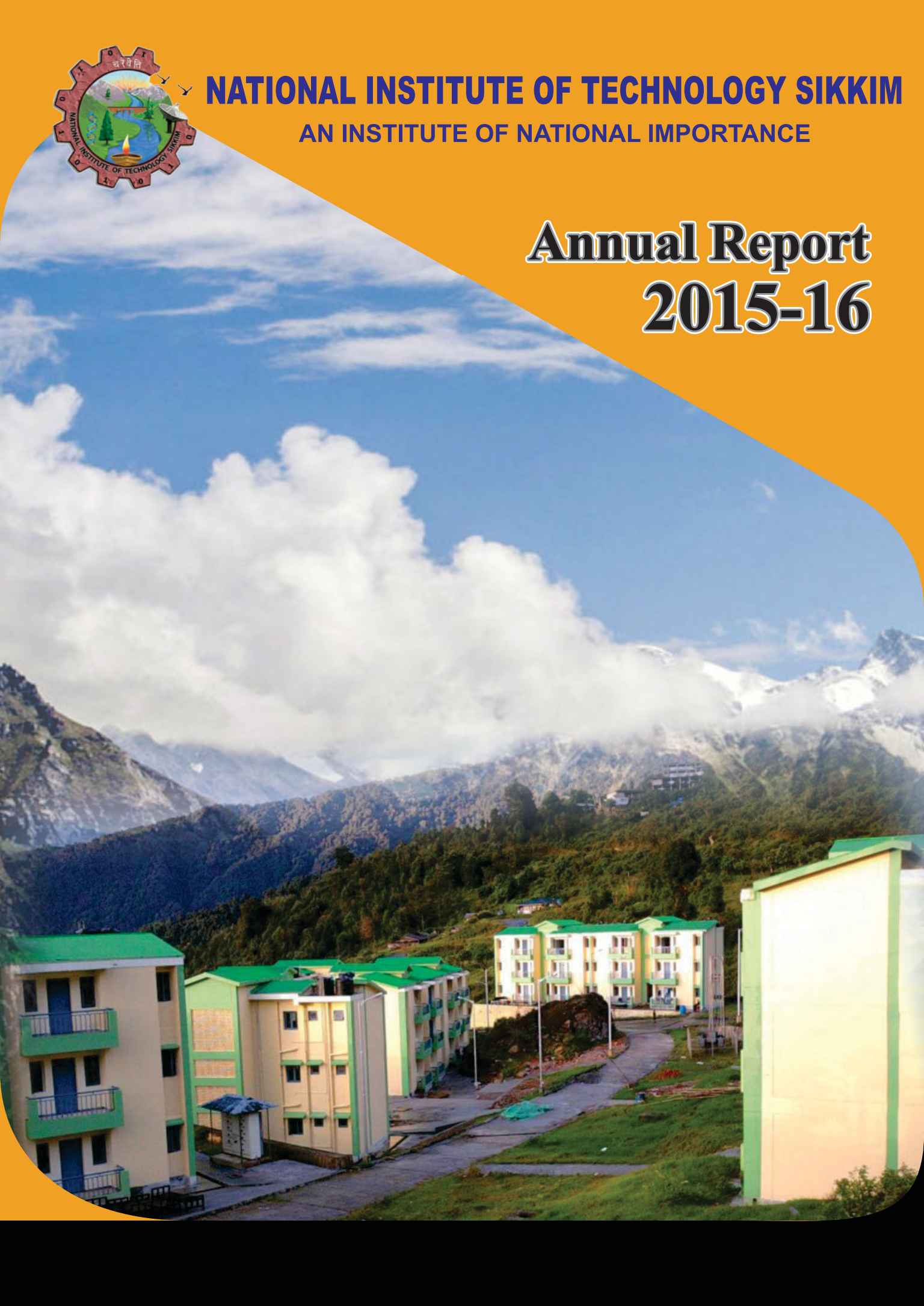




**NATIONAL INSTITUTE OF TECHNOLOGY SIKKIM**  
AN INSTITUTE OF NATIONAL IMPORTANCE

# **Annual Report 2015-16**





# Annual Report 2015-2016



**NATIONAL INSTITUTE OF TECHNOLOGY SIKKIM**  
(An Institute of National Importance)  
Under MHRD, Govt. of India



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## ▶ | Vision

India has the capability and the responsibility to offer the World, Science & Technology essentially with sustainability, through philosophy, conscience and value system. NIT Sikkim will play its role.

## ▶ | Mission

To develop the students as 'Thinking Engineers' by nurturing them in attaining and enjoying the technical and scientific excellence, global exposure and at the same time in beholding the philosophy and the values for India and the world as a whole.

## ▶ | Goals

- **H**elp the engineering professionals recognize the quality and significance of their teaching, research, scholarship, service, outreach and leadership.
- **E**nhance the commitment of faculty, staff and students to the centrality of diversity, social justice and democratic citizenship.
- **P**rovide leadership in the collaborative, professional relationships with schools, organizations and other institutions with focus on the improvement of education in schools.
- **E**nhance the effective and efficient management of the institute.
- **S**ustain the caring, supportive climate throughout the institute.
- **T**o evolve a system and to create an environment in which the students can realize their potential and their responsibilities to earn, create, implement and disseminate knowledge for improvement of human life with natural and social sustainability.

## ▶ | Academics

The Institute offers technical education based on the state of the art curriculum. All Undergraduate programmes, M. Tech (CSE, ECE) and Ph.D. Have been designed in line with the IIT System, giving appropriate weights for the theory and practice; however, the institute does feel the requirement of revision of the syllabus and is working in the direction accordingly.



## Historical Background

National Institute of Technology Sikkim (NITSKM) is one among the ten newly sanctioned NIT(s) by the Government of India in 2009 under the Eleventh Five Year Plan. It is established in the temporary campus in the Barfung Block, Ravangla Subdivision of South Sikkim.

## Location

Presently, the institute is located in a temporary campus in the Kewzing Road at Ravangla, Barfung Block in South Sikkim, and covers an area of about three acres. The New Jalpaiguri Railway Station and Bagdogra Airport are respectively 113 and 106 km away from the Campus.



## Campus

The Infrastructural Facilities in the Temporary Campus include

- The present campus of NIT Sikkim at Ravangla, although temporary in nature, is housed within a plethora of conveniences and an abundance of natural amenities. It is located close to the JawaharNavodayaVidyalaya Ravangla. The State Bank of India Ravangla branch, post office with speed post facility, and an army hospital are located within 2.5 kms from the institute campus. There is also a health centre situated in Ravangla.
- There are Sixteen three-storied blocks, each with six 2-bedroom apartments, totaling to 96 apartments in the campus. These are utilized as boys' hostels, girls' hostels, faculty apartments and staff apartments. Each apartment has been furnished with cots, tables and chairs.



- **T**here is one Academic Building and the rooms of the building are utilised as class rooms (three nos.), two computer rooms, and four faculty rooms. Necessary benches & desks, tables, chairs and almirahs have been purchased.
- **O**ne proposed Administrative Building with 7 rooms completed and is functional at present. Apart from three rooms being used for administrative operations, the building houses one furnished meeting room for faculty/administrative/Directorial meetings, a store-room for academic documents, a chamber for the Director of the institute. All rooms are well-furnished with the required furniture.
- **P**refab Hostels. Two prefab hostels are constructed and are in use.
- **A** common play ground is also available and used by students for certain outdoor games.
- **A**nother common playground is being prepared.
- **O**ne indoor playground has been reconstructed using the courtyard space in the academic building. The ground is presently used as a badminton court by faculty and students both.
- **O**ne more ground is being prepared where girls will be given preference. The ground will also be used for volley ball, Kho Kho and Kabaddi etc.
- **N**early 2-3 acres of land just surrounding these buildings have been fenced. The road connectivity to the temporary campus is good. Three vehicles are being run for official and medical purposes to and from the campus.

## ► **Medical Facilities**

### • **MEDICAL UNIT IN THE CAMPUS:**

All the student's, staff and faculty members have 24/7 free access to the medical unit in the campus. The unit has all the emergency medicines and also equipped with first aid medicines and instruments.

