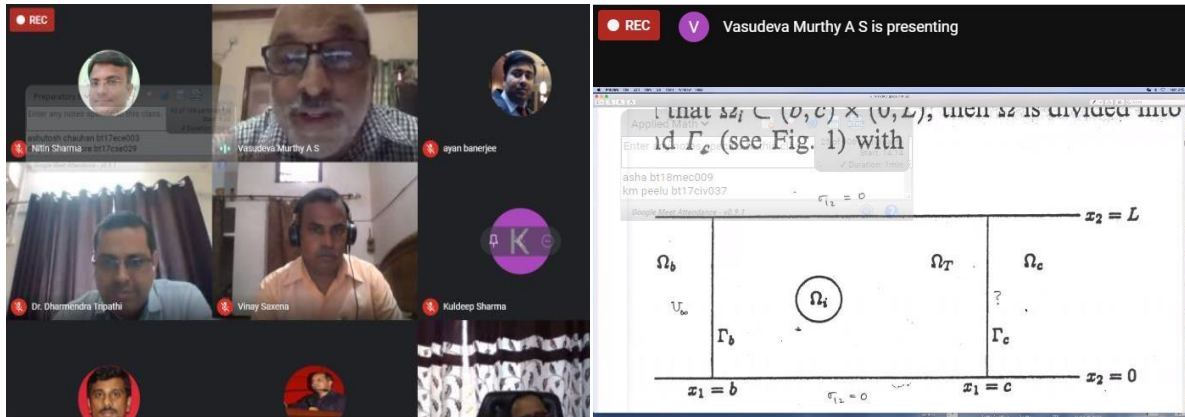
19. Five Days online STTP on “Soft Skills and Personality Development” during 17-21 Sep, 2020 collaboration with NIT Tiruchirappalli organized by the Department of HSS.



20. Five Days Workshop on “Transport Research and Innovations” during 18-22 Sep, 2020 organized by CE Department.



21. One Week Workshop on “ODEs, PDEs, and Integral Equations: Their Engineering Context” during 21-26 Sep, 2020 organized by Mathematics Department.

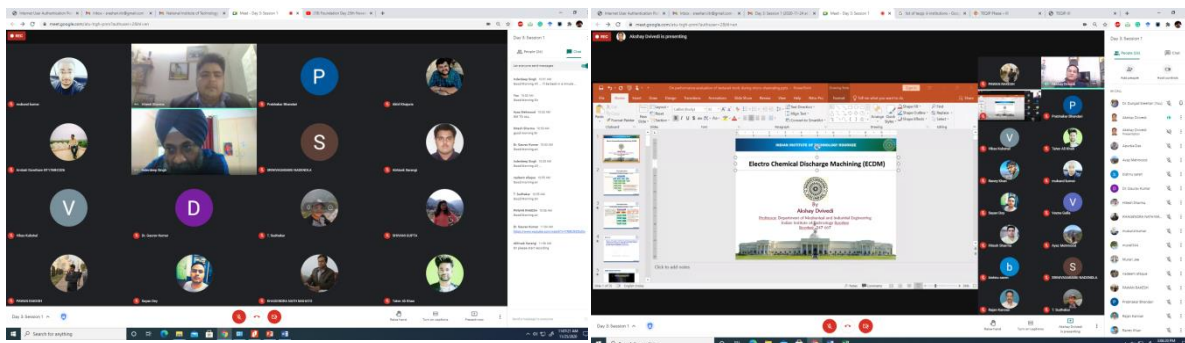


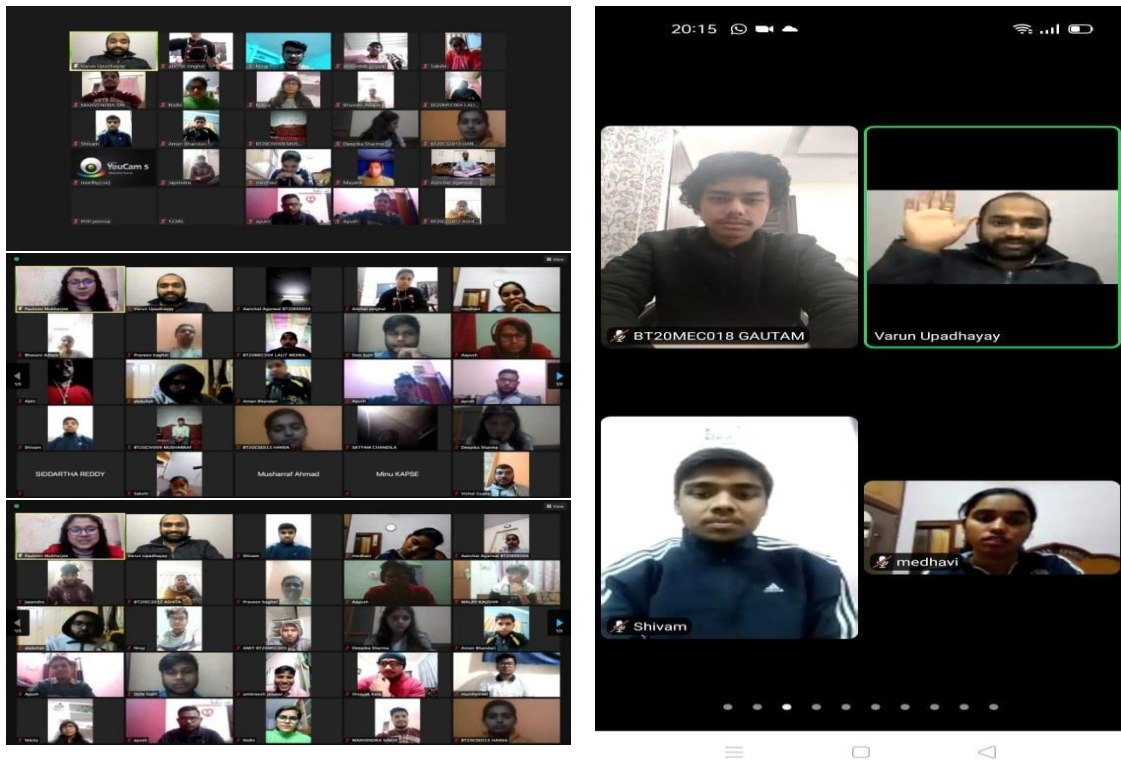
22. One Week STTP on “Industry-Academia Convergence in Electronics & Communication Engineering” during Oct 28-01 Nov, 2020 organized by ECE Department..

23. Jointly Organized two days “International Conference on Advances in Materials Processing & Manufacturing Applications (ICADMA 2020) with MNIT Jaipur during November 05-06, 2020 organized by ME Department.



24. One week STC on “Recent Advancement in Micro manufacturing November” 23-27, 2020 organized by ME Department.

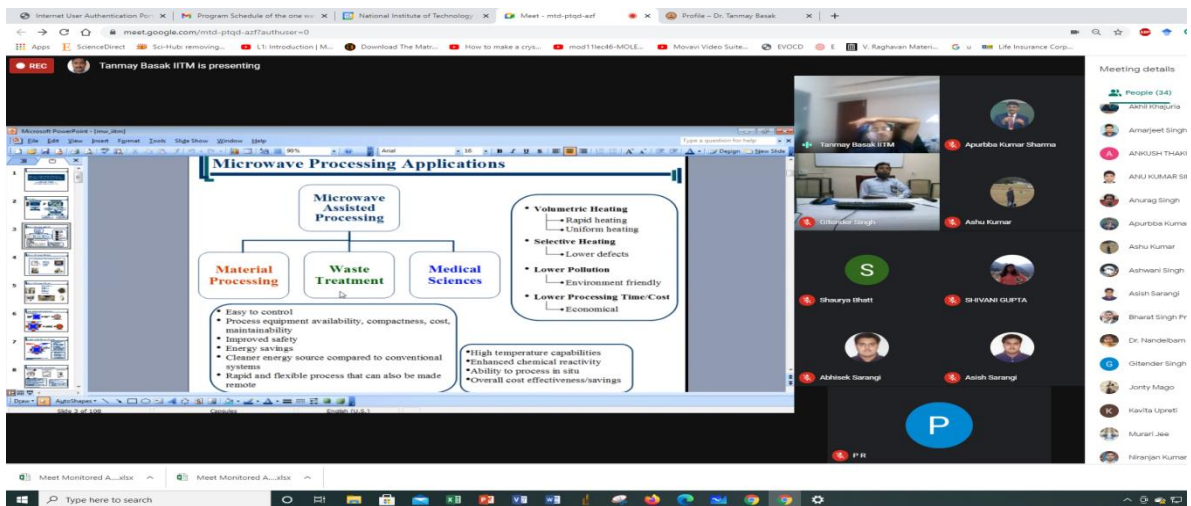
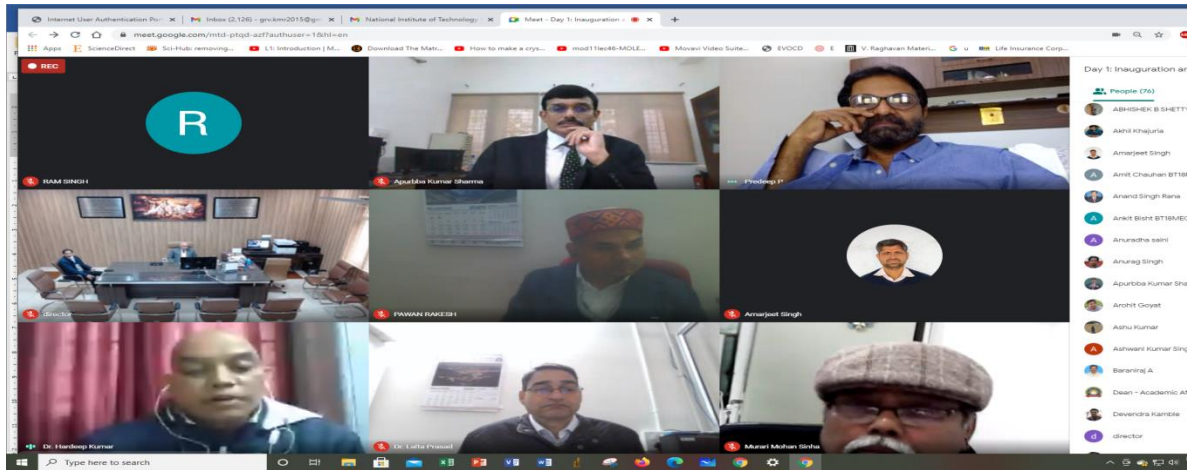




25. Three days **“International Conference on Evolution in Manufacturing (ICEM 2020)** from December 10-12, 2020 collaboration with MNIT, Jaipur organized by ME Department.

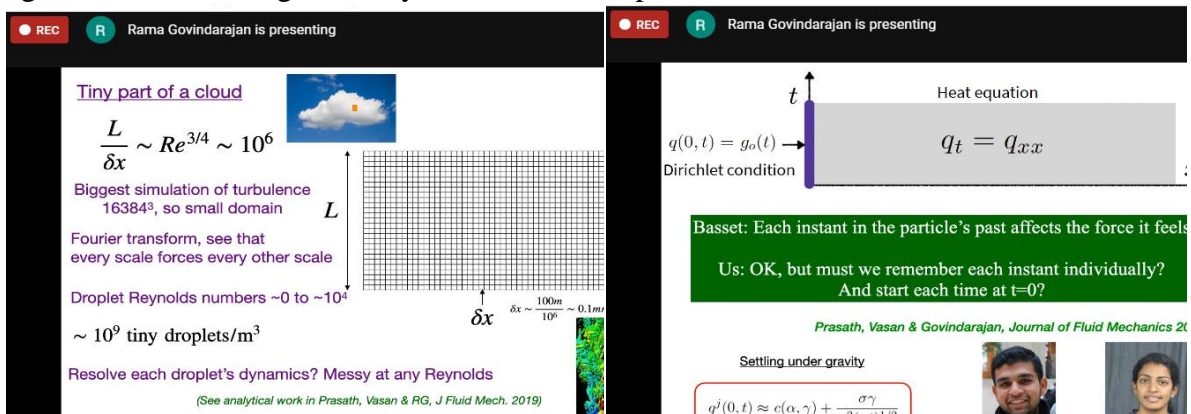
26. One Week STC on **“Recent Advance in Optical and magnetic Materials”** From December 14-18, 2020 organized by Physics Department.

27. One Week STC on **“Microwave Material Processing: Opportunities and Challenges”** from December 14-18, 2020 organized by ME Department.

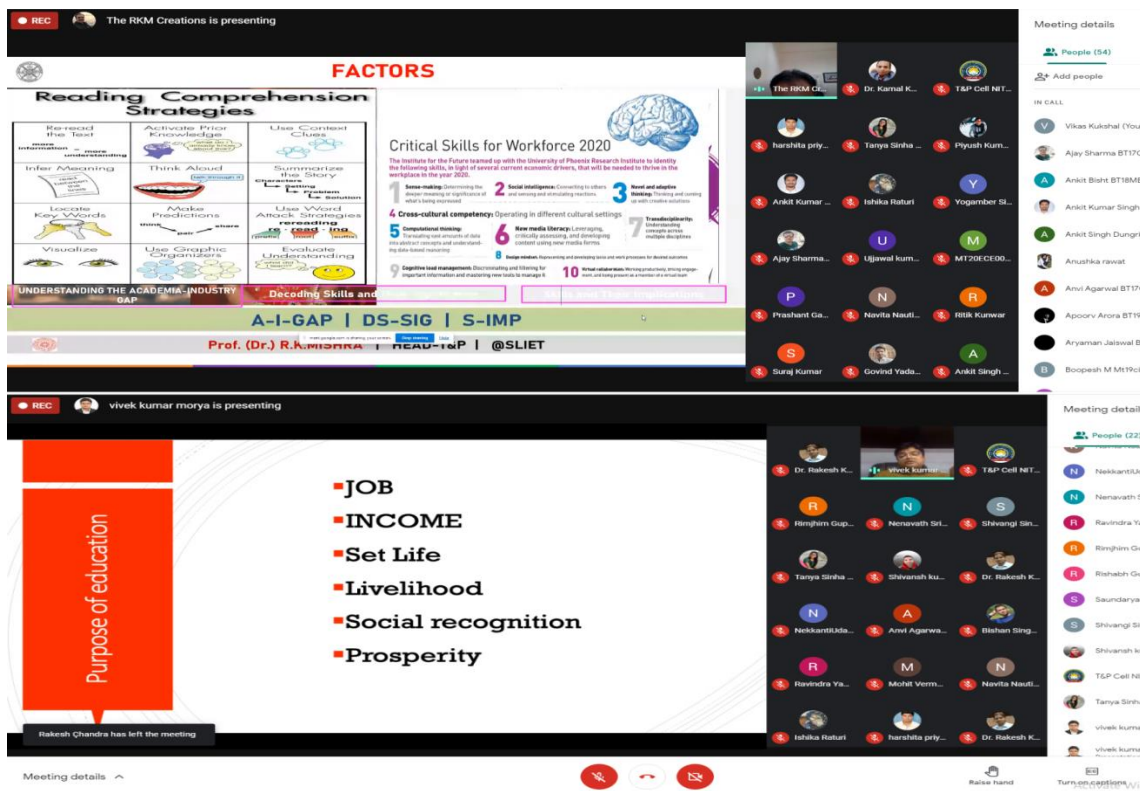


28. One Week Program on “Student Excellence and Learning Program” by Art of Living, India during 04.01.2021 to 09.01.2021 organized by SW Section.

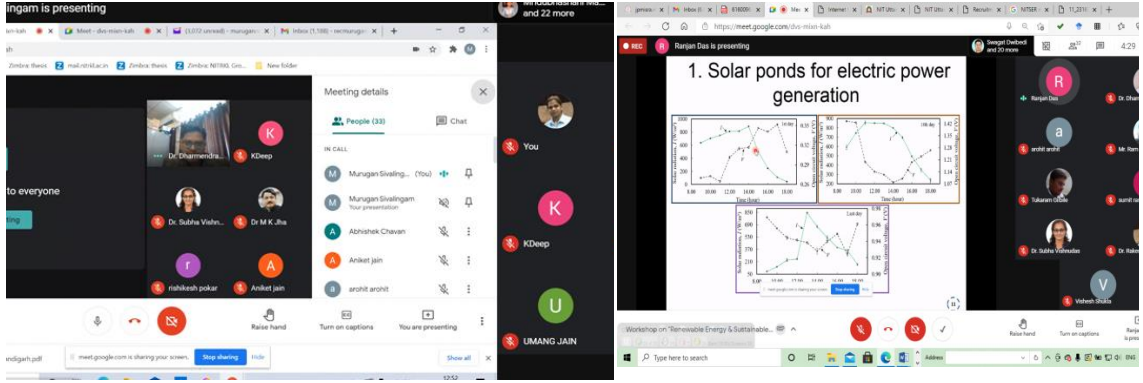
29. International Winter School on “Fluid dynamic Heat Transfer and Applications” during Jan 18-20, 2021 organized by Mathematics Department.



- 30. Online seminar on “Industrial expectations and readiness” during 04-05 Feb, 2021.
- 31. Five Day Online International Workshop on Pandemic and Socio-Economic Determinants: The Uses, Mathematics and Computations behind the Modeling to inform Decision Makers during February 08-12, 2021
- 32. One day workshop on “Effective English Writing and Speaking” from 13 Feb, 2021.
- 33. A Webinar cum meeting for panel discussion on “Natural Disaster and other challenging problems in Uttarakhand” during 13 Feb, 2021.
- 34. One Week online STC on “Sustainable Composites: Processing, Characterization & Application” during 22-26 Feb, 2021.
- 35. Five days online workshop on “How to improve Employability of Engineering graduates” from 23-27 Feb, 2021 organized by R&C Section.

