



NATIONAL INSTITUTE OF TECHNOLOGY SIKKIM

TEMPORARY CAMPUS, RAVANGLA, SOUTH SIKKIM – 737 139

UPCOMING PERMANENT CAMPUS, KHAMDONG, EAST SIKKIM – 737 134

ANNUAL REPORT 2011-2012



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The Institute: A treatise

I. Vision

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

II. 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.

III. Goals

- Help the engineering professionals recognize the quality and significance of their teaching, research, scholarship, service, outreach and leadership.
- Enhance the commitment of faculty, staff and students to the centrality of diversity, social justice and democratic citizenship.
- Provide leadership in the collaborative, professional relationships with schools, organizations and other institutions focused on the improvement of educations in school.
- Enhance the effective and efficient management of the institute.
- Sustain the caring, supportive climate throughout the institute.
- To 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.

IV. Academics

The Institute follows the 2010 curriculum and syllabuses of NIT Calicut, which was the mentor institute. NIT Sikkim (NITSKM) offers technical education based on the state of the art curriculum. All the undergraduate programmes 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.

V. 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.

VI. 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.

Sikkim Map (South District)



Where are we located?

Temporary Ravangla campus:

Address: Barfung Block, Ravangla Sub-Division, South Sikkim – 737 139

Contact (Director): +91 03595 260042 (Phone)

Fax : +91 03595 260018

Camp office near permanent Khamdong campus:

Address: N.H.P.C. Stage-V Balutar Singtam, East Sikkim, Sikkim – 737134

Contact (Director): +91 03593-247023, 247034 (Phone)

The New Jalpaiguri Railway Station and Bagdogra Airport are respectively 113 and 106 km away from the Campus.

VII. Campus

The Infrastructural Facilities in the Temporary Campus include

- i. The main campus of NIT Sikkim has been sanctioned and is to come up on an approximate area of three hundred acres of land in Khamdong, East Sikkim. It is a built up location in terms of conveyance and means of communication. To add to the promising academic environment of NIT Sikkim, it will be located within a stone's throw from the Kendriya Vidyalaya, NHPC stage V Singtam. Perhaps the best Kendriya Vidyalaya in Sikkim.
- ii. The present campus of NIT Sikkim at Ravangla, although temporary in nature, is also housed within a plethora of conveniences and an abundance of natural amenities. Just like the proposed Khamdong campus, it is located astern to the Jawahar Navodaya Vidyalaya Ravangla campus. 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.
- iii. Sixteen three-storied blocks, each with six 2-bedroom apartments, totalling to 96 apartments in the campus. These are utilized as boy's hostels, girl's hostels, faculty apartments and staff apartments. Each apartment has been furnished with cots, tables and chairs.
- iv. One Academic Building: the rooms in this building are utilised as class rooms (three nos.), two computer rooms, and three faculty rooms. Necessary benches & desks, tables, chairs and almirahs have been purchased after the appointment of the director in 2011.
- v. One proposed Administrative Building with 7 rooms, completed by the initiative taken by the FIDA, 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 and the necessary sanitary facilities. All rooms are well-furnished with the required furniture.
- vi. A common play ground is also available and used by students for certain outdoor games.
 - vii. Nearly 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 since the joining of the Director in October, 2011.

VIII. Medical Facilities

Arrangements have been made such that the staff and students of NIT Sikkim can be provided with the medical facilities. A doctor from the nearby government hospital at Ravangla visits the campus on every Sunday. Also, specialist medical practitioners visit the campus from time to time. A regular stock of medicines prescribed by the said medical practitioners are regularly maintained on campus, monitored and regulated by a designated and nominated group of faculty.

IX. Essential construction activities:

The 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:

- i. Renovation of existing residential and non residential bldg. mostly damaged by Earthquake at Ravangla campus;
- ii. Repair and renovation of Community Centre (Multi purpose hall fully damaged by Earthquake at Ravangla campus;



NIT Sikkim on a fine morning



A night at NIT Sikkim



Natural Ravangla

- iii. Repair of Earthquake damage and renovation of some existing structure for developing laboratories for Physics, Chemistry, Electronics and Electrical Lab at Ravangla campus;
- iv. Repair and renovation of earthquake damaged Admin Building with construction and little extension, wall Paneling at Ravangla campus;
- v. Construction of tubular truss with precoated galvanised sheet roofing at Academic Block courtyard at Ravangla Campus;
- vi. Erecting S/H: Shed on outer passage to the laboratory block by tubular truss with polycarbonate sheet roofing & interlocking pavertiles on passage;
- vii. Fixing chain link fencing surrounding of play ground for at Ravangla campus;
- viii. False ceiling, acoustic wall panelling, wooden flooring etc. for the multipurpose hall at Ravangla campus, enhancing its durability and cold resistance within;
- ix. Construction of Front Gate & Guard Room at Ravangla campus;
- x. Construction of Prefab structure.