### • **DOCTORS VISIT:**

Dr. Deokota an orthopedic, Dr. Sanjay Rai a general physician, Dr. Una Pradhan a dentist and Mr. Thendup Dorjee Bhutia a multi-purpose health worker have been visiting our medical unit for giving their valuable services as per the following schedule :

	Dr. Deokota	Dr. Sanjay Rai	Dr. Una Pradhan	Mr. Thendup Dorjee Bhutia
Day	Every Sunday	Every Tuesday and Friday	Every Saturday	Every Monday and Thursday
Time	12 am to 2pm	2pm to 5pm	1pm to 3pm	3:30 pm to 5:30 pm



- **MEDICAL TEAM:**

The campus has a dedicated full time Nursing Assistant Mrs. Hymavathi led by faculty in-charge, medical unit - Dr. Ravi Srivastava. Whenever any emergency happens, students can contact to: Dr. Ravi Srivastava - 09647755490 for help. In case of any major problem, students can also directly contact to Dr. Sumit Saha, Dean Incharge, Students' Affairs.

- **MEDICAL FACILITIES NEARBY CAMPUS:**

Students can visit Ravangla Primary Health Centre (PHC; 3 KM from the campus) or if referred from there or our medical unit, students are taken to Namchi District Hospital.

- **VEHICLE:**

The Institute has an Ambulance dedicated for medical emergencies. Students are taken (free of cost) in that vehicle to PHC, Ravangla or Namchi. Generally, the medical unit team accompanies the ailing students.

- **MEDICAL SHOPS:**

In Ravangla market there are couple of medical shops where all the necessary medicines are available.

- **DIAGNOSTIC CENTRES:**

The district head quarter Namchi (26 KM from Ravangla) has a couple of diagnostic centers. Also, students can avail facilities at the Namchi District hospital.

- **TELEMEDICINE PROGRAMME:**

Recently we have initiated Telemedicine Programme. This programme aims to visit nearby schools and villages to assist medical consultation and most general medicines to needy people.



Telemedicine Programme



Medical Unit





## ► **Hostels & Students' Accommodation:**

There are total 11 Boys hostels out of which 2 hostels are in Ravangla town. These two buildings are rented to accommodate 1st year students. For girls there are three hostels and all these are on the campus of the institute. The hostels on the campus are fully Wi-Fi enabled. And for rented hostels in Ravangla town students are provided with Wi-Fi modems on sharing basis so that they have the access to internet. Also bus facility is provided for the convenience of the students.

## ► **Hostel Rules and Regulation**

- **N**o student (either boy or girl) is permitted to go outside the campus on working / weekdays.
- **W**eekends and holidays, no student shall leave the campus without the consent of the Chief-warden or Students Affairs Committee (SAC) members.
- **G**irl students must return back to their hostel rooms before 06:00 PM in winter semester and by 06:30 PM in Monsoon semester.
- **B**oy students must return back to their hostels by 6.30PM in Winter Semester and 07:00 in Monsoon Semester on days they are permitted to go out of the campus.
- **E**very student should enter the entries in the security register while outgoing and incoming without fail.
- **S**tudents shall go back to their rooms by 10:00 P.M. at night.
- **G**irl students are not allowed to enter the boys' hostel and boys are not allowed to enter the girls' hostel at any time of the day or night.
- **A**lcohol, drugs and smoking is prohibited in the campus. At any time, faculty can check any hostel room. The consumption or storage or supply of liquor or any sort of intoxicant is strictly prohibited and if found guilty, the offenders will be dealt with severely, including prosecution. Any kind of gambling is also prohibited.
- **B**oy students should not cross/enter the boundaries/premises specified for girls near girl's hostels.
- **B**oy students should not dine in the tables specified for girls and faculty at the Mess Hall. Girl students should not dine in the tables specified for boys and faculty at the Mess Hall. And boy students should not sit and discuss on the tables specified for girls in the Mess at any time of day/night and vice versa.
- **E**ntertaining any guest in the hostels without the permission of Chief-warden is not permitted.
- **R**agging of any kind is severely punishable. Students should strictly abide by the





anti-ragging policy of the Institute. It is understood that the students are aware what constitutes ragging and they will refrain from indulging in such acts that may be considered as any form of ragging.

- **U**nder special circumstances, the competent authority may permit a student to reside with his Parent/Guardian within a reasonable distance from the Institute.
- **A** student shall reside in a room allotted to him/her and may shift to any other room only under the direction/permission of the Chief Warden.
- **S**tudents shall be responsible for the proper care of the furniture; electrical and other fittings in the rooms allotted to them and shall generally assist the Warden in ensuring proper use, care and security of those provided in the Hostel of common use of all students. If any damage is done to those items, the students allotted in that particular room shall be held responsible and will be fined accordingly.
- **S**tudents should not break open or try to break open the occupied / vacant rooms of the hostels. Any damage done to the hostel property will have to be borne by all the residents of the hostel.
- **S**tudents will be responsible for the safe keeping of their own property. In the event of loss of any personal property of a student due to theft, fire or any other cause, the Institute shall accept no responsibility and shall not be liable for payment of any compensation.
- **U**se of appliances like electric heater, refrigerator etc., by a student in the Hostel is prohibited.
- **A** student once admitted in the hostel will continue to be a hostel inmate throughout the year unless otherwise debarred from the hostel on disciplinary grounds. Unless they clear the dues, they shall not be allowed to seat in an examination. Further, he/she may be expelled from the Hostel and/or messes.
- **A** student once admitted in to a hostel, he / she shall automatically become a member of the student mess. All students shall pay full charges for mess w.e.f. the date of commencement of a semester to the end date of that semester. The students are also required to pay establishment charges during the semester breaks.
- **E**very inmate of the hostel shall pay in advance the mess bill and other charges before the stipulated date of every month, failing which fines will be imposed as per rules and regulations.
- **N**o parent or guardian of a student is permitted to stay in the hostel.
- **H**ostel students shall not leave the campus without prior permission of the Warden/Chief Warden / SAC members. They shall have to apply for permission in writing in advance stating the reason for leaving and the address of destination. Hostel students who leave hostel without the application and prior permission



from the concerned authorities shall be deemed to be missing and their parent/guardian or even the police authorities may be intimidated.

- **A**ny hostel student harbouring any unauthorised person(s) will be expelled from the hostel immediately. The hostel cannot be considered as the hiding place for miscreants. The police authorities may enter the campus and detain anyone depending upon the severity of the offence.
- **T**he inmates of the hostel should not leave the hostel premises on holidays for the purpose of excursion or picnic without prior permission of the Warden / Chief Warden / SAC members. However, for any accident or fatality that may occur during picnic/excursion, the responsibility does not lie with the institute or Hostel authorities.
- **N**o association of students on the basis of region, religion, caste or creed is permitted.
- **N**o secret activities or meetings are permitted on the hostel premises. For holding any meeting in the hostel room or anywhere in the hostel area, prior written permission should be obtained from the Chief Warden.
- **H**ostellers shall refrain from any act, covert or overt, that may destroy or disturb the peace and harmony among the residents on the campus. Accommodation in the hostel cannot be claimed as a matter of right. Students who disturb peace and violate the rules of the hostel on the campus may be expelled from the hostel.
- **N**o hostel inmate shall take the law into his / her own hands. If any of the hostel inmates find that other students are indulging in any undesirable activity or causing inconvenience or physical injury to him/her or to the other hostel inmates, he/she should inform in writing with the warden concerned.
- **K**eeping of lethal weapons like sticks, rods, chains etc. in the hostel rooms is strictly prohibited and shall be considered as punishable offence.
- **S**tudents who have finished the four years of course study but yet to pass some examinations are called slow learners. Institute shall not be responsible to provide them accommodation in hostel after expiry of normal four years of course.
- **I**n case a student falls sick, he/she should contact immediately the Chief Warden / Warden(s) / SAC members. Medical facilities shall be provided at the Institute's dispensary for routine health problems. However, for any other treatment requiring specialist/expert medical care and treatment, the inmates are supposed to make their own arrangements for treatment and to bear medical expenditure themselves. A student suffering from infectious/contagious diseases will not be permitted to stay in hostels.
- **R**esidents shall not get involved in arguments or otherwise interfere with the duties of the employees of the hostel. If there is any complaint or suggestion to be



made, it shall be made to the warden concerned.