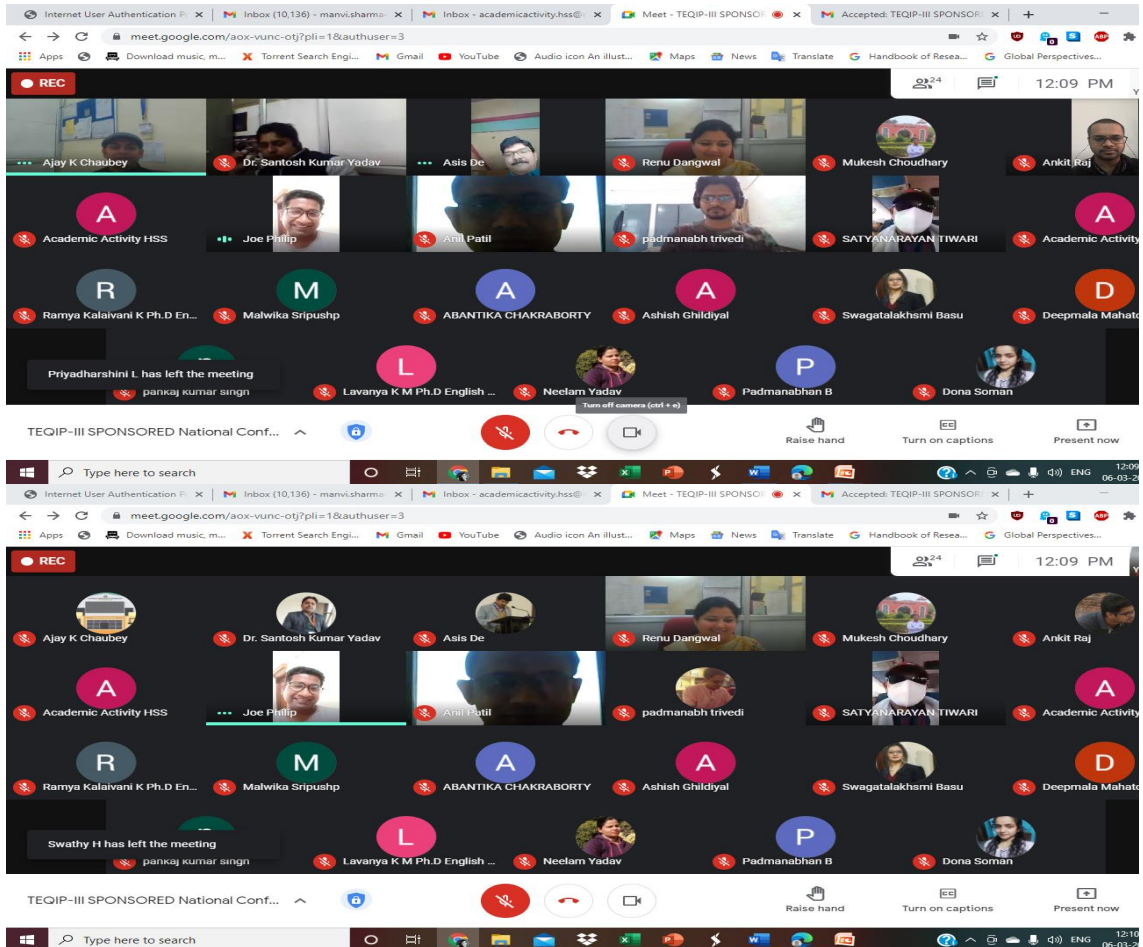


- 36. Five days STC “Computational and Experimental Techniques in Heat Transfer and Fluid Flows” during 01-05 March, 2021.
- 37. Five Days Workshop on “Computational Modeling of Geotechnical Structures using FEM Based Software’s” during 28 Feb to 04 Mar, 2021.
- 38. One week Workshop on “Renewable Energy & Sustainable Development” during March 01-05, 2021.



39. Workshop on “Diesel Engine Emission Control Technology” on 05-06 Mar, 2021.

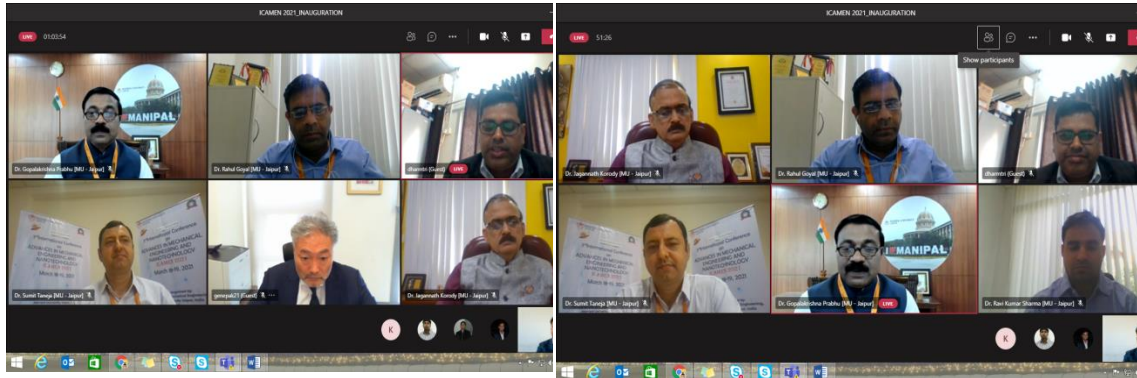
40. Two day conference on “Ecological Humanities: Recent Paradigms” on 06 Mar, 2021 organized by the Department of Humanities and Social Sciences.



41. Five Days Online FDP on “Next Generation Computing and Networking” during 08-12 Mar, 2021.

42. Five Days online STC on “Microgrid issues challenges and solutions in smart grid” during 08-12 March, 2021.

43. 3rd International Conference on Advances in Mechanical Engineering and Nanotechnology (ICAMEN-2021) during 18-19 Mar, 2021 organized by R&C Section.



15.00 INTERNAL COMPLAINT COMMITTEE (ICC)

Following the guidelines regarding the prevention and deterrence of sexual harassment in the workplace formulated by the Supreme Court of India in 1997 and the Sexual Harassment of Women at Workplace (Prevention, Prohibition, and Redressal) Act, 2013, the Women Cell in the Institute came into existence in August 2015. Thereafter constitution of the Internal Complaints Committee (ICC) happened via office order dated 16th Feb, 2019 and the name of the Women Cell also replaced via Internal Complaints Committee (ICC).

The Cell is committed to prevent any act of sexual harassment of women, to spread awareness regarding laws against sexual harassment and to provide redressal of such incidents and thus it ensures to preserve the fundamental rights of women to equality and also their right to live with dignity.

Beginning with the four members, the ICC has now extended up to the following six members in the year 2018-19:

Sr. No.	Name	Designation
1.	Dr. Sarika Pal	Assistant Professor Chairperson
2.	Dr. Kusum Sharma	Assistant Professor Member
3.	Dr. Kamal Kant Tiwari	Assistant Professor Member
4.	Dr. Smita Kaloni	Assistant Professor Member
5.	Dr. Ghanapriya Singh	Assistant Professor Member
6.	Mrs. Shashi Raturi	Member (NGO)

Events and Activities:

To ensure the protection of women from sexual harassment, to spread awareness of law against sexual harassment and the maintenance of civilized conduct, NIT Uttarakhand organizes meetings, awareness/orientation programmes for students, teaching and non-teaching staff from time to time.

Orientation Programme

For this the Cell organized an Orientation Programme for new entrants to the Institute. The common motto of the Orientation Programme was to bring the cleansing of unhealthy belief-

set and thus prevent any kind of malicious act which may result from this. A PPT presentation is delivered by Dr. Sarika Pal to inform students about the Cell and also to make them understand the necessity of civilized behavior towards others

Women's Day Celebration

The Internal Complaints Committee (ICC) organized some activities in celebration of Women's day on March 08, 2021. March 8 is observed as International Women's Day to celebrate the spirit of women. The idea behind celebrating the day is also to highlight the extraordinary roles played by women in almost every walk of life and salute their courage and determination. The theme of this year's Women's Day is — Women in leadership: Achieving an equal future in a Covid-19 world. During the occasion our guest was Dr Hariharan Muthusamy, Dean (FW), NIT Uttarakhand, Dean R&C; Dr Dharmendra Tripathi NIT Uttarakhand, Dr Rampal Pandey Associate Dean FW, NIT Uttarakhand, Ex-Chairperson Women Cell NIT Uttarakhand Dr. Renu Bhadola Dangwal and Dr Jagrati Sahariya Associate Dean Academics (PG & PhD) NIT Uttarakhand. Faculty, staff and students from different departments/Sections were present to celebrate international women's day. The programme was started by the greeting of Dr. Sarika Pal, Chairperson ICC. The entire eminent guest enlightens the audience with their valuable words. Finally, the celebration ended with a cake cutting ceremony. Some glimpse of the Women's day celebration is shown below:







Webinar organized on July 28, 2020:

ICC/ Women Cell organized an online Webinar on “**Gender bias and Stereotyping**” on **28th July 2020** at NIT Uttarakhand Parent Campus for students, faculty and staff members. It was delivered by eminent speaker **Prof. Ritu Gupta, NLU Delhi**. It was attended by approximately 100 persons which includes B.Tech, M.Tech, Ph.D students, faculty and staff members.

Number of agenda related to Gender bias and Stereotyping were discussed during Webinar Session.

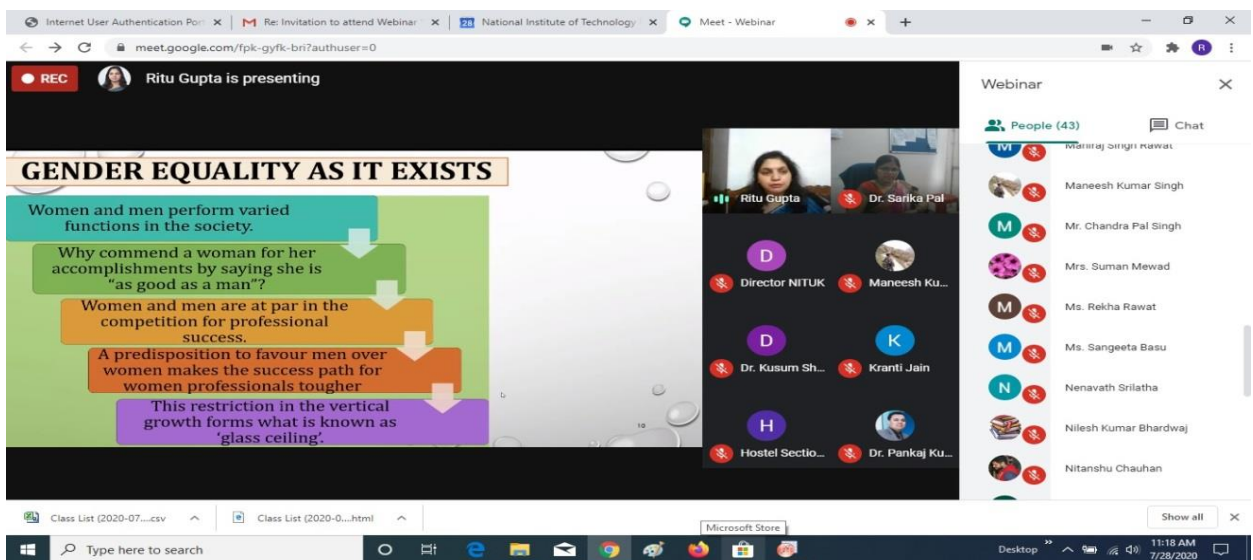
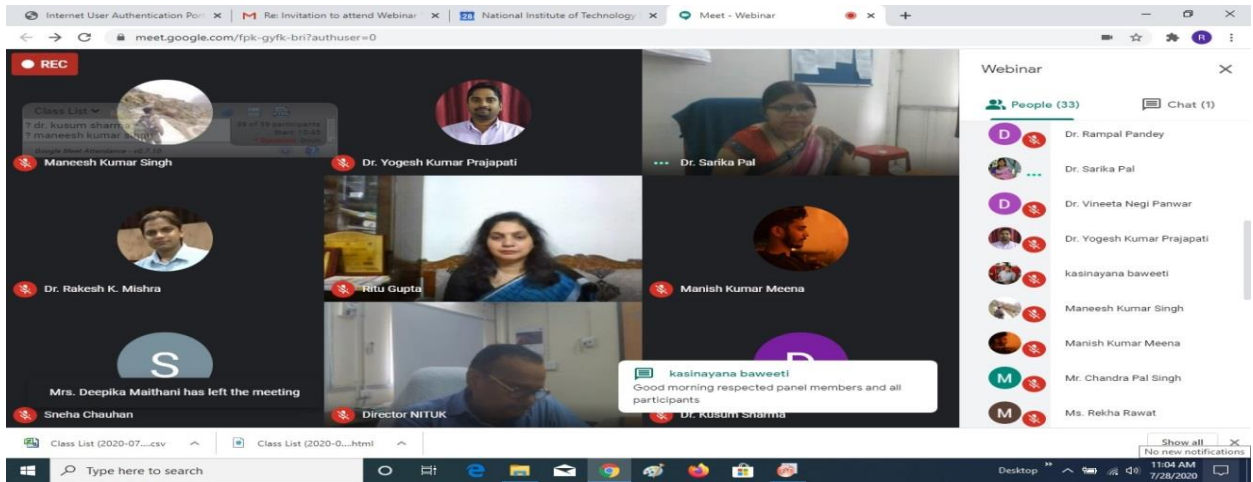
- UGC 2015 Regulation 3 (d): It is the responsibility of Higher Educational Institution (HEIs) to act decisively under all gender based violence against employees and student of all sexes recognizing that
 - Primarily women employees
 - Students
 - Some male students
 - Students of the third gender
- The regulation states that sexual harassment is gender neutral and institution should take action on complaints of employees and students of all sexes.
- Provided interaction with experts, which helps the participants to initiate their low in india.
- Sexual Harassment includes any one or more of the following unwelcome acts or behavior namely:
 - Physical contact and advances
 - A demand or request for sexual favours
 - Making sexually colure remark
 - Showing pornography
 - Any other unwelcome, physical, verbal or non-verbal conduct of sexual nature

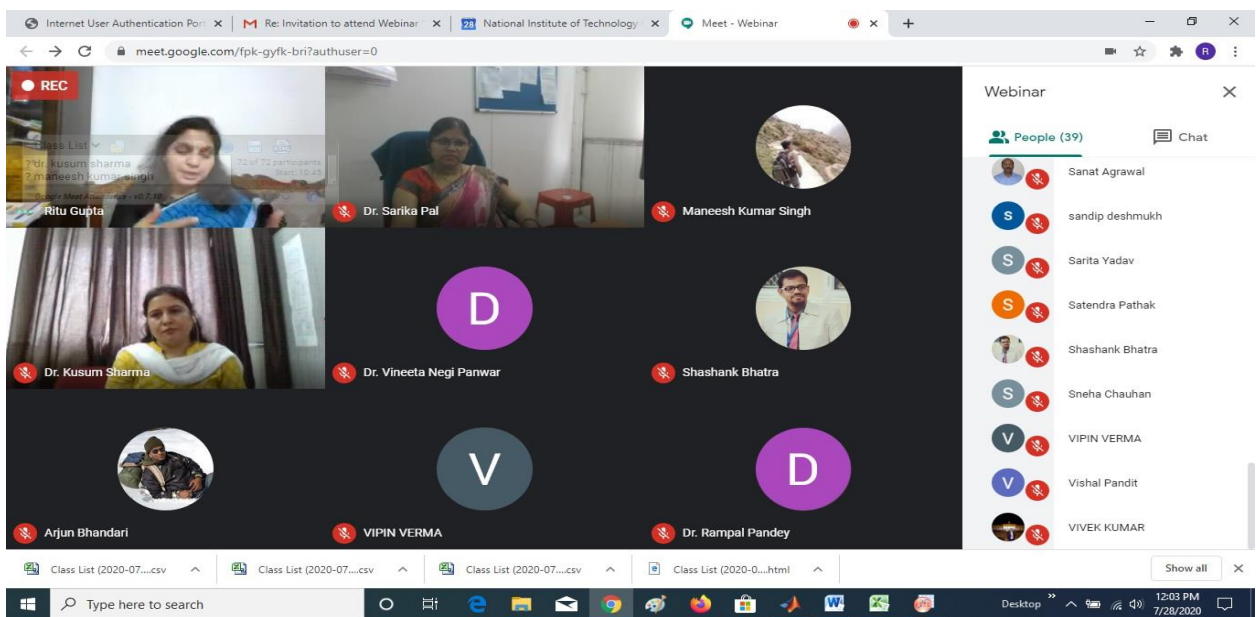
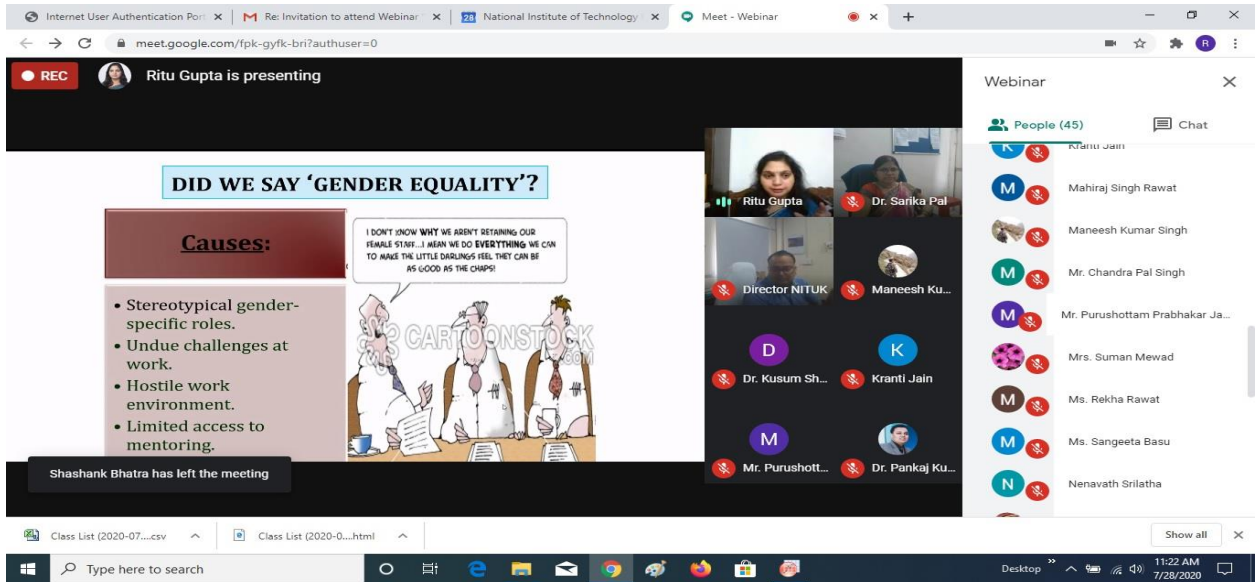
Strengths:

- Very good, talented, experienced, knowledgeable and well-qualified experts working in Indian Low field.