As soon as the land at Khamdong will be handed over , construction of boundary walls and gate will begin.

X. Status of Land for permanent campus

Although the land was allotted at Khamdong following an official inspection on the 24th August 2011, the land has not yet been handed over. As a result it is presenting the Institute's administration and faculty with extreme difficulties in maintaining the standard of education. Several requests have been sent to the state Government, but with no response. Despite the fact that the institute is being run, the situation poses a great threat to the maintenance of the land and the development of the Institute.

Academics



&



Administration

I. ACADEMIC FACTS AND FIGURES

a. Courses Offered

- B. Tech. in Computer Science and Engineering
- B. Tech. in Electronics and Communication Engineering
- B. Tech. in Electrical and Electronics Engineering

b. Statement showing the student position at NIT-SKM

i) Student statistics during 2011-12

S.No	Particulars	Number of students' in position						
		SC	ST	OBC	Minority	General	Others	Total
(i)	<u>Boys</u>							
	UG	14	07	20		32		73
(ii)	<u>Girls</u>							
	UG	03	01	01		08		13
	TOTAL							86

II. ADMINISTRATIVE COMMITTEES

The foremost attempt initiated by the Director, who joined in 2011, was to compose statutory bodies to provide effective guidance and procedural functioning of the institute.

Composition of various statutory bodies

The Institute is governed and run by different statutory bodies.

BoG (Board of Governors) – Ad hoc (meeting held on 17th March 2012)

S.No.	Address of Office	Name and Designation
1	Chairman	Dr. Ratan.K. Sinha, Chairman,BOG
		Krishna Kumar, PA to Dr. Ratan K Sinha
		Dr. N Ramamoorthy, Sr. Tech. Adviser
2	Director , NIT Sikkim	Prof. A.B. Samaddar NIT Sikkim, Ravangla Campus
3	Joint Secretary dealing with NITs, MHRD, Govt. Of India	Shri R. D. Sahay

The Board of Governors (being constituted);

The Senate (being constituted);

The FC finance committee (being constituted);

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. The constitution of a formal committee is under process.

Committees and respective faculty in-charge for the smooth functioning of the institute:

- (i) *Academic Affairs Committee (AAC),*
Mr. R. K. Samanta FLAA
(Faculty In-charge)
Dept. of Computer Science and Engineering
NIT, Sikkim.
- (ii) *Developmental Affairs Committee (DAC),*
Mr. Sarfaraj Alam Ansari
(Faculty In-charge)
Dept. of Computer Science and Engineering
NIT, Sikkim

- (iii) *Research & Consultancy Activities Committee (RCAC)*,
Dr. R. K. Samanta (FIRCA)
(Faculty In-charge)
Dept. Computer Science and Engineering
NIT, Sikkim
- (iv) *Knowledge, Information and Learning Enablement Committee (KILEC)*,
Dr. Sumit Saha (FIKILE)
(Faculty In-charge)
Dept. of Basic Sciences and Humanities (Chemistry)
NIT, Sikkim
- (v) *Power and Energy Conservation Initiative Committee (PECIC)*
Ms. Piyali Das (Faculty In-charge)
Dept. of Computer Science
NIT, Sikkim
- (vi) *Community Service and Awareness Committee (CSAC)*,
Ms. Abriti Sanyal (FICCE)
(Faculty In-charge)
Dept. of Basic Sciences and Humanities (English)
NIT, Sikkim
- (vii) *Computing and Communication Enhancement Committee (CCEC)*,
Mr. Sarfaraj Alam Ansari
(Faculty In-charge)
Dept. of Computer Science and Engineering
NIT, Sikkim
- (viii) *Students Affairs Committee (SAC)*,
Mr. Dhiman Banerjee (FISA)
(Faculty In-charge)
Dept. of Electrical and Electronics Engineering
NIT, Sikkim
- (ix) *Landscaping, Gardening and Environmental Protection Committee (LGEPC)*,
Mr. Bipin Kumar (FILGEP)
(Faculty In-charge)
Dept. of Mechanical Engineering (upcoming)
NIT, Sikkim