- **P**laying loud music and videos etc. inside the rooms is strictly prohibited as it causes disturbance to the inmates. Any such complaint against boarders will be viewed very seriously and seizure of the gadgets may be made along with imposition of fine.
- **T**he room of any student in the hostel can be inspected at any time by the Warden/Chief Warden or any authorised member of the institute staff or district police officials. Inmates are advised to keep their ID cards with them and show them on demand.
- **H**ostel Representatives / Student Mess Representatives will be selected on merit or as desired by the Chief Warden from among the Block/mess students to assist him/her in the supervision of hostel block/mess and in enforcing discipline. Every hostel inmate shall co-operate with him/her in the act of discharging his/her duties.
- **H**ostel inmates are requested to maintain their surroundings neat and clean.
- **I**nmates should not fire crackers on any occasion inside the hostel or within the premises of the hostel.
- **I**nmates are prohibited from writing graffiti or slogans, or any writings obscene drawings on the hostel walls and rooms. Heavy penalties will be imposed on students/group of students indulging in such writings.
- **I**nmates should not play cricket, football etc., in the common halls or inside or in front of hostel. It not only may cause damage to the hostel property, but also disturbs the peace of the surroundings. Heavy penalty will be imposed and will be collected from all students of the Block.
- **H**ostel inmates who are found guilty of misconduct or guilty of infringement of any of the rules prescribed above shall be liable to fine, suspension, rustication or dismissal either from the hostel and/or from the institute or both by the appropriate authority.
- **A**ny violation of the above directions regarding Hostel Rules & Regulations will be severely dealt with. And, the incident will be entered into the students Institute file under a committee formed by the Institute.



## ► **Emergency power back-up:**

- **E**mergency power back-up lines are provided in the hostel rooms and Academic buildings including departments and class rooms.

## ► **Students Mess:**

- **E**quipment were bought for mechanisation of students' mess to provide more hygienic food. Overall infrastructure is improved. There are total 2 mess one each for boys and girls.
- **U**tensils were bought for the girls mess on 1.03.2016 & boys mess in December 2015.

## ► **Scholarships:**

**B**eing an Institute of National Importance, NIT Sikkim students were awarded 12 scholarships per batch per year under “Top Class Education for SC students” from Ministry of Social Justice & Empowerment and 5 scholarships per batch per year under “Top Class Education for ST students” from Ministry of Tribal Affairs. Many students belonging to Other Backward Classes (OBC) receive scholarships from respective States. Students belonging to Minority communities receive scholarships from Ministry of Minority Affairs (MOMA). Students also receive scholarships from some other funding agencies like Foundation for Academic Excellence and Access (FAEA). Scholarship 2015-16 Top Class scholarship for ST Students Received in institute payment: 12 nos. Top class scholarship for SC students received in institute payment which were deposited in Director/Chief warden account and reimbursed to the student: 28 nos. Other Backward class's scholarship received in institute payment which were deposited in Director Account and reimbursed to the student: 16 nos.

## ► **Essential construction activities:**

**T**he land at Khamdong for the proposed permanent campus of NIT Sikkim, was to be handed over to the institution authorities by March 2012. However, it has not yet been received physically. Hence, for the sake of boosting teaching and research, the institute had to go for some essential construction projects at the Ravangla campus itself. Details of the same are as follows:

- **R**enovation of existing residential and non-residential buildings mostly damaged by Earthquake at Ravangla campus, is completed
- **R**epair and renovation of Community Centre (Multipurpose hall) which was fully damaged by Earthquake at Ravangla campus is completed.



- **C**onstruction of tubular truss with pre-coated galvanized sheet roofing at academic Block courtyard at Ravangla Campus is completed and being used as a badminton indoor ground.
- **F**ixing chain link fencing surrounding of playground for at Ravangla campus is completed;
- **C**onstruction of Front Gate & Guard Room at Ravangla campus is completed
- **C**onstruction of Prefab structure for hostel and mess in Phase II was initiated last year and work is completed.
- **C**onstruction work of playground at Ravangla campus is in progress and will be completed by next year.
- **C**onstruction work of Fluid mechanics laboratory, Structural laboratory and workshop has been initiated.
- **C**onstruction of a R.C.C main drain for NIT Sikkim Ravangla campus along with a C.C approach road to both the hostels in Prefab structure is in progress.
- **W**ork for repair and renovation of the earlier students mess to be converted into mechanical laboratory is in progress.
- **T**o have a regular and reliable power supply at NIT Sikkim, Ravangla campus, an initiative have been taken with Energy and Power department of Sikkim to have a separate 11 KV 3 Phase dedicated transmission line from 66/11 KV control room, Ravangla power station to NIT Sikkim campus.
- **A**s soon as the permanent land will be handed over, construction of boundary walls and gate will begin.

## ► | **Status of Land for permanent campus**

It has been almost six years since the Institute started functioning. However, land has not been allotted for the permanent campus as yet. Initially, a land was allotted at Khamdong following an official inspection on 24th August, 2011. However, the land has not been handed over to NIT. Another site near The kabong (near Pakyong) was proposed in 2015. But the Site Selection Committee constituted by the MHRD did not find the site suitable.

Recently, Ministry of Human & Resource Development, Govt. of India has constituted a Site Selection Committee (F.No. 21-6/2010, TS-III dated 07-11-2016) to visit a new site measuring 111 acres of land located at Ravangla. The new site has been identified by the State Govt. of Sikkim for establishment of permanent campus of NIT Sikkim. The visit of the Site Selection Committee is envisioned soon





## ► Academic Facts and Figures

### Courses offered for Undergraduate Degree

- B. Tech in Bio Technology
- B. Tech in Civil Engineering
- B. Tech in Computer Science and Engineering
- B. Tech in Electrical and Electronics Engineering
- B. Tech in Electronics and Communication Engineering
- B. Tech in Mechanical Engineering

### Courses Offered for Postgraduate Degree:

- M Tech in Computer Science and Engineering
- M Tech in Electronics and Communication Engineering

### Courses Offered for PhD Degree:

- Chemistry
- Computer Science and Engineering
- Electrical and Electronics Engineering
- Electronics and Communication Engineering
- Humanities and Social Sciences
- Interdisciplinary areas.
- Mathematics
- Mechanical Engineering
- Physics

## ► Student positions at NIT-SKM

Programme	Category of students			Total Students		
	SC	ST	Other	Male	Female	Total
<b>B Tech(2016 Batch)</b>	12	17	108	121	16	137
<b>B Tech(All batch)</b>	57	40	304	341	60	401
<b>M Tech (2016 Batch)</b>	04	01	15	16	04	20
<b>M Tech (All Batch)</b>	04	02	20	20	06	26
<b>PhD(2016 Batch)</b>	03	00	26	27	02	29
<b>PhD(All Batch)</b>	08	01	42	45	06	51
<b>Total (All Batch)</b>	<b>69</b>	<b>43</b>	<b>366</b>	<b>406</b>	<b>72</b>	<b>478</b>



## ► Department toppers of the pass out batch (2012-2016):

- |   |                              |
|---|------------------------------|
| 1. Computer Science and Engineering:          | <b>Miss Priyanka Kumari</b>  |
| 2. Electrical and Electronics Engineering:    | <b>Miss Puja Gupta</b>       |
| 3. Electronics and Communication Engineering: | <b>Mr. Rajat Kumar Shina</b> |

## ► Administrative Committees

### • Board of Governors (BoGs)

National Institute of Technology Sikkim (NITSKM) is one among the ten newly sanctioned NIT(s) by the Government of India in 2009 under the Eleventh Five Year Plan. In the last six years or so, six (06) BoG meetings have been held. The last (6th Meeting of BoGs) meeting was held on 27th November, 2015 at IIT KGP Extension Centre, Salt Lake, Kolkata. The present status of the BoG is as follows:

### ► Board of Governors of NIT, Sikkim

S.No.	Designation	Name & Address	Remarks, if any
1	Chairman	Director as Chairman In-Charge	Chairman has resigned
2	Director	Director, NIT Sikkim	-
3	Additional Secretary, MHRD, GOI	Additional Secretary or Joint Secretary Dealing with technical education, Department of Higher Education, MHRD	-
4	Financial Adviser, MHRD, GOI	Member Additional Secretary, Department of Higher Education Ministry of Human Resource Development, Government of India, Shastri Bhawan, New Delhi- 110001	-
5	State nominee - 1, member	Shri. G.P. Upadhya, IAS, Principal, Secretary, HRDD, Govt. Of Sikkim, Gangtok 737102	Term expired on 02.09.2016; State has proposed fresh names