- Covered and delivered was very valuable and effective talk on the topic. Different Indian law were also discussed.
- Knowledgeable and effective expert lecture delivered in related field. Webinar covered all some law of recent old and new law and expert talk were really useful.
- Participants were very friendly and cooperative. .
- Knowledge provided about the gender bias in Indian society.

Some glimpse of Webinar





Online Expert Lecture Series on “Women in leadership: Achieving an equal future in a COVID-19 world” Organized on March 06-06, 2021

An online expert lecture series on “*Women in leadership: Achieving an equal future in a COVID-19 world*” was organized by **Internal Complaint Committee**, NIT Uttarakhand during **March 06-08, 2021**. The aim of this lecture series was to provide an interactive platform to the participants and spread awareness regarding laws against harassment and to provide redressal of such incidents and thus it ensures to preserve the fundamental rights of women to equality and also their right to live with dignity.

In the inaugural ceremony of the workshop, Dr Anil Singh Jha, Associate professor, Central University South Gaya Bihar was the Guest of honor of this event.

In this 3-days expert lecture series from 06-08th March 2021, total 03 sessions were conducted on different topics related to the UN theme *Women in leadership: Achieving an equal future in a COVID-19 world*. Total three eminent speakers from academia shared their knowledge with the participants on various issues.

The important part was that all the experts delivered very informative and wonderful lectures.

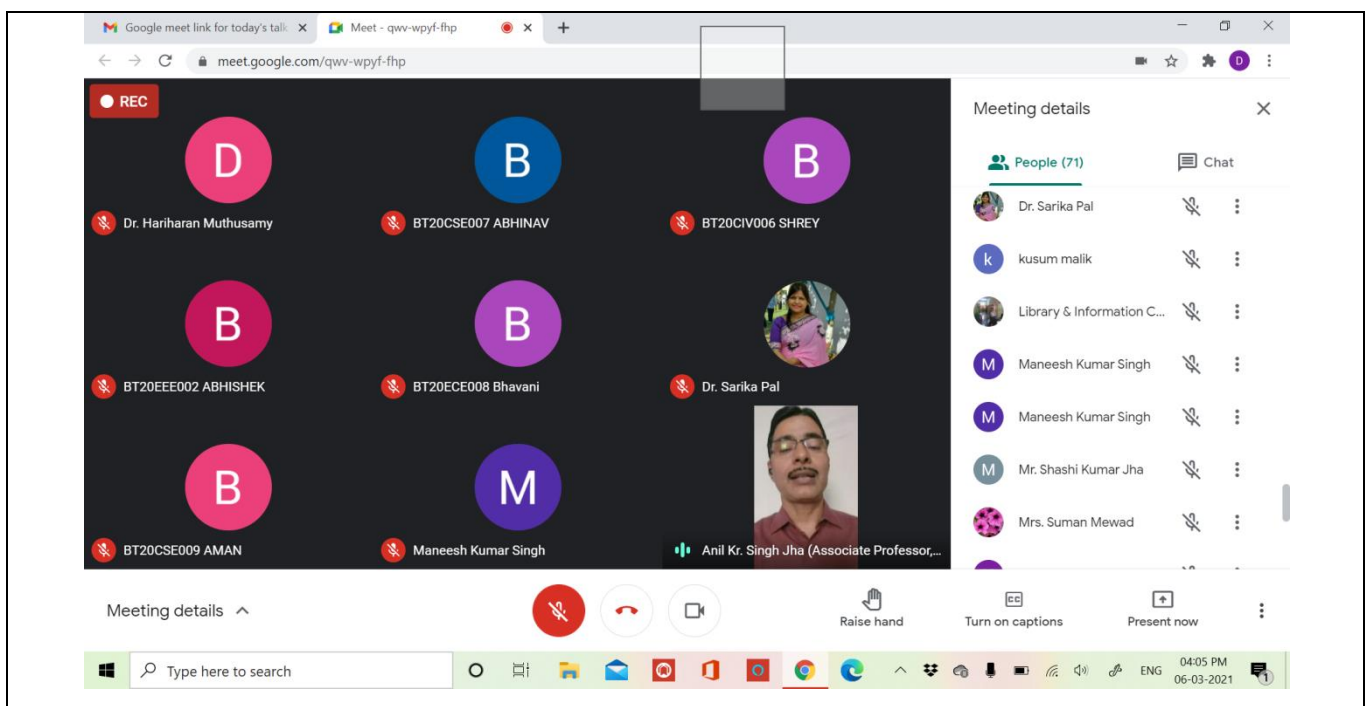
Dr. Anil Kumar Singh Jha from Central University, South Gaya Bihar had taken the first session of this lecture series. In his lecture, he differentiated gender equality and gender equity very beautifully. He talked about sex ratio, gender discrimination and women in leadership taking day-to-day examples.

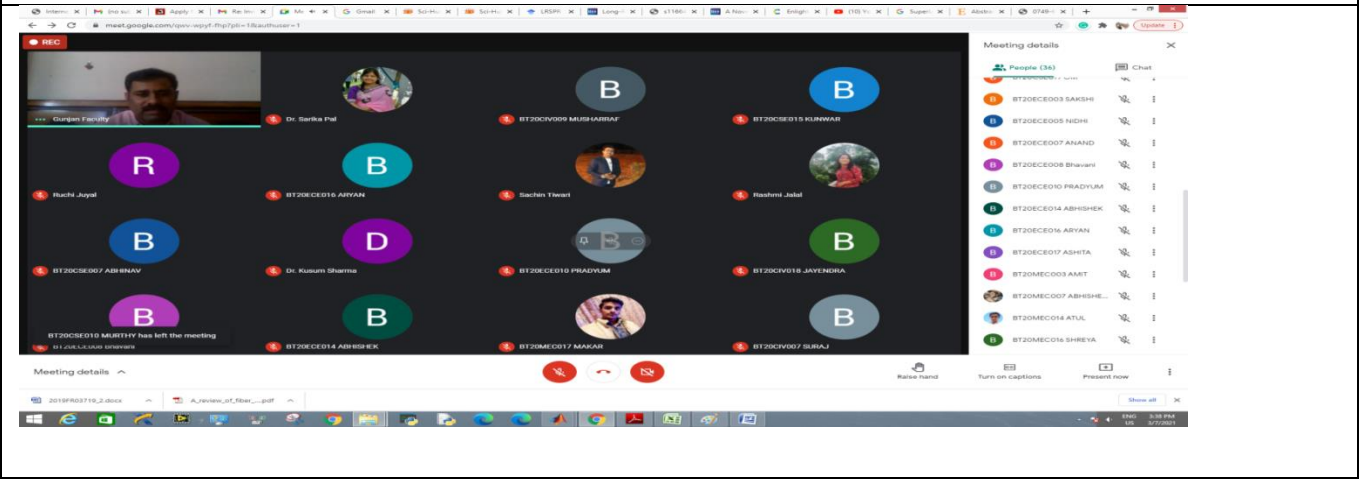
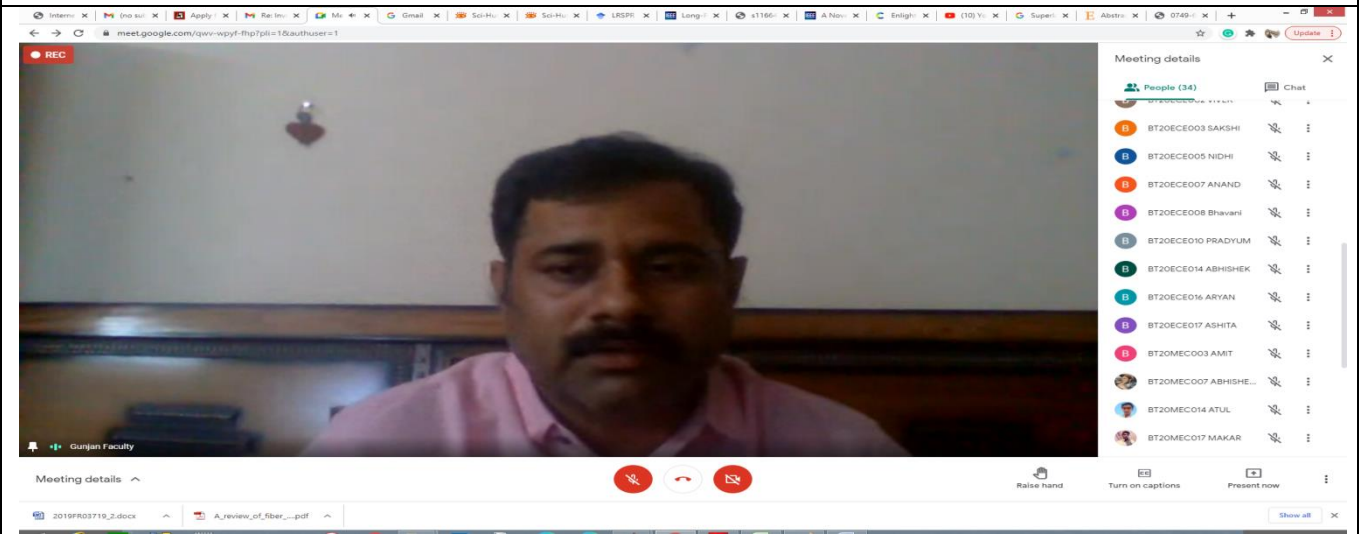
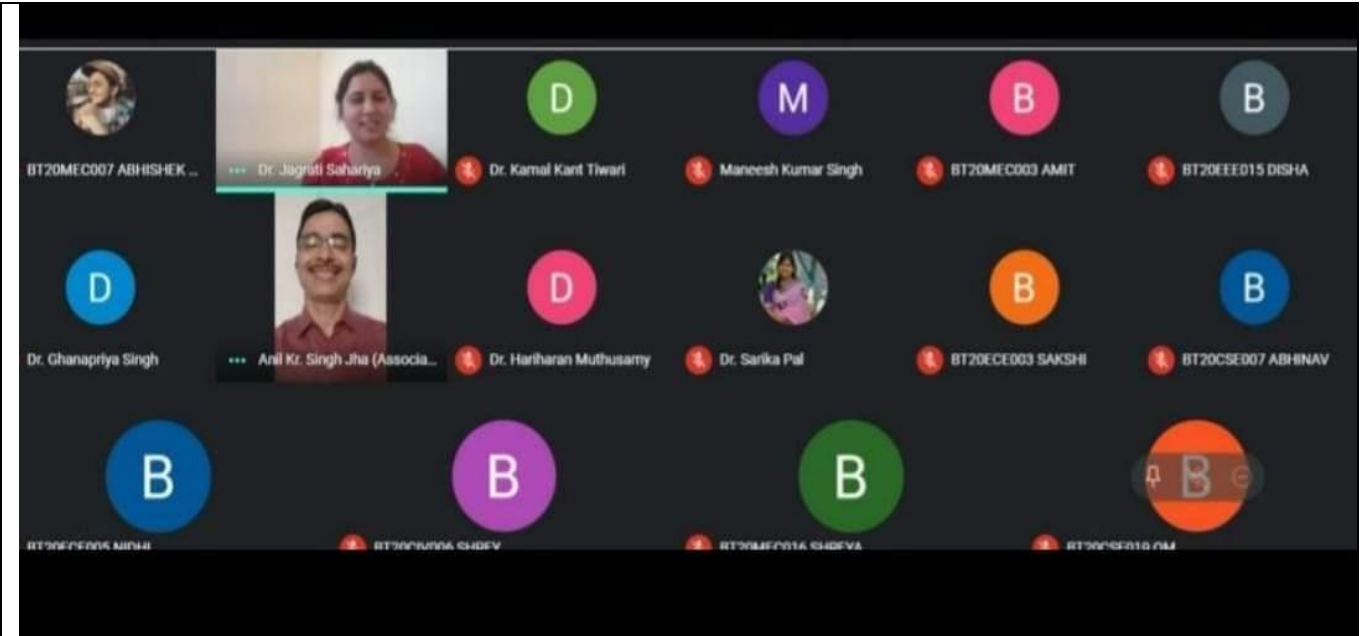
On the second day **Dr. Gunjan** from NUSL Ranchi talked about various laws and provisions related to the women safety. He delivered his lecture on women empowerment through law, literacy and film.

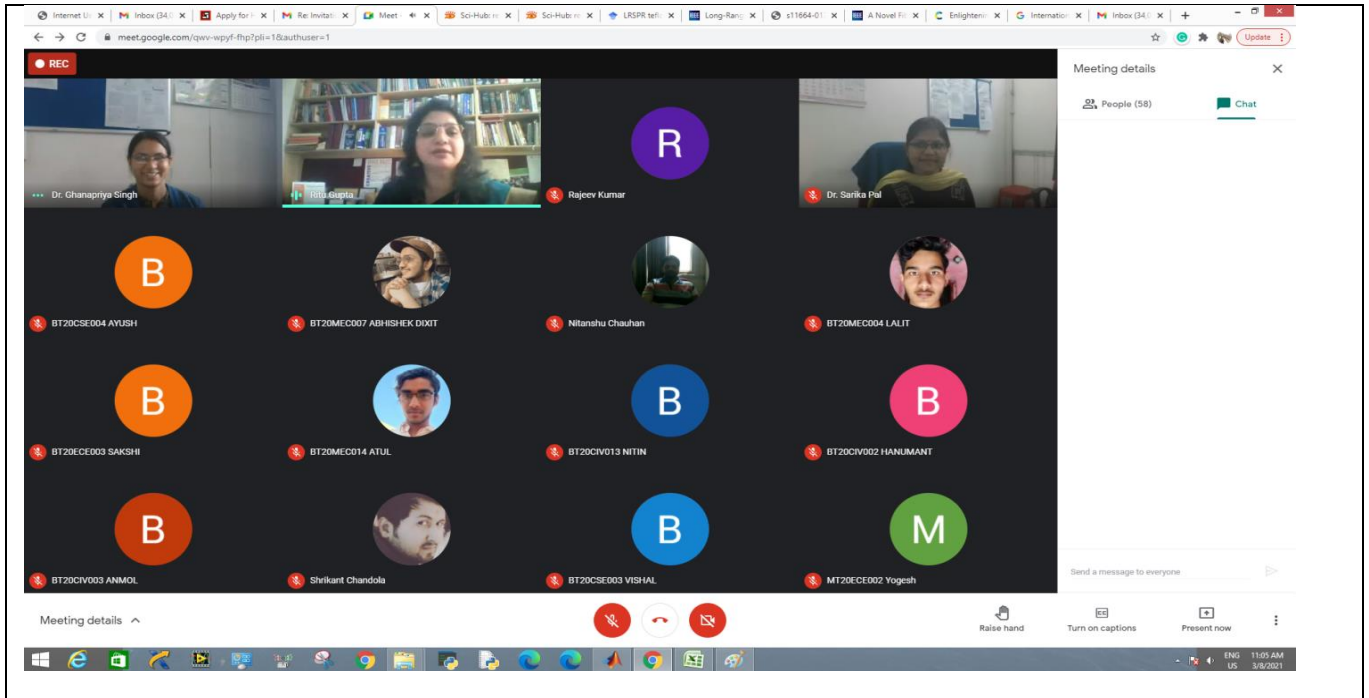
On the last day of the lecture series, **Dr. Ritu Gupta from National Law University Delhi** delivered her talk on the topic “Women in leadership: achieving equal future in COVID-19 world”. She talked about Sexual harassment on work place. She has given various examples of women leadership like famous writer Arundhati Roy, Laxmi acid attack survivor and many more. It was really a wonderful and informative lecture.

The lecture series ended with the feedback of the participants and vote of thanks by Chairperson ICC. The lecture series was successfully organized and fulfilled all its objectives.

Some Glimpse of the Expert Lecture Series







Number of Cases Registered during the Year: 01

16.00 FINANCIAL STATUS**16.01 ANALYSIS OF PLAN AND NON-PLAN GRANTS**

The Institute receives Plan and non-Plan Grants from the Government of India through Department of Higher Education, Ministry of HRD. The accounts are audited by CAG annually.