III. LIST OF FACULTIES & NON-TEACHING STAFF

Faculty list for 2011-2012 academic year

Computer Science and Engineering	
S.No.	Faculty
1	Prof. A. B. Samaddar
2	Mr. Sarfaraz Alam Ansari
3	Mr. Pankaj Kesarwani
4	Mrs. Gopa Bhaumik
Electronics and Communication Engineering	
S.No.	Faculty
1	Mr. Nishu Gupta
Electrical and Electronics Engineering	
S.No.	Faculty
1	Ms. Piyali Das
2	Mr. Dhiman Banerjee
Mechanical Engineering	
S.No.	Faculty
1	Mr. Bipin Kumar
Basic Sciences	
Physics	
S.No.	Faculty
1	Dr. Md. Nurujjaman
Mathematics	
S.No.	Faculty
1	Mr. R.K. Paul (Guest faculty)
Chemistry	
S.No.	Faculty
1	Dr. Sumit Saha
2	Dr. Taraknath Kundu
Humanities	
S.No.	Faculty
1	Ms. Abriti Sanyal

NON-TEACHING STAFF LIST

Staff-list for 2011-2012

S.No.	Staff name	Post
1	Mr. Samir Ghosh	Officer on Special duty (OSD)
2	Mr. Bharat Pradhan	Office assistant

IV. 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:

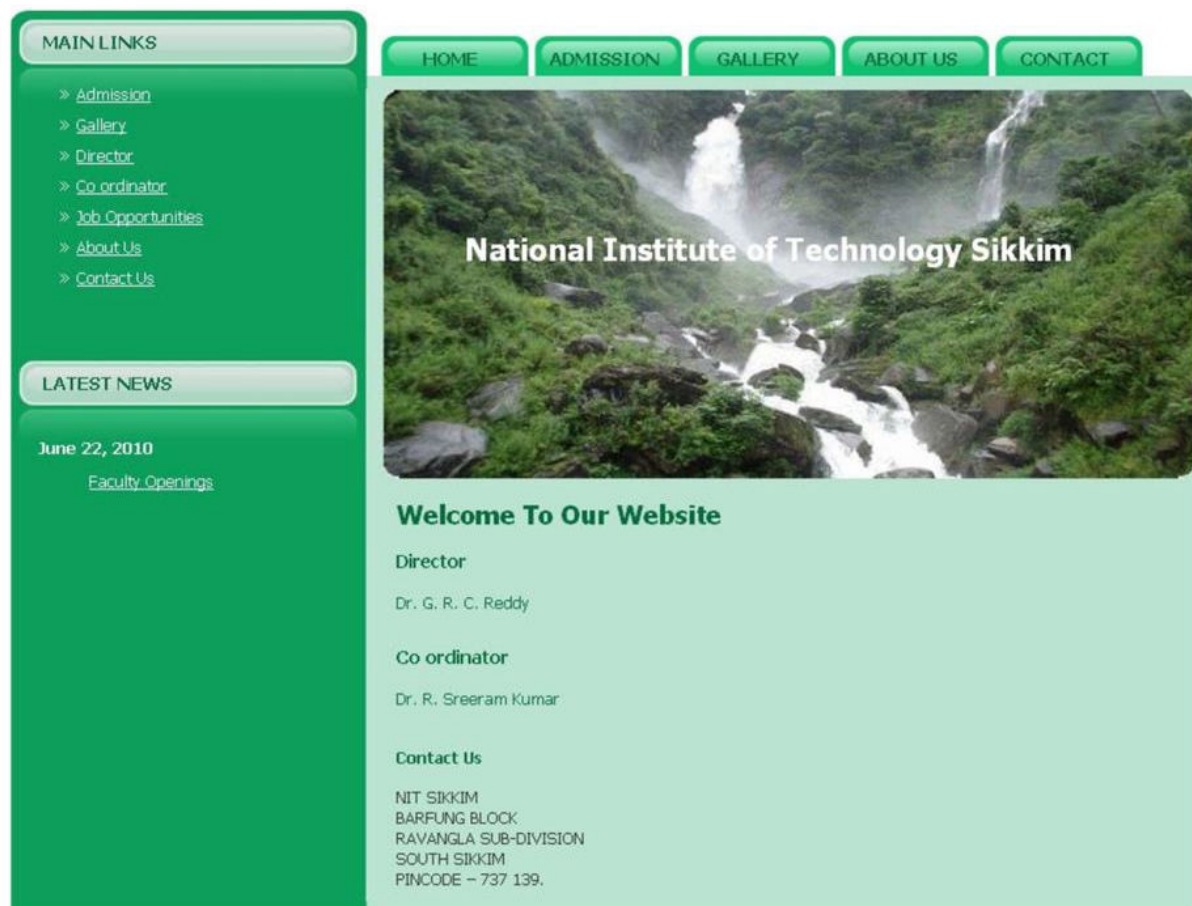


The picture also includes DNA structure giving the sense that the institute provides ample scope for the growth of bio-technology. The river and pine tree in the picture symbolises the flora and fauna of the state of Sikkim. The flame (Deepak) and rising sun is the picturesque description of the institute's 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 at BOG. However, correspondence is going on with the industrial design centre IIT-B for simplifying this and better art-implementation.