S.No.	Designation	Name & Address	Remarks, if any
6	State nominee - 2, member	Mr. D K Pradhan, Director Technical Education, HRDD, Govt. Of Sikkim, Gangtok 737102	Term expired on 02.09.2016; State has proposed fresh names
7	Director IIT Guwahati or his representative, Member	Prof. S.C. Mishra Dean, Alumni Affairs & External Relations, IIT Guwahati, Assam 781039	Term expired on 09-04-2016
8	MHRD nominee-1, Member	Shri Ramesh Sharma, CMD, Moving Picture Co. India Ltd. RZA-17A, Road No. 2, 2nd Floor, Mahipalpur Extension, New Delhi	
9	One Prof.	Board nominee-1	
10	One Asst. Prof.	One Nominee board	
11	MHRD Nominee-2, Member	Ms Swarupa Rani, 196 Classic Orcahrds, Bannerghatta Road, Bangalore	Term expired on 09-04-2016

#### • Past BoG Meetings of NIT Sikkim

The details of the past meetings are given below

S.No.	BoG Meeting No	Venue	Date
1	First	BARC, Mumbai	17-03-2012
2	Second	Dhruva Guest House, New Delhi	14-03-2013
3	Third	DAE, New Delhi	19-12-2013
4	Fourth	DAE, New Delhi	11-06-2014
5	Fifth	NIT Sikkim	14-04-2015
6	Sixth	IITKGP Extension Centre, Kolkata	27-11-2015

#### • Building and Works Committee (BWC)

The BWC ( Building works committee, headed by director) – work was taken care



of with the senior officials from electrical and civil engineering departments of the State CPWD because there was not much of civil construction possible due to non-availability of permanent campus.

So far, two (02) meetings of the Building and Works Committee of National Institute of Technology Sikkim have been held.

S.No.	BWC Meeting No	Venue	Date
1	First	NIT Sikkim, Ravangla	13-04-2015
2	Second	CPWD, Siliguri, West Bengal	25-11-2015

### ► Members of the Committee

1	Director, NIT Sikkim	Chairman
2	Shri Arun Kumar (Under Secretary, NITs)	Member
3	Executive Engineer, CPWD	Member representative
4	Dr. Anjan Kumar Ray, Dean (P&D)	Working member
5	Md. Sarfaraj Alam Ansari, Asst. Prof., Dean (A&FA)	Special Invitee
6	Mr. Sukanta Chakraborty, Asst. Prof., FICMA	Special Invitee
7	Dr. Mohan S.C., Asst. Prof. (Civil)	Special Invitee
8	Assistant Registrar, NIT Sikkim	Working member
9	Executive Engineer (Electrical), CPWD	Member

### ► Finance Committee

So far, two (02) meetings of the Finance Committee of National Institute of Technology Sikkim have been held.

S.No.	FC Meeting No	Venue	Date
1	First	NIT Sikkim, Ravangla	14-04-2015
2	Second	IIT KGP Extension Centre, Kolkata	27-11-2015



The last FC Meeting was attended by the following members

1	BoG Chairman	Chairman
2	Director, NIT Sikkim	Member
3	Shri Ramesh Sharma	Member

## ► Senate

S.No.	Name	Designation
1	Director, NIT Sikkim	Senate Chairman
2	Dr. Nurujjaman	Assistant Dean Academic Affairs (AD, AA)
3	Dr. Sumit Chatterjee	Faculty-In charge, Electronics and Communication Engineering
4	Dr. Sangram Ray	Faculty-In charge, Computer Science and Engineering
5	Dr. Anjan Kr. Ray	Faculty-In charge, Electrical and Electronics Engineering
6	Dr. Sambhunath Barman	Faculty-In charge, Mechanical Engineering
7	Dr. Prasad Basu	Faculty In charge, Physics
8	Dr. Sumit Saha	Faculty In charge, Chemistry
9	Dr. Ravi Srivastava	Faculty In charge, Mathematics
10	Dr. Dhananjay Tripathi	Faculty In charge, Humanities and Social Sciences
11	Mr. Swapan Manna	Knowledge & Information Officer
12	Dr. S.S Pathak	External Member, BOG nominee
13	Dr. Basabi Bhattacharya	External Member, BOG nominee
14	Dr. T.K Nayak	External Member, BOG nominee





## Assistant Deans : following Faculty Members are given charge of Deanship:

S.No.	Staff Name	Post
1	Dr. Md. Nurujjaman	Assistant Dean Academic Affairs
2	Dr. Taraknath Kundu	Assistant Dean & Students Affairs
3	Dr. Anjan Kumar Ray	Assistant Dean Planning & Development
4	Mr. Md. Sarfaraj Alam Ansari	Assistant Dean Administration & Faculty Affairs
5	Dr. Sumit Saha	Assistant Dean Research & Consultancy



## ► Committees and respective faculty in-charge of the Institute:

S.No.	Committee	Faculty In-Charge
1	Training & Placement Activities (FI T&P)	<b>Dr. Sangram Ray</b> Dept. of Computer Science and Engineering
2	Construction and Maintenance Activities (FI - CMA)	<b>Dr. Sarit Kumar Das</b> Dept. of Civil Engineering
3	Power and Energy Conservation Initiative (FI - PEGI)	<b>Dr. Aurobinda Panda</b> Dept. of Electrical and Electronics Engineering
4	Info. & Communication Technology Infrastructure (FI - ICTI)	<b>Dr. Pratayay Kuila</b> Dept. of Computer Science and Engineering
5	Knowledge, Information & Learning Enablement (FI - KILE)	<b>Dr. Ranjan Basak</b> Dept. of Mechanical Engineering
6	Community Development and Awareness Programme (FI - CDAP)	<b>Dr. Sambunath Barman</b> Dept. of Mechanical Engineering
7	Landscape, Gardening and Environmental Protection (FI - LGEP)	<b>Dr. Achintesh Narayan Biswas</b> Dept. of Chemistry
8	Publication and Web Information System (FI - PWIS)	<b>Dr. Dhananajay Tripathi</b> Dept. of Humanities and Social Sciences
9	Women Grievances Committee (FI - WGC)	<b>Ms. Gopa Bhaumik</b> Dept. of Computer Science and Engineering
10	Games, Sports and Cultural Activities (FI - GSCA)	<b>Dr. Pranab Kundu</b> Dept. of Mechanical Engineering
11	Promotion of Indian Language and Culture (FI - PILCu)	<b>Dr. Dhananjay Tripathi</b> Dept. of Humanity and Social Sciences



S.No.	Committee	Faculty In-Charge
12	Poctorial Board (FI - PB)	<b>Dr. Taraknath Kundu</b> Dept. of Chemistry
13	Health Care Services (FI - HCS)	<b>Dr. Ravi Srivastava</b> Dept. of Mathematics
14	Assistant Controller of Examination Cell	<b>Dr. Sumit Saha</b> Dept. of Chemistry
15	Innovation Cell	<b>Dr. S G Samaddar</b> Dept. of Computer Science and Engineering
16	SC/ ST Cell	<b>Ms. Gopa Bhaumik</b> Dept. of Computer Science and Engineering
17	Store & Purchase Activities (FI-FPA)	<b>Dr. Taraknath Kundu</b> Dept. of Chemistry
18	Vehicle and Transport Management Activities (FI-VTMA)	<b>Dr. Shouvik Ghosh</b> Dept. of Mechanical Engineering
19	Public Information Officer (PIO)	<b>Dr. Dhananjay Tripathi, FIPWIS</b>
20	Chief Public Information Officer (CPIO) (1st appellate authority)	<b>Mr. Md. Sarfaraj Alam Ansari, FIDA</b>



## ► | Non-Teaching Staff List – Staff-list for 2015-2016

S.No.	Staff Name	Post
1	Mr. Swapan Manna	KIO
2	Mr. K D Tiwary	OSD
3	Mr. Ram Nepal	Assistant Registrar
4	Mr. Sahil Minda	Dy. Accountant
5	Mr. Kanahiya Prasad	Junior Engineer (Civil)
6	Mr. Tapan Chhetri	Computing Assistant
7	Mr. Bharat Pradhan	Office Assistant
8	Mrs. Nishita Chettri	Office Assistant
9	Ms. Sujata Dhungana	Secretarial Assistant
10	Mr. Amrit Sharma	Lab Technician, EEE
11	Mr. Happy Mondal	Lab Technician, Phy
12	Mr. Christofhar Sudhir George	Library Assistant, Library
13	Mr. Aniruddha Singh	Lab Technician, CSE
14	Mrs. Bhukya Hymavathi	Nursing Assistant, Medical Unit
15	Mr. Amit Tamang	Lab Technician, ECE
16	Mr. Amit Maity	Lab Technician, ME
17	Mr. Subho Das	Lab Technician, Civil
18	Mr. Suman Pathak	Lab Technician, Chemistry
19	Mr. Bapi Mondal	MTS
20	Mrs. Punam Singh	MTS