16.02 SOURCES OF FUND

Statement of Income and Expenditure for the last three years is appended below:

Years	2018-19	2019-20	2020-21
Opening Balance	220296118	450487748	389210660
Total Grant Received	474400000	253300000	303375000
Expenditure	262936370	310735088	287377636
Unspent Balance	450487748	389210660	421699703

Note: Unspent balance includes Interest ₹1,64,91,679/- for the F.Y.2020-21.

17.00 ANNUAL ACCOUNT AND AUDIT REPORT YEAR 2020-21

**ANNUAL ACCOUNT AND AUDIT REPORT
YEAR 2020-21**

राष्ट्रीय प्रौद्योगिकी संस्थान,
उत्तराखण्ड

**National Institute of Technology,
Uttarakhand**



BALANCE
SHEET

FIXED
ASSETS

SPONSORED
PROJECTS

ANNUAL ACCOUNT

2020-21

NATIONAL INSTITUTE OF TECHNOLOGY, UTTARAKHAND

INDEX 2020-21

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NATIONAL INSTITUTE OF TECHNOLOGY, UTTARAKHAND
BALANCE SHEET OF INSITUTE AND R&D FUNDS AS ON 31ST MARCH, 2021

(Figures in Rupees)

SOURCES OF FUNDS	Schedule	Current Year	Previous year
CORPUS / CAPITAL FUND	1	956,601,815.00	886,272,790.00
DESIGNATED / EARMARKED / ENDOWMENT FUNDS	2	45,242,384.00	35,447,362.00
R&D AND PROJECTS	2A	11,218,423.00	7,881,714.00
CURRENT LIABILITIES & PROVISIONS	3	491,957,758.00	480,007,530.00
TOTAL		1,505,020,380.00	1,409,609,396.00
APPLICATION OF FUNDS			
FIXED ASSETS	4		
Tangible Assets		211,484,991.00	222,533,920.00
Intangible Assets		13,163,835.00	9,781,176.00
Capital Works-In-Progress		38,042,900.00	34,558,977.00
INVESTMENTS FROM EARMARKED / ENDOWMENT FUNDS	5		
Long Term		-	-
Short Term		898,067,289.00	834,134,575.00
INVESTMENTS - OTHERS	6	-	-
CURRENT ASSETS	7	206,471,333.00	294,698,835.00
R&D AND PROJECTS	4A & 7A	11,218,423.00	7,881,714.00
LOANS, ADVANCES & DEPOSITS	8	126,571,609.00	6,020,199.00
TOTAL		1,505,020,380.00	1,409,609,396.00

SIGNIFICANT ACCOUNTING POLICIES

23

CONTINGENT LIABILITIES AND NOTES TO ACCOUNTS

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REGISTRAR
 (DR. P.M. KALA)

PLACE: SRINAGAR (GARHWAL)
 DATED: AUG 12, 2021




I/C DIRECTOR
 (DR. SATISH KUMAR)

NATIONAL INSTITUTE OF TECHNOLOGY, UTTARAKHAND
INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31ST MARCH, 2021

(Figures in Rupees)

Particulars	Schedule	Current year	Previous year
INCOME			
Academic Receipts	9	46,498,640.00	67,156,132.00
Grants / Subsidies	10	264,594,805.00	296,187,111.00
Income from investments	11	34,428,745.00	45,590,326.00
Interest earned	12	3,452,058.00	6,633,204.00
Other Income	13	197,160.00	1,929,152.00
Prior Period Income	14	-	35,000.00
TOTAL (A)		349,171,408.00	417,530,925.00
EXPENDITURE		-	
Staff Payment & Benefits (Establishment Expenses)	15	160,752,560.00	163,973,630.00
Academic Expenses	16	25,582,195.00	25,669,014.00
Administrative and General Expenses	17	71,542,496.00	84,291,451.00
Transportation Expenses	18	848,904.00	1,965,054.00
Repairs & Maintenance	19	5,154,273.00	3,540,184.00
Finance costs	20	-	-
Depreciation	4	26,965,178.00	25,132,195.00
Other Expenses	21	-	-
Prior Period Expenses	22	714,377.00	16,747,777.00
TOTAL (B)		291,559,983.00	321,319,305.00
Balance being excess of Income over Expenditure (A-B)		57,611,425.00	96,211,620.00
Transfer to / from Designated Fund			
Student Activity Fund		3,142,000.00	3,927,500.00
Development fund		3,544,000.00	4,132,000.00
Sustainability Fund TEQIP III		6,766,128.00	9,707,504.00
Alumni Association fund		73,500.00	62,500.00
Balance being Surplus / (Deficit) Carried to :			
Capital/Corpus Fund		44,085,797.00	78,382,116.00


REGISTRAR
(DR. P.M. KALA)




I/C DIRECTOR
(DR. SATISH KUMAR)

PLACE: SRINAGAR (GARHWAL)
DATED: AUG 12, 2021

NATIONAL INSTITUTE OF TECHNOLOGY, UTTARAKHAND
SCHEDULES FORMING PART OF BALANCE SHEET AS ON 31st MARCH, 2021

SCHEDULE -1 CORPUS

(Figures in Rupees)

Particulars	Current Year	Previous Year
Balance at the beginning of the year	424,319,806.00	341,805,690.00
Add: Contributions towards Corpus/Capital Fund	3,544,000.00	4,132,000.00
Add: Other Additions	-	-
Add: Excess of Income over expenditure transferred from the Income & Expenditure Account	44,085,797.00	78,382,116.00
Total	471,949,602.00	424,319,806.00
Less: Intt. TFR to Corpus	-	-
Total	471,949,602.00	424,319,806.00
(Deduct) Deficit transferred from the Income & Expenditure Account	-	-
Balance at the end of the year	471,949,602.00	424,319,806.00


REGISTRAR
(DR. P.M. KALA)

PLACE: SRINAGAR (GARHWAL)
DATED: AUG 12, 2021




I/C DIRECTOR
(DR. SATISH KUMAR)

NATIONAL INSTITUTE OF TECHNOLOGY, UTTARAKHAND
SCHEDULES FORMING PART OF BALANCE SHEET AS ON 31ST MARCH, 2021

SCHEDULE -1.1 CAPITAL FUND


(Figures in Rupees)

Particulars	Current Year	Previous Year
Balance at the beginning of the year	461,952,985.00	446,699,141.00
Additions	22,782,831.00	14,547,977.00
Deduction	-	-
Total	484,735,816.00	461,247,118.00
Reserves and Provision	-	-
Additions	2,457.00	705,867.00
Deduction	86,060.00	-
Total	(83,603.00)	705,867.00
Add: Excess of Income over expenditure transferred from the Income & Expenditure Account	-	-
Total	484,652,213.00	461,952,985.00
(Deduct) Deficit transferred from the Income & expenditure Account	-	-
Balance at the year end	484,652,213.00	461,952,985.00


REGISTRAR
(DR. P.M. KALA)

PLACE: SRINAGAR (GARHWAL)
DATED: AUG 12, 2021




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NATIONAL INSTITUTE OF TECHNOLOGY, UTTARAKHAND
SCHEDULES FORMING PART OF BALANCE SHEET AS ON 31ST MARCH,2021

SCHEDULE-2-DESIGNATED / EARMARKED / ENDOWMENT FUND

(Figures in Rupees)

PARTICULARS	2.1	2.2	2.3	Current year	Previous Year
Balance B/F	35,447,362.00	-	-	35,447,362.00	24,100,001.00
Add. Receipts during the year	11,058,110.00	-	-	11,058,110.00	24,990,073.00
Total (a)	46,505,472.00	-	-	46,505,472.00	49,090,074.00
Less Refunds	-	-	-	-	-
Less : Utilized for Revenue Expenditure	1,263,088.00	-	-	1,263,088.00	13,642,712.00
Less : Utilized for Capital Expenditure	-	-	-	-	-
Total (b)	1,263,088.00	-	-	1,263,088.00	13,642,712.00
Unutilized carried forward (a-b)	45,242,384.00	-	-	45,242,384.00	35,447,362.00
Less : Transfer to Capital Fund	-	-	-	-	-
Total	45,242,384.00	-	-	45,242,384.00	35,447,362.00


REGISTRAR
(DR. P.M. KALA)

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DATED: AUG 12, 2021




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NATIONAL INSTITUTE OF TECHNOLOGY, UTTARAKHAND
SCHEDULES FORMING PART OF BALANCE SHEET AS ON 31ST MARCH, 2021

SCHEDULE-2A DESIGNATED / EARMARKED / ENDOWMENT FUNDS OF R&D /PROJECT ACCOUNT

PARTICULARS	PROJECT WISE BREAKUP										(Figures in Rupees) TOTAL	
	SDPC (IMN)	Dr Hardeep Kumar	Dr. M.S. Khatri	DACBTG PI (NK)	DIC (PKR)	STIHCB(RPP)	SMDP (PP)	Dr. Krishan Kumar	Dr. P. Dwivedi	R&C	Current Year	Previous Year
A)												
a) Opening balance	7,435.50	-	-	62,045.00	19,41,002.00	1,41,436.00	8,56,516.00	5,81,533.00	24,50,434.00	5,00,789.00	65,41,190.50	46,80,574.50
b) Additions during the year	-	2,26,440.00	45,000.00	-	49,00,000.00	-	14,40,485.00	12,00,000.00	-	4,44,800.00	82,56,725.00	51,11,611.00
c) Income from investment made of the funds	-	-	-	-	-	-	-	-	-	-	-	-
d) Accrued Interest on investments/ Advances	-	-	-	-	-	-	-	-	-	-	-	-
e) Interest on Savings Bank a/c	196.00	4,278.00	864.00	787.00	1,22,294.00	2,436.00	23,621.00	29,093.00	55,985.00	16,212.00	2,55,766.00	1,16,778.00
f) Other additions (Specify nature)	-	-	-	-	-	-	-	-	-	-	-	-
Adjustment of Loss during the year	-	-	-	-	-	-	-	-	-	-	-	-
Adjustment during the year	-	-	-	-	-	-	-	-	-	-	-	-
Total (A)	7,631.50	2,30,718.00	45,864.00	62,832.00	69,63,296.00	1,43,872.00	23,20,622.00	18,10,626.00	25,06,419.00	9,61,801.00	1,50,53,681.50	99,08,963.50
B)												
Utilisation/Expenditure towards objectives of funds												
i) Capital Expenditure	-	-	-	-	-	-	-	-	-	-	-	19,476.00
ii) Revenue Expenditure	-	1,97,856.00	23,659.00	37,983.50	20,33,521.50	1,17,679.00	15,72,498.00	-	8,46,284.50	4,29,001.00	52,58,482.50	33,48,297.00
Total (B)	-	1,97,856.00	23,659.00	37,983.50	20,33,521.50	1,17,679.00	15,72,498.00	-	8,46,284.50	4,29,001.00	52,58,482.50	33,67,773.00
C) R&D/Project Account - Capital	-	-	-	-	-	-	-	-	-	-	13,40,524.00	13,40,524.00
D) R&D/Project Account - Current Liabilities	-	-	-	-	-	-	-	-	-	-	82,700.00	-
Closing balance at the year end (A-B+C)	7,631.50	32,862.00	22,205.00	24,848.50	49,29,774.50	26,193.00	7,48,124.00	18,10,626.00	16,60,134.50	5,32,800.00	1,12,18,423.00	78,81,714.50


REGISTRAR
(DR. P.M. KALA)

PLACE: SRINAGAR (GARHWAL)
DATED: AUG 12, 2021




I/C DIRECTOR
(DR. SATISH KUMAR)

NATIONAL INSTITUTE OF TECHNOLOGY, UTTARAKHAND
SCHEDULES FORMING PART OF BALANCE SHEET AS ON 31ST MARCH, 2021

SCHEDULE-2.1 DESIGNATED / EARMARKED / ENDOWMENT FUNDS


(Figures in Rupees)

Particulars	Fund wise Breakup									Total	
	Student Activity Fund	Alumni Asso. Fund	DASA Fund	National Physical Laboratory	TEQIP - III Fund	NMEICT	CSAB/CCMT FUND	MNREGA Fund	R & C FUND	Current Year	Previous Year
A.											
a) Opening balance	11,906,000.00	950,800.00	240,000.00	-	19,228,864.00	793,253.00	926,311.00	677,233.00	724,901.00	35,447,362.00	24,100,001.00
b) Additions during the year	3,142,000.00	73,500.00	15,000.00	20,000.00	7,132,529.00	-	404,181.00	-	270,900.00	11,058,110.00	24,990,073.00
c) Income from investment made of the funds	-	-	-	-	-	-	-	-	-	-	-
d) Accrued Interest on investments/ Advances	-	-	-	-	-	-	-	-	-	-	-
e) Interest on Savings Bank a/c	-	-	-	-	-	-	-	-	-	-	-
f) Other additions (Specify nature)	-	-	-	-	-	-	-	-	-	-	-
Total (A)	15,048,000.00	1,024,300.00	255,000.00	20,000.00	26,361,393.00	793,253.00	1,330,492.00	677,233.00	995,801.00	46,505,472.00	49,090,074.00
B.											
Utilisation/Expenditure towards objectives of funds											
i) Capital Expenditure	-	-	-	-	-	-	-	-	-	-	-
ii) Revenue Expenditure	341,197.00	29,617.00	-	-	137,790.00	-	481,252.00	228,650.00	44,582.00	1,263,088.00	13,642,712.00
Total (B)	341,197.00	29,617.00	-	-	137,790.00	-	481,252.00	228,650.00	44,582.00	1,263,088.00	13,642,712.00
Closing balance at the year end (A-B)	14,706,803.00	994,683.00	255,000.00	20,000.00	26,223,603.00	793,253.00	849,240.00	448,583.00	951,219.00	45,242,384.00	35,447,362.00


REGISTRAR
(DR. P.M. KALA)

PLACE: SRINAGAR (GARHWAL)
DATED: AUG 12, 2021




I/C DIRECTOR
(DR. SATISH KUMAR)

NATIONAL INSTITUTE OF TECHNOLOGY, UTTARAKHAND
SCHEDULES FORMING PART OF BALANCE SHEET AS ON 31ST MARCH,2021


SCHEDULE 2.2 PLAN GRANT LIABILITY FOR ASSETS

(Figures in Rupees)		
A. Plan Grants: Government of India	Current year	Previous Year
Balance B/F	-	-
Add. Receipts during the year	-	-
Add. Receipts during the year (CSA)	-	-
Total (a)	-	-
Less Refunds	-	-
Less : Utilized for Revenue Expenditure	-	-
Less : Utilized for Capital Expenditure	-	-
Total (b)	-	-
Less: Transfer to Capital Fund	-	-
Total	-	-


REGISTRAR
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SCHEDULES FORMING PART OF BALANCE SHEET AS ON 31ST MARCH, 2021

SCHEDULE 2.3 EARMARKED FUNDS PLAN GRANT

(Figures in Rupees)

A. Plan Grants: Government of India	Current year	Previous Year
Balance B/F	-	-
Add. Receipts during the year	-	-
Total (a)	-	-
Less Refunds	-	-
Less : Utilized for Revenue Expenditure	-	-
Less : Utilized for Capital Expenditure	-	-
Total (b)	-	-
Unutilized carried forward	(a-b)	-

Note: Particulars of this Schedule has been shown in Schedule 10 as per MHRD Guidelines.


REGISTRAR
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PLACE: SRINAGAR (GARHWAL)
DATED: AUG 12, 2021




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NATIONAL INSTITUTE OF TECHNOLOGY, UTTARAKHAND
SCHEDULES FORMING PART OF BALANCE SHEET AS ON 31ST MARCH, 2021

SCHEDULE 3- CURRENT LIABILITIES & PROVISIONS

Amended as per resolution of the Finance Committee

PARTICULARS	(Figures in Rupees)	
	Current Year	Previous Year
A. CURRENT LIABILITIES		
1. Deposits from Staff	-	-
2. Deposits from Students	2,41,60,546.00	3,73,56,658.00
3. Sundry Creditors		-
a) For Goods & Services	2,04,94,900.00	1,66,54,464.00
b) Others- Rent for Students Hostel MNIT	-	33,54,000.00
4. Deposit-Others (including EMD, Security Deposit)	7,69,786.00	15,07,548.00
5. Statutory Liabilities (GPF, TDS, WC TAX, CPF, GIS, NPS) :	22,59,011.00	22,24,776.00
a) Overdue	-	-
b) Others	-	-
6. Other Current Liabilities		-
a) Fees Received in Advance	80,10,380.00	1,34,85,980.00
b) Salaries	95,93,727.00	97,89,935.00
c) Receipts against sponsored projects	-	-
d) Receipts against sponsored fellowships & Scholarships	3,49,205.00	8,57,841.00
e) Unutilised Grants	-	-
f) Grants in advance	38,95,28,771.00	38,84,92,407.00
g) Interest Earned on GIA (Refundable)	3,13,77,679.00	-
h) Other- Expenses Payable	51,50,571.00	58,85,083.00
i) Other liabilities	2,63,182.00	3,98,838.00
Total (A)	49,19,57,758.00	48,00,07,530.00
B. PROVISIONS		
1. For Taxation	-	-
2. Gratuity	-	-
3. Superannuation Pension	-	-
4. Accumulated Leave Encashment	-	-
5. Trade Warranties / Claims	-	-
6. Other - Leave Salary & Pension Contribution	-	-
Total (B)	-	-
Total (A+B)	49,19,57,758.00	48,00,07,530.00


REGISTRAR
(DR. P.M. KALA)

PLACE: SRINAGAR GARHWAL
DATED: SEP 30, 2021




I/C DIRECTOR
(DR. SATISH KUMAR)

Name of Entity : NATIONAL INSTITUTE OF TECHNOLOGY,UTTARAKHAND
SCHEDULES FORMING PART OF BALANCE SHEET AS ON 31ST MARCH, 2021

SCHEDULE-3 (a) SPONSORED PROJECTS

1. Sr. No.	2. Name of the Project	Opening Balance		5. Receipts/Recoveries during the year		6. Total	7. Expenditure during the year		(Figures in Rupees)	
		3. Credit	4. Debit						Closing Balance	
									8. Credit	9. Debit
-	-	-	-	-	-	-	-	-	-	
Total		-	-	-	-	-	-	-	-	

1. The Projects may be listed agency-wise, with sub-totals for each agency.
2. The total of Col. 8 (Credit) will appear under the above head on the liabilities side of the Balance Sheet (Schedule 3).
3. The total of Col.9 (Debit) will appear as receivables in schedule 8,Loans, Advances and Deposits, on the Assets side of the Balance Sheet.


REGISTRAR
(DR. P.M. KALA)

PLACE: SRINAGAR GARHWAL
DATED: AUG 12, 2021




I/C DIRECTOR
(DR. SATISH KUMAR)

**Name of Entity : NATIONAL INSTITUTE OF TECHNOLOGY,UTTARAKHAND
SCHEDULES FORMING PART OF BALANCE SHEET AS ON 31ST MARCH, 2021**

SCHEDULE-3 (B) SPONSORED FELLOWSHIPS AND SCHOLARSHIPS

(Figures in Rupees)

SL NO 1.	2. Name of Sponsor	Opening Balance As On 01.04.2020		Transactions During the year		Closing Balance As in 31.03.21	
		3	4	5	6	7	8
		CR.	DR.	CR.	DR.	CR.	DR.
1	University Grants Commission	-	-	-	-	-	-
2	Ministry	-	-	-	-	-	-
3	Others (Specify individually)	-	-	-	-	-	-
	Total	-	-	-	-	-	-

Note:

- 1.The total of Column 7, (Credit) will appear under the above head, on the liabilities side of the balance sheet (Schedule 3).
- 2.The total of Column 8 (Debit) will appear as Receivables on the Assets side of the Balance Sheet in Schedule 8 (Loans, Advances and Deposits).


**REGISTRAR
(DR. P.M. KALA)**




**I/C DIRECTOR
(DR. SATISH KUMAR)**

**PLACE: SRINAGAR GARHWAL
DATED: AUG 12, 2021**

Name of Entity : NATIONAL INSTITUTE OF TECHNOLOGY,UTTARAKHAND
SCHEDULES FORMING PART OF BALANCE SHEET AS ON 31ST MARCH, 2021

SCHEDULE 3 (C) UNUTILISED GRANTS FORM UGC, GOVERNMENT OF INDIA AND STATE GOVERNMENTS

(Figures in Rupees)

	Current Year	Previous Year
A. Plan grants: Government of India		
	0.00	0.00
Balance B/F		
Add: Receipts during the year		
Total (a)	0.00	0.00
Less Refunds		
Less: Utilized for Revenue Expenditure	0.00	0.00
Less: Utilized for capital Expenditure		
Total(b)	0.00	0.00
Unutilized carried forward (a -b)	0.00	0.00
B. UGC grants: Plan		
balance B/F		
Receipts during the year		
Total (c)	0.00	0.00
Less Refund		
Less: Utilized for Revenue Expenditure		
Less: Utilized for capital expenditure		
Total (d)	0.00	0.00
Unutilized carried forward (c-d)	0.00	0.00


REGISTRAR
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PLACE: SRINAGAR GARHWAL
DATED: AUG 12, 2021




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NATIONAL INSTITUTE OF TECHNOLOGY, UTTARAKHAND
SCHEDULES FORMING PART OF BALANCE SHEET AS ON 31ST MARCH, 2021

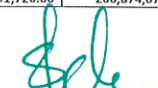
SCHEDULE 4 FIXED ASSETS

S.No.	Tangible Assets Heads	Gross Block					Depreciation for the Year- 2020-21				Net Block	
		ORIGINAL COST AS ON 01.04.2020	Additions	Adjustment	Deductions	Closing Balance	Depreciation on Opening Balance	Depreciation for the year	Deductions / Adjustment	Total Depreciation	31.03.2021	31.03.2020
1	Land	1.00	-	-	-	1.00	-	-	-	-	1.00	1.00
2	Site Development	-	-	-	-	-	-	-	-	-	-	-
3	Buildings	179,387,424.00	-	-	-	179,387,424.00	21,882,161.00	3,587,740.00	-	25,469,910.00	153,917,514.00	157,505,263.00
4	Sports Equipment	-	-	-	-	-	-	-	-	-	-	-
5	Tubewells & Water Supply	110,787.00	-	-	-	110,787.00	8,132.00	2,215.00	-	10,347.00	100,440.00	102,655.00
6	Sewerage & drainage	-	-	-	-	-	-	-	-	-	-	-
7	Electrical Installation and equipment	10,689,434.00	26,150.00	-	-	10,715,584.00	2,883,630.00	535,789.00	-	3,419,419.00	7,296,165.00	7,805,804.00
8	Plant & Machinery	1,336,089.00	-	-	-	1,336,089.00	223,105.00	66,805.00	-	289,910.00	1,046,179.00	1,112,984.00
9	Scientific & Laboratory Equipment	43,116,990.00	822,114.00	-	-	43,939,104.00	18,051,873.00	3,515,135.00	-	21,567,008.00	22,372,096.00	25,065,117.00
10	Office Equipment	4,868,209.00	204,507.00	-	-	5,072,716.00	1,987,842.00	380,461.00	-	2,368,303.00	2,704,413.00	2,880,367.00
11	Audio Visual Equipment	5,814,613.00	2,000.00	-	-	5,816,613.00	2,506,899.00	436,248.00	-	2,943,147.00	2,873,466.00	3,307,714.00
12	Computers & Peripherals	45,820,561.00	4,108,013.00	-	-	49,928,574.00	43,394,150.00	3,452,290.00	-	46,846,440.00	3,082,134.00	2,426,411.00
13	Furniture, Fixtures & Fittings	27,961,018.00	55,706.00	-	-	28,016,724.00	13,002,112.00	2,101,272.00	-	15,103,384.00	12,913,340.00	14,958,906.00
14	Vehicles	3,948,471.00	-	-	-	3,948,471.00	2,271,068.00	394,848.00	-	2,665,916.00	1,282,555.00	1,677,403.00
15	Lib. Books & Scientific Journals	18,075,056.00	3,060.00	-	-	18,078,116.00	12,731,242.00	1,758,709.00	-	14,489,951.00	3,588,165.00	5,343,814.00
16	Small Value Assets	1,710,206.00	11,901.00	-	-	1,722,107.00	1,709,975.00	11,891.00	-	1,721,866.00	241.00	231.00
17	Stock	25,026.00	-	-	-	25,026.00	-	-	-	-	25,026.00	25,026.00
18	Project Development (Office Equipment)	16,480.00	-	-	-	16,480.00	2,472.00	1,236.00	-	3,708.00	12,772.00	14,008.00
19	Audio Visual (CSA)	33,490.00	-	-	-	33,490.00	8,576.00	2,634.00	-	11,210.00	22,280.00	24,914.00
20	Computer & Peripherals (CSA)	26,200.00	-	-	-	26,200.00	14,420.00	5,240.00	-	19,660.00	6,540.00	11,780.00
21	Electrical Equipments (CSA)	2,700.00	-	-	-	2,700.00	405.00	135.00	-	540.00	2,160.00	2,295.00
22	Sports Equipment (CSA)	370,412.00	-	-	-	370,412.00	102,117.00	29,633.00	-	131,750.00	238,662.00	268,295.00
23	Furniture & Fixture (CSA)	1,200.00	-	-	-	1,200.00	270.00	90.00	-	360.00	840.00	930.00
24	Small Value Assets (CSA)	8,560.00	-	-	-	8,560.00	8,558.00	-	-	8,558.00	2.00	2.00
	Total (A)	343,322,927.00	5,233,451.00	-	-	348,556,378.00	120,789,007.00	16,282,380.00	-	137,071,387.00	211,484,991.00	222,533,920.00
25	Capital Work in Progress (B)	34,558,977.00	3,483,923.00	-	-	38,042,900.00	-	-	-	-	38,042,900.00	34,558,977.00
S.No.	Intangible Assets	ORIGINAL COST AS ON 01.04.20	Additions	Adjustment	Deductions	Closing Balance	Amortization on Opening Balance	Amortization for the Year	Deductions / Adjustment	Total Amortization	31.03.2021	31.03.2020
26	Software	51,592,247.00	552,996.00	-	-	52,145,243.00	49,516,522.00	1,066,287.00	-	50,582,809.00	1,562,434.00	2,075,725.00
27	E-Journals, Books	19,249,655.00	13,512,461.00	-	-	32,762,116.00	11,544,204.00	9,616,511.00	-	21,160,715.00	11,601,401.00	7,705,451.00
	Total (C)	70,841,902.00	14,065,457.00	-	-	84,907,359.00	61,060,726.00	10,682,798.00	-	71,743,524.00	13,163,835.00	9,781,176.00
	Grand Total (A+B+C)	448,723,806.00	22,782,831.00	-	-	471,506,637.00	181,849,733.00	26,965,178.00	-	208,814,911.00	262,691,726.00	266,874,073.00


REGISTRAR
(DR. P.M. KALA)

PLACE: SRINAGAR GARHWAL
DATED: AUG 12, 2021




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NATIONAL INSTITUTE OF TECHNOLOGY, UTTARAKHAND
SCHEDULES FORMING PART OF BALANCE SHEET AS ON 31ST MARCH, 2021

SCHEDULE 4A: FIXED ASSETS R&D AND PROJECTS 2020-21


(Figures in Rupees)

S.NO	Tangible Assets Heads	Gross Block (ASSETS)				Depreciation for the Year- 2020-21				Net Block	
		Original Cost as on 01.04.20	Additions	Deductions	CI Balance	Depreciation On Opening Balance	Depreciation for the year	Deductions / Adjustment	Total Depreciation	31.03.21	31.03.20
1	Small Value Assets (SMDP)	-	-	-	-	-	-	-	-	-	-
2	Computer & Peripherals (SMDP)	-	-	-	-	-	-	-	-	-	-
3	Laboratory & Scientific Equipments (IMN)	500,000.00	-	-	500,000.00	-	-	-	-	500,000.00	500,000.00
4	Laboratory & Scientific Equipments (SRD)	840,524.00	-	-	840,524.00	-	-	-	-	840,524.00	840,524.00
	Total	1,340,524.00	-	-	1,340,524.00	-	-	-	-	1,340,524.00	1,340,524.00


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 DATED: AUG 12, 2021




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SCHEDULES FORMING PART OF BALANCE SHEET AS ON 31ST MARCH, 2021

SCHEDULE 4 C - INTANGIBLE ASSETS

(Figures in Rupees)

S.NO	Assets Heads	Gross Block				Depreciation for the Year 2020-21				Net Block	
		OP Balance 01.04.2020	Additions	Deductions	CI Balance	Depreciation/ Amortizations Opening Balance	Depreciation/ Amortization for the Year	Deductions/ Adjustment	Total Depreciation /Amortization	31.03.2021	31.03.2020
1	Patents & Copyrights	-	-	-	-	-	-	-	-	-	-
2	Computer Software	-	-	-	-	-	-	-	-	-	-
3	E- Journals	-	-	-	-	-	-	-	-	-	-


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NATIONAL INSTITUTE OF TECHNOLOGY, UTTARAKHAND
SCHEDULES FORMING PART OF BALANCE SHEET AS ON 31ST MARCH, 2021

SCHEDULE 4C (i) PATENTS AND COPYRIGHTS

(Figures in Rupees)

Particulars	Op. Balance	Addition	Gross	Amortization	Net Block 2020-21	Net Block 2019-20
A Patents Granted						
1 Balance as on 31.03.21 of Patents obtained in Year _____ (Original Value - Rs..../-)						
2 Balance as on 31.03.21 of Patents obtained in Year _____ (Original Value - Rs..../-)	-	-	-	-	-	-
3 Balance as on 31.03.21 of Patents obtained in Year _____ (Original Value - Rs..../-)						
4 Patents granted during the Current Year						
Total	-	-	-	-	-	-

Rs. In Lakhs

Particulars	Op. Balance	Addition	Gross	Patents Granted/Rejected	Net Block 2020-21	Net Block 2019-20
B. Patents Pending in respect of Patents applied for						
1 Expenditure incurred during the Year _____	-	-	-	-	-	-
2 Expenditure incurred during the Year _____						
3 Expenditure incurred during the Year _____						
Total	-	-	-	-	-	-
C. Grand Total (A+B)	-	-	-	-	-	-

Note: The addition in Part A (patents granted), will be the figure of patents granted during the year, transferred from Part B (column - Patents granted/rejected). The amount against grants rejected during the year is written off in the Income and Expenditure Account.


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PLACE: SRINAGAR GARHWAL
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NATIONAL INSTITUTE OF TECHNOLOGY, UTTARAKHAND
SCHEDULES FORMING PART OF BALANCE SHEET AS ON 31ST MARCH, 2021

SCHEDULE 4D OTHERS

(Figures in Rupees)


S.NO	Assets Heads	Gross Block				Depreciation for the Year 2020-21				Net Block	
		OP Balance 01.04.2020	Additions	Deductions	CI Balance	Dep Opening Balance	Depreciation for the year	Deductions / Adjustment	Total Depreciation	31.03.2021	31.03.2020
1	Land	-	-	-	-	-	-	-	-	-	-
2	Site Development	-	-	-	-	-	-	-	-	-	-
3	Buildings	-	-	-	-	-	-	-	-	-	-
4	Roads & Bridges	-	-	-	-	-	-	-	-	-	-
5	Tubewells & Water Supply	-	-	-	-	-	-	-	-	-	-
6	Sewerage & drainage	-	-	-	-	-	-	-	-	-	-
7	Electrical Installation and equipment	-	-	-	-	-	-	-	-	-	-
8	Plant & Machinery	-	-	-	-	-	-	-	-	-	-
9	Scientific & Laboratory Equipment	-	-	-	-	-	-	-	-	-	-
10	Office Equipment	-	-	-	-	-	-	-	-	-	-
11	Audio Visual Equipment	-	-	-	-	-	-	-	-	-	-
12	Computers & Peripherals	-	-	-	-	-	-	-	-	-	-
13	Furniture, Fixtures & Fittings	-	-	-	-	-	-	-	-	-	-
14	Vehicles	-	-	-	-	-	-	-	-	-	-
15	Lib. Books & Scientific Journals	-	-	-	-	-	-	-	-	-	-
16	Small Value Assets	-	-	-	-	-	-	-	-	-	-
	Total	-	-	-	-	-	-	-	-	-	-
17	Capital Work in Progress	-	-	-	-	-	-	-	-	-	-
	Grand Total	-	-	-	-	-	-	-	-	-	-

Note: The additions during the Year include additions from:

- Gifted
- Earmarked Funds
- Sponsored Projects
- Own Funds
- Total**


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NATIONAL INSTITUTE OF TECHNOLOGY, UTTARAKHAND
SCHEDULES FORMING PART OF BALANCE SHEET AS ON 31ST MARCH, 2021


SCHEDULE 5 : INVESTMENTS FROM EARMARKED/ENDOWMENT FUNDS/ OTHERS

(Figures in Rupees)

PARTICULARS	Current Year	Previous Year
1. In Central Government Securities	-	-
2. In State Government Securities	-	-
3. Other Approved Securities	-	-
4. Shares	-	-
5. Debentures and Bonds	-	-
6. Term Deposits with Banks	89,80,67,289.00	83,41,34,575.00
7. Others (to be specified)	-	-
Total	89,80,67,289.00	83,41,34,575.00


REGISTRAR
(DR. P.M. KALA)




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PLACE: SRINAGAR (GARHWAL)

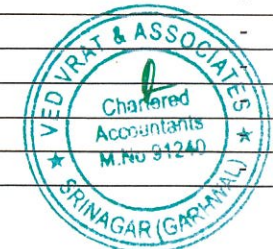
DATED: AUG 12, 2021

NATIONAL INSTITUTE OF TECHNOLOGY, UTTARAKHAND
SCHEDULES FORMING PART OF BALANCE SHEET AS ON 31ST MARCH, 2021

SCHEDULE 5A: INVESTMENTS FROM EARMARKED/ENDOWMENT FUNDS (FUND WISE) CORPUS FUND

(Figures in Rupees)