## ADOPTION OF LOGO

The logo of National Institute of Technology Sikkim has designed and is given on the front page of this report. It has the picture that includes number one and zero symbolizing basic units of computer science. The picture includes a bridge, a token for civil engineering, antenna for Electrical and Electronics Engineering. The logo is shown below:



The picture also includes DNA structure giving the sense that the institute provides ample scope for the growth of bio-technology. The river and pine tree in the picture symbolizes the flora and fauna of the state of Sikkim. The flame (Deepak) and rising sun is the picturesque description of the institute's punch line, 'Charaiveti'— a Vedic sentence, meaning constantly rising. The two birds flying high are metaphor for grown - up technocrats who are prepared and free to move away to spread the light of wisdom; the circle is not closed rather opened at the top of right hand side to give the idea that the institute believes in giving freedom to explore the horizons of technology to its students and associates.

The design has been accepted in principle by BoG. However, correspondence is going on with the industrial design centre IIT-B for simplifying this and better art-implementation.





## LAUNCHING OF WEBSITE

The NIT SIKKIM website was launched under the domain name [www.nitsikkim.ac.in](http://www.nitsikkim.ac.in) in the month of July 2011. The website is further improved. The current home page is designed as follows (the two views show the dynamically altering picture in the central display):



FIPWIS. Dr. Dhananjay Tripathi along with Public and Web Information System committee looks after the website. A group of students of the institute works with the Convener of the committee, Mr. B. Balaji Naik to keep the website updated. The students' committee is called Web Development Cell of NIT Sikkim which not only updates the website but keep on making new webpages and sub domains as required time to time. The initiative helps the students in getting the practical training in the area of Web development. The final responsibility of the contents on the website is on the administrative head; however, the changes and updates are the subject to the approval of the technical head.



## ► | CENTRAL LIBRARY

**K**nowledge and Information Centre (KIC) of NIT, Sikkim is growing rapidly in the path of serving its patrons. In this digital era KIC is exceedingly modernized. An evaluation study of NITs library website ranked KIC website on 12th place among rest of NIT's Library website. At present it is providing various electronic resources in the form of e-journals and e-books. In addition NPTEL videos are accessible. Electronic as well as print collections are on the rise. It has text books, reference books, encyclopaedias, dictionaries, CDs/DVDs, Local and National newspapers. Newsletters, annual reports, brochures, information bulletins in Hindi and English from prestigious institutions are obtainable in KIC. Photocopy, printing and high speed broad-band internet (LAN and Wi-Fi) facilities are available for patrons. KIC is fully automated with the latest software Libsys 7. KIC is committed to support teaching and research programme of the institute and to disseminate the information according to the requirement of the patrons. KIC offered peaceable and knowledgeable atmosphere for study, research, innovation and learning to all the patrons.

**Currently KIC is effectively running by two staff members:**



Mr. Swapan Manna



Mr. Christofhar Sudhir George



## Library Time table for Books Issue/Return:

DAYS	Session 1	Session 2
Monday	0900 hrs - 1300 hrs	1400 hrs - 1730 hrs
Tuesday	0900 hrs - 1300 hrs	1400 hrs - 1730 hrs
Wednesday	0900 hrs - 1300 hrs	1400 hrs - 1730 hrs
Thursday	0900 hrs - 1300 hrs	1400 hrs - 1730 hrs
Friday	0900 hrs - 1300 hrs	1400 hrs - 1730 hrs
Saturday	Closed	1400 hrs - 1700 hrs

### ► Library at a Glance

- 1. Total No. Titles 1514
- 2. Total No. of Hard copy books 8091
- 3. E- Books 233
- 4. Kindle E- Books 880
- 5. Hard Copy Journal/ Magazine 24
- SPIE digital Library online access started.
- Number of Books issued per students increased. Now issuing 6 books per student.
- Approval received from Top Management for more space for KIC.
- 6. Kindle e-book Reader/Tablet 4
- Online Databases –
- Science Direct
- IEEE
- SciFinder
- Springer
- Nature
- APS (Selected Title Journals)
- National and Regional News Paper – 7
- NPTEL Videos



## New Initiative

- Cashless transaction started for KIC related payment
- Number of Books issued per students increased.
- Approval received from Top Management for more space for KIC.
- Approval received for KIC's dedicated server to implement NDL initiative
- Web 2.0 tool (Facebook page) implementation in KIC.
- KIC's separate website launched <http://kic.nitsikkim.ac.in/>
- Books exhibition done successfully with Abhiyantran-2014
- SPIE digital Library online access started.
- Number of Books issued per students increased. Now issuing 6 books per student.
- Approval received from Top Management for more space for KIC.

## Planning and Development Activity

### Construction Progress report for the year 2015-2016

S.No.	Work Sanctioned	Work Initiated	Work Completed	Work in progress
1	Construction of a retaining wall at the back side of Prefab Hostel II	Construction of a Retaining wall at the back side of Prefab Hostel II	Roof treated of existing buildings at NIT Sikkim	Construction of kitchen cum dining block in Prefabricated structure.
2	Construction of a C.C approach road from administrative block to Prefab I	Construction of a C.C approach road from administrative block to Prefab I	Construction of Prefabricated hostel in Phase I.	Construction of conference room with Pantry and W.C at NIT Sikkim.
3	Construction of a temporary gate at the preset entrance of NIT Sikkim	Construction of a temporary gate at the preset entrance of NIT Sikkim	Fixing of hand railing along with the road and surrounding of Playground.	Construction of kitchen cum dining block in Prefabricated structure
4	Internal Painting of academic block hostels, staff quarters and other	Internal Painting of academic block hostels staff quarters and other	Construction of a computer lab to accommodate Super computer.	Construction of Prefab hostel in Phase II.
5	Fencing of the newly allotted land	NA	Construction of a temporary gate at the preset entrance of NIT Sikkim	NA



S.No.	Work Sanctioned	Work Initiated	Work Completed	Work in progress
6	Repair and renovation of kitchen, dining hall and toilet of boys	NA	Internal Painting of academic block hostels staff quarters and other mess which is to be used as mechanical Lab	NA
7	Construction of Fluid mechanics laboratory.	NA	NA	NA
8	Construction of Structural Laboratory.	NA	NA	NA
9	Construction of Workshop.	NA	NA	NA
10	Construction of approach road, drainage for Prefab Hostel in Phase II	NA	NA	NA





## ► Academic Departments

### ► Department of Biotechnology

#### Faculty Members in the Department:

1. **Dr. TaraknathKundu ( FIC)**
2. **Dr. Achintesh Narayan Biswas**
3. **Dr. Sumit Saha**
4. **Dr. Sancharini Das**

#### ► *Facilities in the Department*

- FT-IR and UV-Visible spectrophotometers, colorimeters, Autoclave, BOD incubator, PH meters, etc..

#### Programmes / courses offered by the Department

- B. Tech in Biotechnology.

### ► Department of Chemistry

#### Faculty Members in the Department:

1. **Dr. TaraknathKundu ( FIC)**
2. **Dr. Achintesh Narayan Biswas**
3. **Dr. Sumit Saha**

#### ► *Facilities in the Department*

- FT-IR and UV-Visible spectrophotometers, Low temperature bath, rotary evaporator, modern laboratories fitted with fume hoods.

#### Programmes / courses offered by the Department

- Chemistry (CY 1001)
- Chemistry laboratory (CY 1094)
- Environmental Engineering Laboratory

#### Others

- Dr. Taraknath Kundu, received a project from DST – SERB, Govt. of India.
- Dr. Achintesh Narayan Biswas received two projects, one is from DST – SERB, and another from CSIR.
- The department took the initiative to start and presently mentoring Department of Biotechnology in the Institute.



## ► Civil Engineering

### Faculty Members in the Department:

1. Mr. Samyajit Basu(FIC)
2. Mr. Sukanta Chakraborty
3. Dr. Sabyasachi Chandra
4. Mr. Durgesh Vikram
5. Dr. Mohan S C

### ► *Facilities in the Department*

- Class Rooms and Computer Labs are centralized but can be accessed by Civil Engineering students at any time of the day.