S.No.	Funds	Current Year	Previous Year
1	ALLAHABAD BANK FDR 50511679374	-	1,99,99,999.00
2	ALLAHABAD BANK FDR 50511959373	-	1,99,99,999.00
3	ALLAHABAD BANK FDR 50512104723	-	1,99,99,999.00
4	ALLAHABAD BANK FDR 50512315043	-	1,99,99,999.00
5	ALLAHABAD BANK FDR 50512427665	-	1,99,99,999.00
6	ALLAHABAD BANK FDR 50512527148	-	1,99,99,999.00
7	ALLAHABAD BANK FDR 50512655670	-	1,99,99,999.00
8	ALLAHABAD BANK FDR 50512879043	-	1,99,99,999.00
9	ALLAHABAD BANK FDR 50512998594	-	1,99,99,999.00
10	ALLAHABAD BANK FDR 50513141595	-	1,99,99,999.00
11	FDR ICICI BANK 6768013003355	-	2,45,19,695.00
12	FDR PNB 085400PU00006327	-	9,30,00,000.00
13	FDR PNB 085400PU00006336	-	9,30,00,000.00
14	FDR PNB 085400PU00006354	-	8,38,20,461.00
15	FDR PNB 085400PU00006381	-	9,30,00,000.00
16	FDR NAINITAL BANK LTD. 3501882	-	24,67,94,429.00
17	ALLAHABAD BANK FDR 50520877169	1,99,99,999.00	-
18	ALLAHABAD BANK FDR 50520950425	1,99,99,999.00	-
19	ALLAHABAD BANK FDR 50521037855	1,99,99,999.00	-
20	FDR ICICI BANK 676813004774	1,99,00,000.00	-
21	FDR ICICI BANK 676813004775	97,00,000.00	-
22	FDR ICICI BANK 676813004776	1,99,00,000.00	-
23	FDR ICICI BANK 676813004777	1,99,00,000.00	-
24	FDR ICICI BANK 676813004778	1,99,00,000.00	-
25	FDR ICICI BANK 676813004779	1,90,00,000.00	-
26	FDR ICICI BANK 676813004780	26,00,000.00	-
27	FDR ICICI BANK 676813004781	1,99,00,000.00	-
28	FDR ICICI BANK 676813004782	1,99,00,000.00	-
29	FDR ICICI BANK 676813004783	1,99,00,000.00	-
30	FDR ICICI BANK 676813004784	1,99,00,000.00	-
31	FDR PNB 085400PU00011280	1,99,90,000.00	-
32	FDR PNB 085400PU00011299	1,99,90,000.00	-
33	FDR PNB 085400PU00011305	1,99,90,000.00	-
34	FDR PNB 085400PU00011314	1,99,90,000.00	-




S.No.	Funds	Current Year	Previous Year
35	FDR PNB 085400PU00011323	1,99,90,000.00	-
36	FDR PNB 085400PU00011350	1,99,90,000.00	-
37	FDR PNB 085400PU00011378	1,99,90,000.00	-
38	FDR PNB 085400PU00011396	1,99,90,000.00	-
39	FDR PNB 085400PU00011402	1,99,90,000.00	-
40	FDR PNB 085400PU00011411	1,99,90,000.00	-
41	FDR PNB 085400PU00011420	1,99,90,000.00	-
42	FDR PNB 085400PU00011439	1,99,90,000.00	-
43	FDR PNB 085400PU00011448	1,99,90,000.00	-
44	FDR PNB 085400PU00011457	1,99,90,000.00	-
45	FDR PNB 085400PU00011466	1,99,90,000.00	-
46	FDR PNB 085400PU00011475	1,99,90,000.00	-
47	FDR PNB 085400PU00011484	1,99,90,000.00	-
48	FDR PNB 085400PU00011493	1,99,90,000.00	-
49	FDR PNB 085400PU00011509	1,99,90,000.00	-
50	FDR PNB 085400PU00011527	78,67,294.00	-
51	FDR PNB 614000PU00011019	1,99,99,999.00	-
52	FDR PNB 614000PU00011028	1,99,90,000.00	-
53	FDR PNB 614000PU00011037	1,99,90,000.00	-
54	FDR PNB 614000PU00011046	1,99,90,000.00	-
55	FDR PNB 614000PU00011055	1,99,90,000.00	-
56	FDR PNB 614000PU00011064	1,99,90,000.00	-
57	FDR PNB 614000PU00011073	1,99,90,000.00	-
58	FDR PNB 614000PU00011082	1,99,90,000.00	-
59	FDR PNB 614000PU00011091	1,99,90,000.00	-
60	FDR PNB 614000PU00011107	1,99,90,000.00	-
61	FDR PNB 614000PU00011116	1,99,99,999.00	-
62	FDR PNB 614000PU00011125	1,99,90,000.00	-
63	FDR PNB 614000PU00011134	1,99,90,000.00	-
	Grand Total	89,80,67,289.00	83,41,34,575.00


REGISTRAR
(DR. P.M. KALA)

PLACE: SRINAGAR (GARHWAL)
DATED: AUG 12, 2021




I/C DIRECTOR
(DR. SATISH KUMAR)

NATIONAL INSTITUTE OF TECHNOLOGY, UTTARAKHAND
SCHEDULES FORMING PART OF BALANCE SHEET AS ON 31ST MARCH, 2021

SCHEDULE 6 : INVESTMENTS OTHERS

(Figures in Rupees)

PARTICULARS	Current Year	Previous Year
1. In Central Government Securities	-	-
2. In State Government Securities	-	-
3. Other Approved Securities	-	-
4. Shares	-	-
5. Debentures and Bonds	-	-
6. Term Deposits with Banks	-	-
7. Others (to be specified)	-	-
Total	-	-


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SCHEDULE FORMING PART OF BALANCE SHEET AS ON 31ST MARCH, 2021

SCHEDULE 7- CURRENT ASSETS


(Figures in Rupees)

Particulars	Current Year	Previous Year
1. Stock:		
a) Stores and Spares	-	-
b) Loose Tools	-	-
c) Publications	-	-
d) Laboratory Chemicals, consumables and glass ware	-	-
e) Building Material	-	-
f) Electrical Material	-	-
g) Stationery	-	-
h) Water supply material	-	-
2. Sundry Debtors :		
a) Debts Outstanding for a period exceeding six months	-	-
b) Others : Recovery from Employees	1,825.00	1,825.00
3. ACCRUED INTEREST	3,03,13,420.00	3,03,94,136.00
4. T.D.S. on FDR Interest	9,97,993.00	8,70,393.00
5. Cash and Bank Balances		
a) With Scheduled Banks:		
In Current Accounts	20,37,031.00	1,79,93,825.00
R & D Current A/C	-	-
In term deposit Accounts	-	-
In Savings Accounts	17,31,21,064.00	24,54,38,656.00
b) With Non-Scheduled Banks:		
In term deposit Accounts	-	-
In Savings Accounts	-	-
4. Post Office- Savings Accounts	-	-
TOTAL	20,64,71,333.00	29,46,98,835.00


REGISTRAR
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NATIONAL INSTITUTE OF TECHNOLOGY, UTTARAKHAND
SCHEDULES FORMING PART OF BALANCE SHEET AS ON 31ST MARCH, 2021

SCHEDULE 7A- CURRENT ASSETS -R&D AND PROJECTS

(Figures in Rupees)

	Current Year	Previous Year
1. Stock:		
a) Stores and Spares	-	-
b) Loose Tools	-	-
c) Publications	-	-
d) Laboratory Chemicals, consumables and glass ware	-	-
e) Building Material	-	-
f) Electrical Material	-	-
g) Stationery	-	-
h) Water supply material	-	-
2. Sundry Debtors :		
a) Debts Outstanding for a period exceeding six months	-	-
b) Others (Duties & Taxes)	19,200.00	(7,200.00)
3. ACCRUED INTEREST	-	-
4. RECOVERABLE AMOUNT OF NPS	-	-
5. Cash and Bank Balances		
a) With Scheduled Banks:		
In Current Accounts		
SBI A/C No 3351969550 SDPC (IMN)	-	-
SBI A/C No 3351969550 SERB (SRD)	-	-
SBI A/C No 37530603172 R & D (Saving)	91,10,575.00	56,91,874.50
SBI A/C No 37357884648 SMDP (Saving)	7,48,124.00	8,56,515.50
SBI A/C 34936696386 SMDP (PP)	-	-
In term deposit Accounts		
In Savings Accounts	-	-
b) With Non-Scheduled Banks:		
In term deposit Accounts	-	-
In Savings Accounts	-	-
4. Post Office- Savings Accounts	-	-
TOTAL	98,77,899.00	65,41,190.00


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NATIONAL INSTITUTE OF TECHNOLOGY, UTTARAKHAND
SCHEDULE FORMING PART OF BALANCE SHEET AS ON 31ST MARCH, 2021

SCHEDULE 8 - LOANS, ADVANCES & DEPOSITS

Particulars	(Figures in Rupees)	
	Current year	Previous year
1. Advances to employees: (Non- Interest bearing)		
a) Salary	-	-
b) Festival	-	-
c) Medical Advance	-	-
d) Other - For Work Expenses	-	17,66,066.00
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	12,55,51,649.00	36,80,362.00
b) to Suppliers	-	-
c) Others	-	12,227.00
4. Prepaid Expenses		
a) Insurance	-	-
b) Other expenses	-	-
5. Deposits		
a) Telephone	12,439.00	12,439.00
b) Lease Rent	-	-
c) Electricity	3,82,855.00	3,82,855.00
d) AICTE, if applicable	-	-
e) Others (to be specified)	1,66,250.00	1,66,250.00
6. Income Accrued:		
a) On Investments from Earmarked/ Endowment Funds	-	-
b) On Investments- Others	-	-
c) On Loans and Advances	-	-
d) Other (includes income due unrealized)	-	-
7. Other- Current assets receivable from UGC/sponsored projects		
a) Debit balances in Sponsored Projects	4,58,416.00	-
b) Debit balances in Sponsored Fellowships & Scholarships	-	-
c) Grants Receivable	-	-
d) Other Receivables (Plan Grant Receivable)	-	-
8. Claims Receivable	-	-
TOTAL	12,65,71,609.00	60,20,199.00


REGISTRAR
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NATIONAL INSTITUTE OF TECHNOLOGY, UTTARAKHAND
SCHEDULES FORMING PART OF INCOME & EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31ST MARCH, 2021

SCHEDULE 9- ACADEMIC RECEIPTS

(Figures in Rupees)

FEES FROM STUDENTS	Current year	Previous year
Academic		
1. Tuition fee	3,21,14,825.00	3,94,96,015.00
2. Book Bank Fees	3,91,000.00	7,85,000.00
3. Examination Fees	10,10,600.00	12,56,000.00
Other Fees		
1. Seat Rent	22,42,712.00	78,87,460.00
2. Hostel Receipts	3,22,375.00	4,08,000.00
3. Transcript Fees	11,601.00	18,000.00
4. Convocation Fees	1,47,000.00	1,20,500.00
5. Security Services fees	10,67,220.00	8,25,000.00
6. Miscellaneous Fees- Duplicate Documents Fees	21,700.00	2,000.00
7. Thesis Submission Fees	-	5,000.00
8. Alumni Association Fees	73,500.00	62,500.00
9. Student Related Activity Fees	31,42,000.00	39,26,700.00
10. Development Fees	35,44,000.00	41,32,000.00
11. Duplicate ID Card Charges	100.00	12,500.00
12. IRG Electricity and Water	19,87,277.00	76,90,629.00
13. Admission Cancellation Fees	-	62,000.00
14. Late Fees Charges	60,010.00	1,84,000.00
15. Misc. Academic Income	15,710.00	32,828.00
16. PHD Application Fees	2,52,010.00	90,000.00
17. PHD Examination Fees	25,000.00	-
18. PHD Registration Fees	70,000.00	1,60,000.00
TOTAL	4,64,98,640.00	6,71,56,132.00


REGISTRAR
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PLACE: SRINAGAR (GARHWAL)
DATED: AUG 12, 2021




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NATIONAL INSTITUTE OF TECHNOLOGY, UTTARAKHAND
SCHEDULE FORMING PART OF INCOME AND EXPENDITURE FOR THE YEAR ENDED 31ST MARCH, 2021

Amended as per resolution of the Finance Committee

SCHEDULE 10- GRANTS / SUBSIDIES (IRREVOCABLE GRANTS RECEIVED)

(Figures in Rupees)

Particulars	Plan	Current Year	Previous Year
	Govt. of India		
Balance B/F		38,84,17,407.00	44,96,94,495.00
Add: Receipts during the Year	30,33,75,000.00	30,33,75,000.00	25,33,00,000.00
Add: Interest Earned	1,64,91,679.00	1,64,91,679.00	1,48,86,000.00
Total	31,98,66,679.00	70,82,84,086.00	71,78,80,495.00
Less: Refund to MHRD (Interest)	-	-	1,87,28,000.00
Total Grants available	-	70,82,84,086.00	69,91,52,495.00
Less: Utilised for Capital expenditure (A)	-	2,27,82,831.00	1,45,47,977.00
Less: Transferred to MNIT Jaipur	-	-	-
Balance	-	68,55,01,255.00	68,46,04,518.00
Less: Utilized for Revenue Expenditure (B)	-	26,45,94,805.00	29,61,87,111.00
Balance C/F (C)	-	42,09,06,450.00	38,84,17,407.00

A- Appears as addition to capital fund as well as additions to Fixed Assets during the year.

B- Appears as income in the income & Expenditure Account.

C-(I) Appears under Current Liabilities in the Balance Sheet and will become the opening balance next year.

(II) Represented by Bank balance, Investments and Advances on the assets side.


REGISTRAR
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PLACE: SRINAGAR (GARHWAL)
DATED: SEP 30, 2021




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NATIONAL INSTITUTE OF TECHNOLOGY, UTTARAKAND
SCHEDULE FORMING PART OF INCOME AND EXPENDITURE FOR THE YEAR ENDED 31ST MARCH, 2021

SCHEDULE 11- INCOME FROM INVESTMENTS

(Figures in Rupees)

Particulars	Earmarked/Endowment Funds		Other Investments	
	Current Year	Previous Year	Current Year	Previous Year
1. Interest				
a. On Government Securities				
b. Other Bonds/Debentures				
2. Interest on Term Deposits	3,44,28,745.00	4,55,90,326.00		
3. Income accrued but not due on term deposits/				
Interest bearing advances to employees				
4. Interest on Savings Bank Accounts				
5. Others (Specify)				
Total	3,44,28,745.00	4,55,90,326.00	-	-
Transferred to Earmarked/Endowment Funds		-		
Balance	3,44,28,745.00	4,55,90,326.00		


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PLACE: SRINAGAR (GARHWAL)
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NATIONAL INSTITUTE OF TECHNOLOGY, UTTARAKHAND
SCHEDULE FORMING PART OF INCOME & EXPENDITURE FOR THE YEAR 31ST MARCH, 2021

SCHEDULE 12: INTEREST EARNED

Particulars	(Figures in Rupees)	
	Current Year	Previous Year
1. On Savings Accounts with Scheduled banks	34,52,058.00	66,33,204.00
2. On Loans	-	-
a. Employees/ Staff	-	-
b. Others	-	-
3. On Debtors and Other Receivables		-
Total	34,52,058.00	66,33,204.00

Note:

1. The amount against item 1, in respect of Bank Accounts of Earmarked/Endowment Funds is dealt with in Schedule 11 (First Part) and Schedule 2.
2. Items 2(a) is applicable only if revolving funds have not been constituted for such advances.


REGISTRAR
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PLACE: SRINAGAR (GARHWAL)
DATED: AUG 12, 2021

NATIONAL INSTITUTE OF TECHNOLOGY, UTTARAKHAND
SCHEDULE FORMING PART OF INCOME AND EXPENDITURE FOR THE YEAR ENDED 31ST MARCH, 2021


SCHEDULE 13 - OTHER INCOME

(Figures in Rupees)

	Current Year	Previous Year
1. Recruitment Fees	1,06,750.00	2,90,500.00
2. RTI Fees	160.00	495.00
3. Tender Fees	28,000.00	24,000.00
4. Sale of application form (recruitment)	-	-
5. Misc. receipts	1,800.00	35,000.00
6. Profit on Sale/ disposal of Assets		
a) Owned assets	-	-
b) Assets received free of cost	-	-
7. Grants/ Donations from Institutions, Welfare Bodies and International Organizations	-	-
8. License Fee	-	-
9. Others - Forfeiture of Security Deposits	-	14,56,157.00
10. Vendor Registration Fees	-	-
11. Lab Facility Charges	-	-
12. Notice Pay Received	-	-
13. Sponsorship AIINIT Sports	-	1,23,000.00
14. Excess & Short	-	-
15. Student Medical Insurance Chrges	60,450.00	-
Total	1,97,160.00	19,29,152.00


REGISTRAR
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NATIONAL INSTITUTE OF TECHNOLOGY, UTTARAKHAND
SCHEDULE FORMING PART OF INCOME AND EXPENDITURE FOR THE YEAR ENDED 31ST MARCH, 2021

SCHEDULE 14 - PRIOR PERIOD INCOME

(Figures in Rupees)

Particulars	Current Year	Previous Year
1. Academic Receipts	-	-
2. Income from Investments	-	-
3. Interest earned	-	-
4. Other Income	-	35,000.00
Total	-	35,000.00


REGISTRAR
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NATIONAL INSTITUTE OF TECHNOLOGY, UTTARAKHAND
SCHEDULE FORMING PART OF INCOME AND EXPENDITURE FOR THE YEAR ENDED 31ST MARCH, 2021

SCHEDULE 15 - STAFF PAYMENTS & BENEFITS (ESTABLISHMENT EXPENSES)


(Figures in Rupees)

	Current Year			Previous Year		
	Plan	Non Plan	Total	Plan	Non Plan	Total
a) Salaries and Wages	13,48,19,850.00	-	13,48,19,850.00	14,00,35,921.00	-	14,00,35,921.00
Teaching Staff	10,20,51,416.00	-	10,20,51,416.00	10,48,00,507.00	-	10,48,00,507.00
Non-Teaching Staff	3,20,34,293.00	-	3,20,34,293.00	3,44,97,437.00	-	3,44,97,437.00
Earned Leave Encashment	7,34,141.00	-	7,34,141.00	7,37,977.00	-	7,37,977.00
b) Allowances and Bonus	3,04,301.00	-	3,04,301.00	24,72,564.00	-	24,72,564.00
Hill Allowances	-	-	-	-	-	-
Teaching Staff	-	-	-	-	-	-
Non-Teaching Staff	-	-	-	-	-	-
DA Arrears	-	-	-	21,43,320.00	-	21,43,320.00
Bonus	-	-	-	-	-	-
Cumulative Professional Development Allowance	3,04,301.00	-	3,04,301.00	3,29,244.00	-	3,29,244.00
c) Contribution to Provident Fund	-	-	-	-	-	-
d) Contribution to Other Fund	-	-	-	-	-	-
e) Leave Salary & Pension Contribution	5,49,135.00	-	5,49,135.00	8,37,744.00	-	8,37,744.00
f) Staff welfare Expenses	-	-	-	-	-	-
g) Retirement and Terminal Benefits (Employer Contribution towards NPS)	1,49,41,553.00	-	1,49,41,553.00	1,40,38,970.00	-	1,40,38,970.00
h) LTC facility	37,92,378.00	-	37,92,378.00	9,52,803.00	-	9,52,803.00
i) Medical facility	31,18,913.00	-	31,18,913.00	38,32,140.00	-	38,32,140.00
Medical And Dispensary	4,02,941.00	-	4,02,941.00	3,80,036.00	-	3,80,036.00
Medical Reimbursement/Healthcare	27,15,972.00	-	27,15,972.00	34,52,104.00	-	34,52,104.00
j) Children Education Allowance	14,30,200.00	-	14,30,200.00	10,21,063.00	-	10,21,063.00
k) Honorarium	1,94,668.00	-	1,94,668.00	27,500.00	-	27,500.00
l) Consultancy/Professional Charges	16,01,562.00	-	16,01,562.00	7,54,925.00	-	7,54,925.00
m) Others (specify)	-	-	-	-	-	-
Total	16,07,52,560.00	-	16,07,52,560.00	16,39,73,630.00	-	16,39,73,630.00


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SCHEDULE FORMING PART OF INCOME AND EXPENDITURE FOR THE YEAR ENDED 31ST MARCH, 2021

SCHEDULE 16 - ACADEMIC EXPENSES

(Figures in Rupees)

	Current Year			Previous Year		
	Plan	Non Plan	Total	Plan	Non Plan	Total
a) Laboratory Expenses	11,99,510.00	-	11,99,510.00	17,14,043.00		17,14,043.00
b) Field work/Participation in Conferences	5,08,944.00	-	5,08,944.00	7,45,988.00		7,45,988.00
c) Expenses on Seminars/Workshops	1,22,032.00	-	1,22,032.00	3,87,016.00		3,87,016.00
d) Payment to Visiting faculty	-	-	-	-		-
e) Examination	1,41,270.00	-	1,41,270.00	2,91,930.00		2,91,930.00
f) Student Welfare expenses	-	-	-			-
g) Admission Expenses	20,000.00	-	20,000.00	27,321.00		27,321.00
h) Convocation Expenses		-	-			-
i) PHD Scholars	1,31,17,295.00	-	1,31,17,295.00	1,03,15,959.00		1,03,15,959.00
j) Stipend/means-cum-merit Scholarship	97,60,287.00	-	97,60,287.00	1,01,26,221.00		1,01,26,221.00
k) Subscription Expenses		-	-			-
l) Other- Prefect Concession	7,12,857.00		7,12,857.00	20,60,536.00		20,60,536.00
i) Sports Consumables/Tours	5,93,458.00	-	5,93,458.00	11,89,354.00		11,89,354.00
ii) Curriculum Development	37,908.00	-	37,908.00	5,64,092.00		5,64,092.00
iii) Survey & Project Camp	-	-	-	-		-
iv) Training & Placement Exp.	34,591.00	-	34,591.00	2,29,590.00		2,29,590.00
v) Training Teachers PHD Tuition Fees	46,900.00	-	46,900.00	77,500.00		77,500.00
vi) Student Related Expenses	-	-	-	-		-
Total	2,55,82,195.00	-	2,55,82,195.00	2,56,69,014.00		2,56,69,014.00


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SCHEDULE FORMING PART OF INCOME AND EXPENDITURE FOR THE YEAR ENDED 31ST MARCH, 2021

SCHEDULE 17- ADMINISTRATIVE AND GENERAL EXPENSES

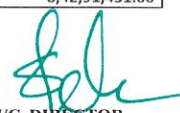
(Figures in Rupees)

	Current year			Previous year		
	Plan	Non Plan	Total	Plan	Non Plan	Total
A. Infrastructure						
a) Electricity and power	43,20,755.00		43,20,755.00	78,84,644.00		78,84,644.00
b) Water charges	2,95,331.00		2,95,331.00	2,73,137.00		2,73,137.00
c) Insurance	-		-	-		-
d) Rates and Taxes (including property tax)	6,500.00		6,500.00	6,500.00		6,500.00
e) Building Rent	36,04,603.00		36,04,603.00	1,71,16,200.00		1,71,16,200.00
f) Generator Running expenses	1,13,066.00		1,13,066.00	3,80,797.00		3,80,797.00
B. Communication						
g) Postage and Stationery	81,276.00		81,276.00	2,57,750.00		2,57,750.00
h) Telephone, Fax and Internet Charges	12,65,283.00		12,65,283.00	20,98,317.00		20,98,317.00
C. Others						
i) Printing and Stationery (consumption)			-			-
i) Computer Consumables	5,47,445.00		5,47,445.00	5,69,281.00		5,69,281.00
ii) Printing & Stationery	3,69,571.00		3,69,571.00	7,90,743.00		7,90,743.00
j) Travelling and conveyance Expenses	1,00,53,354.00		1,00,53,354.00	34,07,038.00		34,07,038.00
k) Hospitality	62,233.00		62,233.00	78,291.00		78,291.00
l) Auditors Remuneration	-		-	5,00,000.00		5,00,000.00
m) Professional Charges	-		-	-		-
n) Advertisement and Publicity	3,52,237.00		3,52,237.00	12,63,753.00		12,63,753.00
o) Magazines & Journals	8,437.00		8,437.00	22,058.00		22,058.00
p) Others Utilities (staff Welfare)			-			-
i) Security Services	2,23,51,730.00		2,23,51,730.00	2,02,32,831.00		2,02,32,831.00
ii) Upkeep & Sanitation	2,25,98,479.00		2,25,98,479.00	2,44,29,693.00		2,44,29,693.00
g) Others			-			-
i) NIT Transit House	3,50,000.00		3,50,000.00	3,50,000.00		3,50,000.00
ii) Bank Charges	4,236.00		4,236.00	8,292.00		8,292.00
iii) Other Consumables	1,31,535.00		1,31,535.00	1,26,380.00		1,26,380.00
iv) Misc. Expenses	4,01,672.00		4,01,672.00	7,67,359.00		7,67,359.00
v) Board & Committee Meeting	4,01,378.00		4,01,378.00	13,97,794.00		13,97,794.00
vi) CRA Service Charges	21,473.00		21,473.00	22,502.00		22,502.00
vii) Legal Expenses/ Audit fees	97,320.00		97,320.00	1,17,844.00		1,17,844.00
viii) National Events & Celebration	98,119.00		98,119.00	3,49,750.00		3,49,750.00
ix) Staff Welfare	1,81,704.00		1,81,704.00	2,64,046.00		2,64,046.00
x) Spic Macay Expenses	4,08,126.00		4,08,126.00	22,901.00		22,901.00
xi) Office Consumables	-		-	-		-
xii) Audit Expenses	1,68,630.00		1,68,630.00	2,21,270.00		2,21,270.00
xiii) Other Expenses	25,03,490.00		25,03,490.00	58,702.00		58,702.00
r) Staff Recruitment	7,44,513.00		7,44,513.00	12,73,578.00		12,73,578.00
Total	7,15,42,496.00		7,15,42,496.00	8,42,91,451.00		8,42,91,451.00


REGISTRAR
(DR. P.M. KALA)

PLACE: SRINAGAR (GARHWAL)
DATED: AUG 12, 2021




I/C DIRECTOR
(DR. SATISH KUMAR)

NATIONAL INSTITUTE OF TECHNOLOGY, UTTARAKHAND
SCHEDULE FORMING PART OF INCOME AND EXPENDITURE FOR THE YEAR ENDED 31ST MARCH, 2021

SCHEDULE 18 - TRANSPORTATION EXPENSES

(Figures in Rupees)

Particulars	Current Year			Previous year		
	Plan	Non Plan	Total	Plan	Non Plan	Total
1. Vehicles (owned by institution)			-			
OWN Vehicle Expenses	4,50,614.00		4,50,614.00	5,54,016.00		5,54,016.00
a) Running Expenses	2,85,275.00		2,85,275.00	2,73,572.00		2,73,572.00
b) Repairs & Maintenance	1,65,339.00		1,65,339.00	2,42,391.00		2,42,391.00
c) Insurance Expenses	-		-	38,053.00		38,053.00
2. Vehicles taken on rent/lease			-			-
a) Rent/lease Expenses	-		-	-		-
3. Vehicle (Taxi) Hiring Expenses	3,98,290.00		3,98,290.00	14,11,038.00		14,11,038.00
Total	8,48,904.00		8,48,904.00	19,65,054.00		19,65,054.00


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NATIONAL INSTITUTE OF TECHNOLOGY, UTTARAKHAND
SCHEDULE FORMING PART OF INCOME EXPENDITURE FOR THE YEAR ENDED 31ST MARCH, 2021

SCHEDULE 19 - REPAIRS & MAINTENANCE

(Figures in Rupees)

Particulars	Current Year			Previous year		
	Plan	Non Plan	Total	Plan	Non Plan	Total
a) Buildings	21,61,054.00		21,61,054.00	2,76,618.00		2,76,618.00
i) Civil Maintenance	20,57,188.00		20,57,188.00	28,665.00		28,665.00
ii) Electrical Maintenance	85,755.00		85,755.00	1,38,604.00		1,38,604.00
iii) Hostel Maintenance	18,111.00		18,111.00	1,09,349.00		1,09,349.00
iv) Other Maintenance (Sewage & Water pump)	-		-	-		-
b) Furniture & Fixtures	-		-	2,48,976.00		2,48,976.00
c) Plant & Machinery	1,18,790.00		1,18,790.00	62,605.00		62,605.00
i) Diesel, Petrol & oil	-		-	-		-
ii) Repair of Equipments	1,18,790.00		1,18,790.00	62,605.00		62,605.00
d) Office Equipment	65,820.00		65,820.00	52,138.00		52,138.00
Minor Equipment Repairs and maint.	65,820.00		65,820.00	52,138.00		52,138.00
e) Computers	12,82,949.00		12,82,949.00	39,874.00		39,874.00
f) Laboratory & Scientific equipment	15,00,661.00		15,00,661.00	28,41,144.00		28,41,144.00
g) Audio Visual equipment	-		-	-		-
h) Cleaning Material & Services	-		-	-		-
i) Hostel Equipments	-		-	2,230.00		2,230.00
j) Gardening	-		-	-		-
k) Estate Maintenance	-		-	-		-
l) Other (Specify)	-		-	-		-
m) Website	24,999.00		24,999.00	16,599.00		16,599.00
Total	51,54,273.00		51,54,273.00	35,40,184.00		35,40,184.00


REGISTRAR
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PLACE: SRINAGAR (GARHWAL)
DATED: AUG 12, 2021




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NATIONAL INSTITUTE OF TECHNOLOGY, UTTARAKHAND
SCHEDULE FORMING PART OF INCOME AND EXPENDITURE FOR THE YEAR ENDED 31ST MARCH, 2021

SCHEDULE 20 - FINANCE COSTS

(Figures in Rupees)

Particulars	Current Year			Previous Year		
	Plan	Non Plan	Total	Plan	Non Plan	Total
a) Bank charges						
b) Other (Specify)						
Total	NIL	NIL	-	NIL	NIL	-

Note:-

If the amount is not material, the head Bank charges could be omitted and these could be accounted as Administrative expenses


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NATIONAL INSTITUTE OF TECHNOLOGY, UTTARAKHAND
SCHEDULE FORMING PART OF INCOME AND EXPENDITURE FOR THE YEAR ENDED 31ST MARCH, 2021

SCHEDULE 21- OTHER EXPENSES

(Figures in Rupees)

Particulars	Current Year			Previous Year		
	Plan	Non Plan	Total	Plan	Non Plan	Total
a) Provision for Bad and Doubtful debts/ Advances						
b) Irrecoverable Balances Written- off						
c) Grants/Subsidies to other institutions/ organizations						
d) Other(specify)						
Total	NIL	NIL	-	NIL	NIL	-


REGISTRAR
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DATED: AUG 12, 2021




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NATIONAL INSTITUTE OF TECHNOLOGY, UTTARAKHAND
SCHEDULE FORMING PART OF INCOME AND EXPENDITURE FOR THE YEAR ENDED 31ST MARCH, 2021

SCHEDULE 22: PRIOR PERIOD EXPENSES

(Figures in Rupees)

Particulars	Current Year			Previous Year		
	Plan	Non Plan	Total	Plan	Non Plan	Total
1 Establishment Expenses	74,170.00	-	74,170.00	1,14,93,069.00		1,14,93,069.00
2 Academic Expenses	48,645.00	-	48,645.00	-		-
3 Administrative Expenses	4,26,526.00	-	4,26,526.00	49,66,036.00		49,66,036.00
4 Transportation Expenses	1,65,036.00	-	1,65,036.00	2,88,672.00		2,88,672.00
5 Repairs & Maintenance	-	-	-	-		-
6 Other Expenses	-	-	-	-		-
Total	7,14,377.00	-	7,14,377.00	1,67,47,777.00		1,67,47,777.00


REGISTRAR
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PLACE: SRINAGAR (GARHWAL)
DATED: AUG 12, 2021

NATIONAL INSTITUTE OF TECHNOLOGY, UTTARAKHAND


RECEIPTS AND PAYMENTS ACCOUNT FOR THE YEAR ENDED ON 31ST MARCH, 2021

RECEIPTS	Current Year	Previous Year	PAYMENTS	Current Year	Previous Year
I. Opening Balances			I. Expenses	13,36,85,949.00	13,21,76,091.00
a) Cash Balances			a) Establishment Expenses	11,53,17,146.00	10,87,42,757.00
b) Bank Balances	26,99,80,872.00	14,91,29,711.00	b) Academic Expenses	10,42,260.00	22,70,241.00
SBI CA NO. 31091775379	1,79,93,825.00	20,000.00	c) Administrative Expenses	1,15,27,750.00	44,58,654.00
ALLAHABAD 50511577145	-	-	d) Transportation Expenses	4,16,290.00	14,11,038.00
SBI TEQIP III 37843015175	3,27,548.00	-	e) Repairs & Maintenance	53,33,858.00	38,20,628.00
SBI SA NO 37530566069	7,42,52,173.00	8,70,72,774.00	f) J& K Relief (deductions From Salaries)		
SBI SA NO 37530602667	57,98,929.00	5,47,26,444.00	g) Prior period Expenses	48,645.00	1,14,72,773.00
SBI SA NO 37530603682	6,70,533.00	6,29,920.00			
SBI SB NO 37530603172 (R&D)	56,91,875.00	41,27,412.00			
SBI SB NO 37357884648 (SMDP)	8,56,516.00	5,53,161.00			
ICICI SA NO. 676801701094	12,19,36,795.00	10,00,000.00			
ICICI SA NO. 676801701095	4,24,52,678.00	10,00,000.00			
SBI SAE CLUB 37933821967	-	-			
II. Grants Received			II. Payment against Earmarked/Endowment Funds		
a) From Government of India			Plan Grant (Refund of intt on GIA)		1,87,28,000.00
Plan Grant	30,33,75,000.00	25,33,00,000.00	Hostel welfare fund		
Other Funds(Earmarked funds)			Other Fund (Designated/Earmarked)	4,38,975.00	57,95,532.00
Corpus fund			Corpus fund		
b) From State Government			Capital fund	83,603.00	
c) From other sources (details)					
separately if available)					
III. Academic Receipts (from students)	5,00,21,881.00	9,62,50,687.00	III. Payments against Sponsored Projects/ R&D	53,10,310.00	31,96,670.00
IV. Receipts against Earmarked/ Endowment Funds	4,06,801.00	39,74,160.00	IV. Payment against Sponsored Fellowships/Scholarships	2,20,09,074.00	1,75,55,819.00
V. Receipts against Sponsored Projects/ R&D	86,20,619.00	50,64,486.00	V. Investment and Deposits made	65,95,53,125.00	85,41,34,574.00
			a) Out of Earmarked / Endowments Funds		
			b) Out of own fund (Investment- Others)		
VI. Receipts against sponsored Fellowships and	-	-	VI. Term Deposits with Scheduled Banks		
VII. Income on Investment from	2,62,25,325.00	6,50,32,666.00	VII. Expenditure on Fixed Assets and		


REGISTRAR
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PLACE: SRINAGAR (GARHWAL)
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			Capital Works-in-Progress & Fixed Assets	1,18,953.00	90,891.00
			UP Rajkiya Nirman Nigam (WIP)		
VIII. Interest received on			VIII. Other Payments Including		
a) Bank Deposits			EMD	8,40,000.00	40,000.00
b) Loans and Advances			Security Deposit	18,13,979.00	29,53,325.00
c) Savings Bank Accounts	34,32,473.00	66,66,843.00	Statutory Liabilities	4,65,03,571.00	4,12,36,897.00
			Other Liabilities	7,42,46,612.00	10,13,81,208.00
			Fees		
			Central Seat allocation board	3,81,242.00	3,90,983.00
IX. Investments Encashed	62,04,77,244.00	90,31,73,618.00	IX. Refunds of Grants		
			Deposited from students	1,01,71,967.00	72,70,708.00
			Deposited from Staff		
			Electricity Security Deposited		
X. Term Deposit with Scheduled Banks encashed			X. Deposits and Advances		29,09,217.00
XI. Other Income	1,36,710.00	4,77,995.00	XI. Other Payments		
salaries Wages & Other			Recoverable Advance	18,22,879.00	81,22,672.00
			Lease line (PrePaid Exp.)		
			Others	14,78,78,974.00	3,31,75,001.00
XII. Deposits and Advances					
Security Deposit	59,985.00	23,04,766.00			
EMD	1,15,000.00	3,70,000.00	XII. Closing balances		
Deposits from Students	1,08,636.00	4,000.00			
			a) Cash in hand		-
			b) Bank Balances	18,50,16,795.00	26,99,80,871.00
			SBI CA NO. 31091775379	20,37,031.00	1,79,93,825.00
			SBI TEQIP-III 37843015175	6,15,947.00	3,27,548.00
XIII. Miscellaneous Receipts including			SBI SAE CLUB 37933821967	-	-
fees & Statutory Receipts			SBI SA NO 37530566069	12,39,20,884.00	7,42,52,173.00
XIV. Any Other Receipts			SBI SA NO 37530602667	1,05,74,956.00	57,98,930.00
Statutory Liabilities			SBI SA NO 37530603682	6,88,947.00	6,70,533.00
Scholarship	17,72,331.00	11,84,636.00	SBI SB NO 37530603172 (R&D)	91,10,576.00	56,91,874.00
CSAB Fund	4,04,181.00	68,27,119.00	SBI SB NO 37357884648 (SMDP)	7,48,124.00	8,56,515.00
XV) Refund of Advances	47,38,950.00	53,77,772.00	ALLAHABAD 50511577145	3,32,939.00	-
Recoverable Advances			ICICI SA NO. 676801701094	11,69,551.00	12,19,36,795.00
Provisions			ICICI SA NO. 676801701095	3,58,17,840.00	4,24,52,678.00
Other Receipts					
TOTAL	1,28,98,76,008.00	1,49,91,38,459.00	TOTAL	1,28,98,76,008.00	1,49,91,38,459.00


REGISTRAR
(DR. P.M. KALA)

PLACE: SRINAGAR (GARHWAL)
DATED: AUG 12, 2021




I/C DIRECTOR
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SCHEDULES FORMING PART OF THE ACCOUNTS

SCHEDULE: 23

SIGNIFICANT ACCOUNTING POLICIES

1. BASIS FOR PREPARATION OF ACCOUNTS

The accounts are prepared under the Historical Cost Convention unless otherwise stated and generally on the Accrual method of accounting.