### Laboratories:

- Surveying Laboratory with state of the art equipment including totals stations.
- Material Testing Laboratory is in process of establishment (will be completed by February, 2016)

### Programmes / courses offered by the Department

- B.Tech. and PhD

### Others

- Faculties from Civil Engineering department are actively associated with construction and maintenance of NIT Sikkim campus.

## ► Computer Science and Engineering

### Faculty Members in the Department:

1. Dr. Sangram Ray(FIC)
2. Dr. Pratyay Kuila
3. Mr. Sarfaraz Alam Ansari
4. Mr. Pankaj Kumar Kesarwani
5. Mrs. Gopa Bhaumik
6. Mr. Tarun Biswas
7. Mr. Banavath Balaji Naik
8. Dr.(Mrs) Shefalika Samaddar (Guest Faculty )

### ► *Facilities in the Department*

- The department offers four years B. Tech (CSE) degree, two years M. Tech (CSE) degree and PhD.
- The department has a comprehensive curriculum on topics related to all aspects of Computer Science and Engineering with an emphasis on applicability using latest techniques of engineering.



- The course structure is up-to-date and includes courses on state-of-the-art to equip the students and teachers with the latest developments in the field.
- The areas of research are Cryptography, Network Security, Parallel-Distributed and High-Performance Computing, Algorithms, Bioinformatics, Computer Animation, System Software, Software Engineering, Cloud Computing and Wireless and Sensor Networks to build research groups and leverage the research activities in Sikkim in particular, and North-East region in general using a coordinated effort of various other organization working in the field of community development.
- The Department has state-of-the art infrastructure supported by high speed Ethernet and wireless network.
- The Department offers four years B. Tech(CSE) degree, two years M. Tech(CSE) degree and PhD(CSE).
- The Department has a comprehensive curriculum on topics related to all aspects of Computer Science with an emphasis on applicability that is provided using latest techniques of engineering.
- The course structure is up-to-date and includes courses on state-of-the-art to equip the students and teachers with the latest developments in the field.
- It is also proposed to develop interdisciplinary and multi disciplinary projects based on the expertise of faculty members.
- The areas of research are Cryptography, Network Security, Parallel-Distributed and High-Performance Computing, Algorithms, Bioinformatics, Computer Animation, System Software, Software Engineering, Cloud Computing and Wireless and Sensor Networks to build research groups and leverage the research activities in Sikkim in particular, and North-East region in general using a coordinated effort of various other organization working in the field of community development using science and technology.
- The Department has state-of-the art infrastructure supported by high speed Ethernet and wireless network.

### **Laboratories:**

- Computer Laboratory -1 (Used for laboratory classes for Programming Languages, Data Structure and Algorithm, Web Design, etc.)
- Computer Laboratory – 2 (Used for laboratory classes for Operating System, Computer Network, Database Management System, etc.)
- Cloud Computing Laboratory
- Information Security Laboratory (Setting up is in process)
- Programming Languages Laboratory
- Logic Design Laboratory
- Hardware Laboratory
- Data Structure and Algorithm Laboratory
- Operating System Laboratory
- Computer Network Laboratory
- Database Management System Laboratory



- Machine Intelligence and Robotics Laboratory
- Web Design Laboratory
- Cloud Computing Laboratory

### **Ongoing Projects/Schemes in the Department**

- Visvesvaraya PhD scheme in Electronics and IT funded by MEIT, Govt. of India.

### **Collaboration with other Department /institutes**

- University of Bremen, Germany
- Indian Institute of Technology, Kharagpur
- Indian Institute of Technology, Guwahati
- CDAC, Pune

### **Programmes/courses offered by the department**

- B. Tech in Computer Science and Engineering
- M. Tech in Computer Science and Engineering with specialization in Information Security.
- PhD in Computer Science and Engineering

### **Any land mark achieved**

- Introduced M.Tech. Course in 2015-16.

### **Any special lecture / seminar workshop organized**

- One day workshop on “Big Data Analysis and Hadoop” November 07, 2015.
- One Day Workshop on “Ethical Hacking”, November 08, 2015.
- One Day Seminar on “Ethical Hacking and Information Security”, March 17, 2016.
- Special lectures and laboratories visit for school students under community awareness programmes

### **Involvement in Community Development in 2015-16**

- Lecture by senior faculty to local schools.
- Computer exposure to the children in local villages.
- Department/Laboratory visit by school students

### **Placement/Internship during 2015-16**

- Placement Percentage in 2015-16: Over 90%.
- No. of Companies visited: In Campus – 05 and Pool Campus at North-East Institutes – 15.
- Internship at IIT Bombay; IIT Kharagpur; IIT Guwahati under Ishaan Vikash; North-Eastern Space Application Centre, Meghalaya.



## ► Electrical and Electronics Engineering

### Faculty Members in the Department:

1. **Dr. Anjan Kumar Ray (FIC)**
2. **Mr. Sankar S.**
3. **Mr. Pradeep Kumar**
4. **Mr. Molay Roy**
5. **Dr. Sourav Mallick**
6. **Dr. Aurobinda Panda**
7. **Dr. Amit Kumar Yadav**

### ► *Facilities in the Department*

- Despite severe lack of space, the department looked forward for academic excellence. It started developing its Machine Lab facilities, received funded projects from Visvesvaraya schemes, CDAC Bengaluru.

### Programmes/courses offered by the Department

- B. Tech. in Electrical and Electronics Engineering,
- PhD Programming

### Departmental Laboratories:

- It started developing its Machine Lab facilities

### Ongoing Projects/schemes in the Department

- Dr. Anjan Kumar Ray of EEE received Visvesvaraya PhD project “Intelligent Networked Robotic Systems” along with Prof. Arun Baran Samaddar. One full time PhD scholar joined the Department under this project.
- The Department in collaboration with CDAC Bengaluru had started the project “Establishing Research Laboratories Using C-DAC Lab Kits in North East Region Educational Institutes”. There are four partner institutes which are NIT Silchar, NIT Sikkim, Gauhati University Institute of Technology Assam, and Rajib Gandhi University, Arunachal Pradesh. The objective is to setup laboratory facilities on emerging technology which include the following research labs:
  - a. SCADA and Automation
  - b. Wireless Sensor Network
  - c. Cloud Computing
  - d. Augmented Reality

### Collaboration with other institutes/organizations

- NIT Silchar
- Gauhati University Institute of Technology, Assam
- Rajib Gandhi University, Arunachal Pradesh
- NIT Durgapur
- IIT Kharagpur





### **Landmark achieved in 2015-16**

- PhD programme is expanded during this period. Five part-time PhD scholars joined the Department. They are faculty members of State Engineering Colleges of Sikkim and West Bengal. The department also started Full Time PhD programme and obtained funded projects.

### **Special lecture/seminar/workshop organized in 2015-16**

- Departmental faculty members were involved in organizing all institutional lecture/seminar/workshops e.g. lecture series during Annual Tech Fest Abhiyantran.

### **Involvement in community development in 2015-16**

- Student group started a start-up called WADERS group with objectives to develop 'Intelligent Home Automation System – Rachel' and 'Ganatavya - Your on-road Assistant'. Students along with faculty members were involved in Swachh Bharat Abhiyan. Faculty members also interacted with school students as an open day programme. They were also involved in Inspire camp.

### **Placement/Internship during 2015-16**

- Students are placed in INFOSYS, IBM, VIRTUSA, ROBERT BOSCH, TECH MAHINDRA, MU SIGMA, WIPRO, L&T CONSTRUCTION, ORACLE CORPORATION. Students had done internship at reputed industrial and academic institutions such as BHEL, ALTTC Ghaziabad, NTPC, NHPC, IOCL, IIT Bombay, IIT Gandhinagar.

## **► Electronics and Communication Engineering**

### **Faculty Members in the Department:**

1. **Dr. Sanjay Kr. Jana (FIC)**
2. **Dr. Kaustav Bhomik**
3. **Mr. Surajit kundu**
4. **Miss Reshmi Dhara**
5. **Mr. Hemant Kathania**
6. **Dr. Sumit Kumar Chatterjee**
7. **Mr. Agile Mathew**

### **► Facilities in the department**

- Microelectronics & VLSI Design:
- VLSI Design LaB
- RF, Microwave and Antenna:
- Equipment:
- Digital Signal Processing lab.
- Additional Equipment for ECE Lab:



### **Programmes/courses offered by the Department**

- B. Tech in Electronics and Communication Engineering
- M. Tech in Microelectronics and Communication Engineering
- PhD in programme in various specializations

### **Land mark achieved**

- Introduced M. Tech course
- Introduced PhD full time/Part time programme under various project (SMDP C2SD, Visvesvaraya PhD Scheme)
- Internships in various research field: Maximum duration of two months.

### **Special lecture/Seminer workshop organized**

- Dr. S.G. Samaddar
- Dr. Abhijit Mitra (IIT Guwahati)
- Dr. Pankaj Pratap Singh (Assistant Professor, CIT Kokrajhar)
- Dr. Dibyendu Roy ( Assistant Professor, UIT, The University of Burdwan)
- Mr. Rahul Kumar (Ph.D Thesis submitted at IIT Kharagpur)
- Mr. Kaustav Das ( M.Tech IITG, Ph.D pursuing)
- Three Days Training Programme on PCB prototype & Antenna Fabrication using CNC Machine.
- Multiple Student events & workshops organized by departmental society 'Anuvrat'

### **Ongoing Projects**

- SMDP- C2SD for Microelectronics
- Technology & VLSI Design
- Visvesvaraya PhD Scheme.

## **► Department of Humanities & Social Sciences**

### **Faculty Members in the Department:**

1. **Dr. Dhananjay Tripathi (FIC)**

## **► Department of Mathematics**

### **Faculty Members in the Department:**

1. **Dr. Ravi Srivastava (FIC)**
2. **Dr. Om Prakash**

## **► Mechanical Engineering**

### **Faculty Members in the Department:**

1. **Dr. Shambhunath Barman (FIC)**
2. **Dr. Shouvik Ghosh**



3. **Dr. Ranjan Basak**
4. **Dr. Pranab Kumar Kundu**
5. **Mr. Debajit Saha**

### ► ***Facilities in the Department***

- ME Department started its journey in 2014. Students admitted in 2014 as first batch. Department started to set up basic laboratory like mechanical workshop, strength of material. End of 2016, fluid mechanics lab has been completed. Centrally Wifi facility is provided to students Laboratories

### **Departmental Laboratories**

- During the session of 2015-16, a part of the Fluid Mechanics Laboratory has been established.

### **Programmes/courses offered by the Department**

- B. Tech in Mechanical Engineering
- PhD in Mechanical Engineering

### **Special Lecture/Seminar/Workshop Organized in 2015-16**

- Renowned faculty from reputed institutes have given valuable lectures to the students of Mechanical Engineering Department.
- Prof. Gautam Biswas

## ► **Department of Physics**

### **Faculty Members in the Department:**

1. **Dr. Nurujjaman (FIC)**
2. **Dr. Anindya Biswas**

### ► ***Facilities in the Department***

- B. Tech experimental equipment
- Research equipment to study effect of noise in electronicckt.
- Radon Gas detector for research in the field of earthquake.
- Workstation for end numerical simulation and GPU computing

### **Collaboration with other institutes**

- Radon gas detection facilities has been installed in collaboration with Jadavpur University.
- Harish-Chandra Research Institute, Allahbad
- Saha Institute of Nuclear Physics



### Programmes / courses offered by the department

- Physics, Basic Sciences
- Electromagnetic field theory, Solid state Devices, Basic Electrical Sciences, Introduction to nonlinear dynamics and Quantum Information Sciences.

## ► Various Invited Lectures in the Institute

S.No.	Name of the Speaker	Designation	Lecture Topics
1	Dr. Amretashis Sen gupta	Post-Doctoral Fellow, Nano Scale Device Research Laboratory, Department of Electronic Systems Engineering, Indian Institute of Science (IISc), Bangalore – 560 012, India	2-Dimensional Channel Materials based Next Generation Nano-scale MOS devices.
2	Prof. Singam Jayanthu	Mining Engineering Department, NIT Rourkella-769008	Urgent need of Interdisciplinary Research for Mining Industry
3	Dr. Puneet Sharma	Department of Information and Communication Technologies IIT Jodhpur	Sensitivity and Chaos in Discrete Dynamical Systems
4	Dr. Arunabha Thakur	Post-Doctoral Fellow, Department of Chemistry, TU Dresden, Germany and INSPIRE faculty Awardee	Synthesis of Stabilized Low Valent Mixed Binary Pnictogens and B (I) Compound for Small Molecule Activation

## ► Research activities

### Ongoing Projects

- Dr. Sumit Saha – Asymmetric Synthesis of Bio active Natural Products and related Compounds Compounds using Carbohydrate as Chiral template (DST) (ongoing)
- Dr. Taraknath Kundu – Metal Catalyzed formal diastereo and enantioselective reaction of carbohydrate derived vinylcyclopropanes (DST) (ongoing)
- Dr. Achintesh Narayan Biswas – Tuning the Reactivity of Metal-oxygen Intermediates in C-H Activation and Water Oxidation (DST) (ongoing)
- Dr. Achintesh Narayan Biswas – Molecular Water Oxidation Catalysts



based on Earth Abundant Transition Metals (CSIR) (ongoing)

- Dr. Anjan Kumar Ray – Visvesvaraya Project: Intelligent Networked Robotic Systems (DEITY)(ongoing)
- Dr. Sangram Ray – Visvesvaraya Project: Development of efficient algorithm for wireless sensor network (DEITY) (ongoing)
- Prof. Arun Baran Samaddar – Visvesvaraya Project: Multimedia teaching-learning content optimisation (DEITY) (ongoing)
- Dr. Shefalika Ghosh Samaddar – Visvesvaraya Project: Design of a secured border gateway protocol and router (DEITY) (ongoing)
- Dr. Sanjay Jana – Visvesvaraya Project: Design of high speed semiconductor devices (DEITY) (ongoing)
- Prof. Arun Baran Samaddar – SMDP C2SD: Development of a chip (FPGA based board level digital designs), especially for earthquake prediction and RF testing (DEITY) (ongoing)

### Completed Projects

- Dr. Md. Nurujaman – Implementation of the Ensemble Transform Kalman Filter based Data Assimilation system in ROMS model using ARGO data (DST) (completed)
- (CDAC) Project: Establishing Research Laboratories Using C-DAC Lab Kits In North East Region Educational Institutes (completed)

### ► Publications:

#### Journal

- P. Kumar and N. Kumar, Simulation of Three-Phase Three-Wire Active Power Filter using p-q Theory. International Journal of Innovative Research in Electrical, Electronics, Instrumentation and control Engineering, Vol. 4, Issue 3, 5-8, March 2016.
- S. Bhattacharjee and A. K. Ray. Sentiment Analysis: Approaches, Applications and Challenges. International Journal of Innovations & Advancement in Computer Science, Vol 4, Special Issue, 516-527, 2015.
- M. Roy and M. Sengupta. A commutation strategy for IGBT-based CSI-fed parallel resonant circuit for induction heating application. Accepted in Sadhana - Academy Proceedings in Engineering Science, 2016.
- M. Roy and M. Sengupta. Design, Real time modeling, simulation and digital implementation of phase-locked loop based auto-synchronizing current sourced converter for an induction heating prototype. Accepted in Sadhana - Academy Proceedings in Engineering Science, 2016.
- S. Bora and R. Srivastava, Distance problems for Hermitian matrix pencils with eigenvalues of definite type. SIAM Journal on Matrix Analysis and Applications, Vol. 37, (2016) No. 1, pp.53-85