2. REVENUE RECOGNITION

2.1 Fees from Students (except Tuition Fees), Sale of Admission Forms, Royalty and Interest on Savings Bank account are accounted on cash basis. Tuition Fees collected separately for each semester is accounted on accrual basis.

2.2 Income from Interest on Investments are accounted on accrual basis.

3. FIXED ASSETS AND DEPRECIATION

3.1 Fixed assets are stated at cost of acquisition including inward freight, duties and taxes and incidental and direct expenses related to acquisition, installation and commissioning.

3.2 The institute adopted Straight Line Method for writing off Depreciation as required in the revised format. The revised rate of Depreciation now prescribed is adopted as per MHRD letter no 29-4/2012-IFD dated 17th April 2015. The rates are as follows:



Tangible Assets

1. Land	0%
2. Site Development	0%
3. Buildings	2%
4. Roads & Bridges	2%
5. Tube wells & Water Supply	2%
6. Sewerage & Drainage	2%
7. Electrical Installation and equipment	5%
8. Plant & Machinery	5%
9. Scientific & laboratory Equipment	8%
10. Office Equipment	7.5%
11. Audio Visual Equipment	7.5%
12. Computers & Peripherals	20%
13. Furniture, Fixtures & Fittings	7.5%
14. Vehicles	10%
15. Lib. Books & Scientific Journals	10%

Intangible Assets (amortization):

1. E-Journals	40%
2. Computer Software	40%
3. Patents and Copyrights	9 years



3.3 Depreciation is provided for the whole year on additions during the year.

3.4 Where an asset is fully depreciated, it will be carried at a residual value of Rs.1 in the Balance Sheet and will not be further depreciated. Thereafter, depreciation is calculated on the additions of each year separately at the rate of depreciation applicable for the asset head.

3.5 Assets created out of Earmarked Funds and funds of Sponsored Projects, where the existence of such assets vests in the Institution, are setup by credit to respective Project Fund. Assets created out of Sponsored Project funds, where the ownership is retained by the sponsors but held and used by the institution are separately disclosed in the Notes on Accounts.

3.6 Assets, the individual value of each of which is Rs.2000/- or less (except Library Books) are treated as Small Value Assets, 100% depreciation is provided in respect of such assets at the time of their acquisition. However physical accounting and control continued by the holders of such assets.

4. INTANGIBLE ASSETS

4.1 E-Books/Journals and Computers Software are grouped under Intangible Assets.

4.2 Electronic Books/Journals (E- Books/Journals) are separated from library Books in view of the limited benefit that could be derived from the on line access provided. E-journals are not in a tangible form, but temporarily capitalized and in view of the magnitude of expenditure and the benefit derived terms of perpetual knowledge acquired by the Academic and Research Staff; Depreciation is provided in respect of E- journals at a higher rate of 40% as against depreciation of 10% provided in respect of Library Books.



4.3 Expenditure on acquisition of software has been separated from computers and peripherals, as apart from being intangible assets, the rate of obsolescence in respect of these of these is very high. Depreciation is provided in respect of software at a higher rate of 40 % as against depreciation of 20 % provided in respect of Computers & Peripherals.

5. RETIREMENT BENEFITS

5.1 Employee benefits under define contribution plans comprising new pension scheme (NPS) are recognized and charged to revenue on the basis of actual liabilities.

5.2 Provision for liability towards N.P.S. of employees as on 31st March 2021 has been made.

6. INVESTMENTS

Institute has invested the temporary surplus funds as per the directives and guidelines of Govt. of India, MHRD on the subject. Investments are stated at cost. However, any interest accrued in their value as on the date of the Balance Sheet is provided for.

7. DESIGNATED/EARMARKED/ENDOWMENT FUNDS

7.1 This Fund is created from designated fees received from the Students for the exclusive purpose of student specific activities.

7.2 The Fees received from Students as "Alumni Fees" are also accounted as "Alumni Fund" and shown under Earmarked Fund.



7.3 Funds received from the scheme of Direct Admission of Students Abroad- DASA (SAARC/NON-SAARC countries) from MHRD are classified as Earmarked Fund in view the conditions attached for expenditure therefrom.

7.4 Funds received from Central Seat Allocation Board/Centralized Counseling for M.TECH./M.ARCH./M.PLAN. Admissions used for the admission counseling of students for allocation of seats for Bachelor/PG courses.

7.5 TEQIP-III fund comprises Sustainability Fund @8% of the revenue of the Institute for ongoing maintenance and development of the Institute once the project period of TEQIP-III ended, fee collected for organizing various workshops under TEQIP-III and IEEE fund related to IEEE Student Chapter, NIT Uttarakhand which is utilized to promote student technical activities in the field of engineering and to organize distinguished lectures/Mini-colloquial.

7.6 MGNREGA Funds received from Department of Rural Development, Uttarakhand Govt. which is utilized for Time and Motion Study under MGNREGA.

7.7 R&D Project is shown under Earmarked Fund under **Schedule 2A** on the Sources of Funds of the Balance Sheet and **Schedule 4A & 7A** on the Application of Funds of the Balance Sheet.

8. CORPUS FUND

This fund is in the nature of Endowment Fund created out of IRG and other designated and set aside funds. During the current year amount of Rs.4.41 Crore is set aside from surplus and transferred to Corpus Fund. No part of Grant-in-aid is included in the Surplus.



9. PLAN GRANTS

Grant-in-aid is sanctioned as grant for acquisition of capital assets, general activity and for salary. It is further divided into grant for SC & ST promotions. Therefore the Grant is accounted for the classification in which the same is sanctioned. The expenditure from these Grants is appropriated in proportion to the ratio of number of SC and ST students to the aggregate number of students. Thus Salary and General Grant is appropriated and depicted as Income in the Income and Expenditure account and charged off from Grant Account. Similarly, expenditure on account of acquisition of assets is charged off in Grant Account in the same proportion (SC/ST students: Aggregate number of Students) and transferred to Capital Account. The remaining amount either Surplus or Deficiency is indicated as Current Liability in the Balance Sheet as per MHRD guidelines.

10. INCOME TAX

The income of the Institution is exempt from Income Tax under Section 10 (23C) (iiiab) of the Income Tax Act. No provision for Income Tax is therefore made in the accounts.


REGISTRAR
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PLACE: SRINAGAR GARHWAL
DATED: AUG 12, 2021




I/C DIRECTOR
(DR. SATISH KUMAR)

SCHEDULE : 24

CONTINGENT LIABILITIES AND NOTES TO ACCOUNTS

1. CONTINGENT LIABILITIES

As on 31st March 2021 there is no Contingent Liabilities pending on account of Court Cases and other circumstances.

2. FIXED ASSETS

- 2.1 The Fixed Assets are procured from Scheme 3670 - Grant-in-Aid for National Institute of Technologies and IEST. Significantly, Assets of the nature of Equipment's/Instruments procured from R&D Funds remain the property of the Grantor and until and unless the Grantor approves is not taken on charge of the Institute. Such Assets are retained in the Departments to be utilized for research activities.
- 2.2 During the FY 2020-21, an amount of Rs. 7,14,377/- with respect to F.Y. 2019-20 paid in the current year had been shown under prior period expenses.

3. CURRENT DEPOSITS & LIABILITIES

The amount of Rs. 7,69,786/- is shown as Current Deposits and Liabilities which is received against Security Deposits, Earnest Money and Performance guarantee accepted from Vendors. Unspent amount of Grant-in- aid is shown under Current Liabilities. These amount does not includes IRG.



4. EXPENDITURE IN FOREIGN CURRENCY

During the year Institute has made transactions of US DOLLARS \$4912.60/- which is recorded at INR Rs.3,61,764/-. Transactions denominated in foreign currencies are recorded at the exchange rate prevailing on the date of transaction/GOC Rates/Bank Rates as the case may be.

5. CURRENT ASSETS, ADVANCES AND DEPOSITS

These Current Assets, Advances and Deposits have a value on realization in the ordinary course equal at least to the aggregate amount shown in the Balance Sheet.

6. R&D AND PROJECT ACCOUNTS

Separate schedules for Earmarked funds and Current Assets, Fixed Assets have been made for R&D Projects and Consolidated with the Institute's Annual Financial Statement.

7. Figures in the final accounts have been rounded off to the nearest rupee wherever it was necessary.


REGISTRAR
(DR. P.M. KALA)

PLACE: SRINAGAR GARHWAL
DATED: AUG 12, 2021




I/C DIRECTOR
(DR. SATISH KUMAR)



The Registrar,
National Institute of Technology Uttarakhand,
Srinagar (Garhwal),
Uttarakhand

Dear Sir,

Re : Accountant's Report on the Compilation of Financial Statements of National Institute of Technology Uttarakhand, Srinagar (Garhwal), Uttarakhand for the year ended 31st March, 2021.

We have Compiled the attached Balance Sheet of **National Institute of Technology Uttarakhand, Srinagar (Garhwal), Uttarakhand.** as at 31st March, 2021 and related Income & Expenditure Account along with Receipts & Payments Account for the year ended on that date annexed thereto.

These financial statements are the responsibility of the management. The management is responsible for:-

- i) Completeness and accuracy of the underlying data and complete disclosure of all material and relevant information to the accountant;
- ii) Maintaining adequate accounting and other records and internal control and selecting and applying appropriate accounting policies;
- iii) Preparation and presentation of financial statements in accordance with the applicable laws and regulations, if any;
- iv) Establishing controls to safeguard the assets of the entity and preventing and detecting frauds or other irregularities;
- v) Establishing controls for ensuring that the activities of the entity are carried out in accordance with the applicable laws and regulations and preventing and detecting any non compliance.

The compilation engagement was carried out by us in accordance with the Standard on Related Services (SRS) 4410, "Engagements to compile Financial Information ", issued by the ICAI.

We report that:-

1. The statements of accounts dealt with this report are in agreement with the books of account.
2. We have not audited or reviewed these financial statements and accordingly express no opinion thereon.

Place: Srinagar (Garhwal)
Dated: Aug. 12, 2021

For Ved Vrat & Associates
Chartered Accountants


(CA Ved Vrat Sharma)
F.C.A.





Separate Audit Report of the Comptroller & Auditor General of India on the accounts of National Institute of Technology, Uttarakhand for the year ended 31 March 2021

We have audited the attached Balance Sheet of the National Institute of Technology, Uttarakhand (Institute) as at 31 March 2021, Income & Expenditure Account and Receipts & Payments Account for the year ended on that date under Section 19(2) of the Comptroller & Auditor General's (Duties, Powers & Conditions of Service) Act, 1971 read with Section 22(2) of the National Institutes of Technology Act, 2007 (Amended-2012). These financial statements are the responsibility of the Institute's Management. Our responsibility is to express an opinion on these financial statements based on our audit.

2. This separate Audit Report contains the comments of the Comptroller & Auditor General of India (CAG) on the accounting treatment only with regard to classification, conformity with the best accounting practices, accounting standards and disclosure norms, etc. Audit observations on the 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 Inspection Reports/CAG's Audit Reports separately.

3. We have conducted our audit in accordance with auditing standards generally accepted in India. These standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatements. An audit includes examining, on a test basis, evidences supporting the amounts and disclosure in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of financial statements. We believe that our audit provides a reasonable basis for our opinion.

4. Based on our audit, we report that:

- (i) We have obtained all the information and explanations, which to the best of our knowledge and belief were necessary for the purpose of our audit;
- (ii) The Balance Sheet, Income & Expenditure Account and Receipts & Payments Account dealt with by this report have been drawn up in the format of financial statements for Central Higher Educational Institutions prescribed by the Ministry of Education.
- (iii) In our opinion, proper books of accounts and other relevant records have been maintained by the Institute as required under Section 22(1) of the National Institutes of Technology Act, 2007 (Amended-2012) in so far as it appears from our examination of such books.

(iv) We further report that:

(A) Balance Sheet

Current Assets (Schedule-7)

₹ 20.65 crore

(A.1.1) Above includes ₹ 9.98 lakh being receivable amount of 'TDS on FDR interest' whereas the same should have been depicted as 'claims receivable' under Loans, Advances & Deposits (Schedule-8). This resulted in overstatement of Current Assets (Schedule-7) by ₹ 9.98 lakh and understatement of Loans, Advances & Deposits (Schedule-8) by the same amount.

(A.1.2) Above includes ₹ 3.03 crore being amount of 'Accrued Interest' whereas the same should have been depicted as 'Income Accrued' under Loans, Advances & Deposits (Schedule-8). This resulted in overstatement of Current Assets (Schedule-7) and understatement of Loans, Advances & Deposits (Schedule-8) by ₹ 3.03 crore.

(B) Fixed Assets (Schedule 4)

Capital work in progress

₹ 3.80 crore

(B.1) The above included ₹ 34.84 lakh as the 'Capital work in progress' whereas the same should have been capitalized and depicted under the head 'Site development' as the works has been completed and handed over to the Institute. This resulted in understatement of the head 'Site development' (Tangible Assets) by ₹ 34.84 lakh and overstatement of 'Capital work in progress' by the same amount.

(B.2) The above does not include ₹ 35.39 lakh being amount of expenses towards the 'Site development and construction of boys and Girls hostels at extension campus of NIT Uttarakhand at Srinagar' as the adjustment has been submitted to the Institute. This resulted in understatement of 'Capital work in progress' (Schedule-4) by ₹ 35.39 lakh and overstatement of 'Loans, Advances & deposits' (Schedule-8) by the same amount.

(C) General

(C.1) The Institute has not depicted the amounts as required under Schedule-3(a), Schedule-3(b), Schedule-3(c) and Schedule-4(c).

(C.2) The Institute has not made Provision for retirement benefits on actuarial basis as required in AS-15.

(C.3) The Institute has not reflected details of Bank accounts in Annexure 'A' to Schedule-7.

(C.4) The Institute has not accounted for 'the balance of consumables stock of different departments' amounting to ₹ 11.23 lakh under 'Current Assets' as on 31.03.2021.

(D) Grants-in-aid

The Institute received ₹ 30.34 crore during 2020-21. After taking opening balance of ₹ 38.84 crore and interest earned of ₹ 1.65 crore, the total funds works out to ₹ 70.83 crore. The Institute utilized ₹ 28.74 crore leaving a balance of ₹ 42.09 crore.

(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, Uttarakhand as at 31 March 2021; and*
- b. *In so far as it relates to Income & Expenditure Account of the 'surplus' for the year ended on that date.*

Place: Lucknow

Date: 25.3.2022

For and on behalf of the C&AG of India



Director General of Audit (Central)

Annexure

1. Adequacy of Internal Audit System

The internal audit of the Institute has not been conducted for the year 2020-21. Moreover, the Institute has no internal audit system of its own.

2. Adequacy of Internal Control System

The Internal Control System of the Institute is characterised by the following deficiencies;

- Non fulfilment of 44 vacant posts against 194 sanctioned posts.
- Non traceability of 851 books in the library of the Institute.
- Non-disposal of unserviceable items in the Institute.

3. System of Physical Verification of fixed Assets

Physical verification of fixed Assets has been conducted for the year 2020-21.

4. System of Physical verification of inventory

The Institute reported for non-existence of 'Inventory management system'.

5. Regularity in payment of statutory dues

The Institute is regular in payment of statutory dues.



Dy. Director (CE)