## ► Conference

- Canard and mixed mode oscillations in an excitable glow discharge plasma in the presence of inhomogeneous magnetic field PK Shaw, ANS Iyengar, M Nurujjaman, *Physics of Plasmas* (1994-present) 22 (12), 122301 (2015).
- Multi-scale dynamics in externally excited glow discharge plasma, U Deka, A Rao, M Nurujjaman, *Physica Scripta* 90 (12), 125602 (2015)
- Gopa Bhaumik, Shefalika Ghosh Samaddar, Arun Baran Samaddar, Digital Posture Analysis Buddha Images for Classification of Sects and Historical Time scale, Poster presentation, Regional Celebration of Women in Computing, East and North-East, Department of CSE, IIT Guwahati in association with ACM-India's ACM-W, IIT Guwahati, 2 - 3 November 2015
- Gopa Bhaumik, Shefalika Ghosh Samaddar, Arun Baran Samaddar Digital Authentication of the Images of Buddha in the Portrait of Thangka for determination of sects and periods, National Conference on Scientific Validation of Traditional Knowledge, MHRD-IPR Chair, IIT Roorkee, IIT Roorkee, March 12-13, 2016.
- Manna, Swapan; Samaddar, Shefalika Ghosh and Samaddar, Arun Baran. Resolving IPR Challenges in MOOC. MPhil/PhD Colloquium. ICIS-2015. November 13 – 14, 2015. NILIS. Sri Lanka. Accepted but not presented.
- Manna, Swapan; Samaddar, Shefalika Ghosh and Samaddar, Arun Baran. Resolving IPR Issues in MOOC. National Conference on the Evolving regime of Intellectual Property Protection. November 2 – 4, 2015. JNU, Delhi.
- Manna, Swapan; Samaddar, Arun Baran and Samaddar, Shefalika Ghosh. Interface of Open Learning Resources and Library Repositories. National Seminar on Emerging Trends in Academic Libraries (Celebrating Librarians Day), Indian Institute of Technology Kharagpur August 21, 2015.
- M. Roy and M. Sengupta. An over-voltage protection scheme with very fast response for application in a CSI-fed induction heating prototype. National Power Electronics Conference proceedings, NPEC-2015, IIT Bombay, December 2015.
- Suneet K Gupta, Pratyay Kuila and Prasanta K. Jana, “GA based Energy Efficient and Balanced Routing in k-connected Wireless Sensor Networks,” *ICIC2 2016, AISC (Springer)*, Vol. 458, pp.679-686 (2016).
- Om Prakash, and A Goswami, Stochastic inventory model with finite production rate and two level of trade credit financing, publication in proceeding of” international conference on advances in production and industrial engineering 2015”

## ► Book Chapter

- Pratyay Kuila and Prasanta K. Jana, “Evolutionary Computing Approaches for Clustering and Routing in Wireless Sensor Networks,” in *Handbook of Research on Natural Computing for Optimization Problems* (IGI Global), pp 246-266. (2016). ISBN 9781522500582.





## ► **VARIOUS EVENTS & CELEBRATIONS**

### **Udgam-15**

Udgam, the annual cultural festival of NIT Sikkim, is the culmination of sound and lights, of music and arts, of dances and dramas, of thoughts and words, the perfect place to bring out the artist in everyone. The festival also aims to serve as a platform for the expression of youth opinion on social issues. The second chapter of Udgam was organised during 23rd – 25th Apr, 2015. This grand festival was graced by the presence of Shri Avinash Mohananey (Director General of Police, Sikkim). This festival also served as a platform for the local artists, students from nearby schools (JNV Ravangla, DAV Rangit Nagar, CST School Ravangla and VCGL Ravangla) as well as the students of NIT Sikkim to showcase their cultural performances as well as to participate in the events organised during the 3-day fest. On the last day of the festival, winners of the various events were awarded with exciting prizes.

### **Abhiyantran-14**

Abhiyantran is the annual technical festival extravaganza held every year by the students of NIT Sikkim. Our main motto behind the festival is to bring out every single one of the curious and the innovative minds together under one roof and give them a platform to show their talents either by presenting a model or a project or by organizing various spirit-building events, talks, lectures and seminars, technical competitions. Many budding innovators and young minds attend the fest and illuminate the event with their presence and talent every year. The festival is also graced by the presence of renowned personnel from around the world who not only attend the fest but also inspire the students with their lectures and talks to change the course of modern technology by hardwork and dedication.

The second chapter of Abhiyantran was organised during 13th – 16th Nov, 2015 and the grand success of this fest can be attributed to the awe-inspiring talks by Dr. A.S. Kiran Kumar (Chairman, ISRO), Dr. A.LV. Kumar Reddy (Nuclear Fuel Scientist, NFC Hyderabad), Prof. Jayanta Kumar Bhattacharjee (Director, HRI Allahabad), Ms. Deepa Malik (Arjuna Awardee), Dr. Christopher Soghoian (TED Senior Fellow) and Mr. Srinivas Chamarthi (Career Guidance Provider). Apart from the technical events, this festival was also illuminated by the soothing performances by artists like Shri Dhananjay Hegde (Classical Vocalist) and Ms. Passang Doma Lama (Finalist, The Voice of India).

### **Research and Innovation Summit**

Abhiyantran'15, the techno-social festival of NIT Sikkim, apart from hosting a variety of technical events, workshops and competitions, also organised, Projects, seminars at Research and Innovation Summit (RIS) on 14th of November, 2015. Here, the young aspiring students from all over the country came to showcase and



propagate their projects in front of some of the most experienced stalwarts of the scientific and technical fields who shared their expertise and knowledge and judged the competition as well. This served as an excellent opportunity for students to exhibit their talents and redefining and revolutionizing the modern technology.

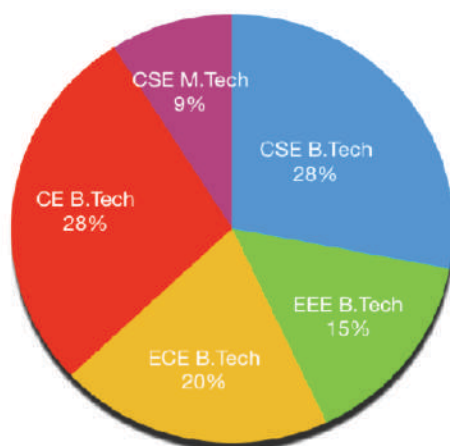
The entire festival was organised and headed by Prof. Arun Baran Samaddar as the Chief Patron, Dr. Taraknath Kundu as the Patron, Dr. Dhananjay Tripathi as the Chairman, Mr. Hemant Kumar Kathania as the Vice Chairman, Sampurnanand Mishra (Secretary), Deepansh Rastogi (Coordinator) supported by a creative and enthusiastic team of other students.

The festival saw a great number of sponsors as they showcased their interest in sponsoring in various categories. The festival was co-sponsored by Hotel Manadala, M/s Koyu Enterprises and CISB. The technical partners were Infi-Zeal Technologies, CyberCure Technologies, CAD Desk, Tech Trunk Ventures Pvt. Ltd. and Roxent Technologies. The online shopping partner was Ebay and the Media Partner was Sikkim Express.

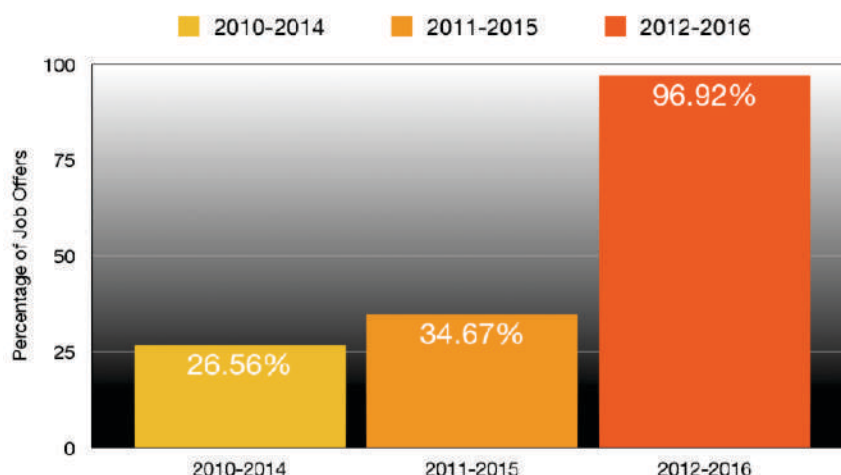


## ► Placement Statistics for 2012-2016

### Demographics



Student Intake



### ► Internships and Industrial Exposures

Undergraduate students undertake summer internships/training after their 4th and 6th semester in various premier institutes and well known industries of the country. This provides them with an opportunity to gain hands-on experience and also sensitizes them to current areas of research and industry needs. Some of the organizations in which the students have interned/trained are:

- BHEL
- BSNL
- CDAC
- L&T Construction
- IBM
- IIT Guwahati
- NTPC etc..

#### Past Recruiters are

- Intel
- Microsoft
- Power Grid
- National Instruments
- Virtusa
- IBM etc..



## ► | Constitution of Reporting Team

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