V. LAUNCHING OF WEBSITE

The NIT SIKKIM website was launched under the domain name www.nitsikkim.ac.in in the month of July 2011. The current home page is designed as follows:



The administrative head of the website is Director. FICCI looks into the website. Students and staff equally participate. The technical head is Mr. Sarfaraj Alam Ansari (taken up later by Mr. Pankaj Kesarwani). 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.

VI. CENTRAL LIBRARY & BOOKS/REFERENCES/JOURNALS

The central library of NIT Sikkim is designated as *Knowledge and Information Centre*. Presently the centre is headed by Mr. Swapan Manna and looked after by FIKILE. The centre has procured great number books and journals.

The Central Library supports the teaching and research programmes of the Institute and provides facilities for general reading and disseminates information according to the requirement of the users. It is housed in a separate building. The open access system is observed in the library. It has text books, reference books, encyclopaedias, dictionaries, Videos, CDs/DVDs, Local and National newspapers, e-books, and institutional publications. Library reading room is open from 10am to 8pm every day. Xerox and Printing facilities are available for users. Wi-Fi connections are recent additions to the library. Library is implementing Library Automation Software with barcode facility, E-book reader, NPTEL video course, online databases and e-journals shortly.

Collections—

Text Books – 1636

Reference Books – 170

Newspapers – 8 National/ Regional

Library Time table for Books Issue/Return:

	Mon-Fri	Saturday	Sunday
First session	10:00am-1:00 pm		
Second session	2:00 pm-4:30 pm	2:30-4:30 pm	
Third session	5:30 pm-8:00 pm	7:00-8.00 pm	6:30 pm-8:00 pm

Library Reading Room – 10am to 8pm

VII. Information Communication Technology (ICT)

Highly encouraged academic activities supported by Information Communication Technology (ICT) at National Institute of Technology Sikkim are given as:

E-classroom

- **Students' Presentation for course related activities:**
Students are making presentations related to course for advanced and general topics with information search.
- **Faculties' presentations for course teaching:**
Faculties are teaching with slides and/or explaining with audio visual materials.
- **Research seminars by faculties:**
Faculties present seminars related to their research interests
- **Students' presentation for different society related activities:**
Students are participating in their societal activities and searching materials in the form of power point presentations (PPT), Portable Data File (PDF), Texts, Audios and Videos etc. to fulfil the purpose.
- **Smart presentations using pen tablet, overhead projectors, speakers etc:**
Modifications or illustration during presentation is captured in the computer with the help of pen tablet for future reference to make interactive presentations.

E-results Publication

- Marks and results publication related ERP software:

We are in the process of implementing the same. At present these are performed through websites as a part of ICT

E-community activities

- **Community development activities with portable projectors:**
We are in the process of implementing the same. We need to develop contents for the same.
- **Summer science and technology camp for high school students:**
This is also in planning phase. We are trying to get some funding from governmental agencies
- **Future expansion of ICT activities being planned**
 - Academic ICT softwares like moodle etc. can be used for interacting with the students.
 - Students and faculties can view NPTEL lectures in a smart classroom connected with Internet.

- Class Lectures can be recorded and can be shared for academic purposes.
- Video conferencing capability over internet can be facilitated in the campus.
- Access to National Knowledge Network is planned
- Unlimited access for IEEE and other Journals with high impacts factors can be arranged.
- E-recruitment can be implemented for Faculty and office staff recruitment at NIT Sikkim
- E-tender management
- E-office management related ERP tools can be used
- E-accounting can be implemented with softwares like Tally

Challenges

The internet connection is very slow and also prone to connectivity interruptions. This issue must be addressed by the concerned authorities immediately.

VIII. VARIOUS EVENTS & DEVELOPMENTS

1. Event at NHPC Auditorium (SPIC-MACAY), on 18th May 2012, organized by NIT Sikkim, featuring Grammy award winner Pt. Vishwa Mohan Bhatt performing Mohan Bina.
2. Inauguration and start of library at NIT Sikkim.
3. Opening of a fully functional and organized student mess at NIT-Sikkim with dining space.
4. Electronics society Anuvrat opens under the mentorship of the Director, Prof. A. B. Samaddar, via the initiative of Ms. Mona Rajhans, faculty of ECE.

Picture platen:

1. Pt. Vishwa Mohan Bhatt performing at SPIC-MACAY, NHPC auditorium (top left).
2. Student award distribution by the Director, Prof. A.B. Samaddar at SPIC-MACAY (top right)
3. The Director, Prof. A.B. Samaddar at the inauguration of library at NIT-Sikkim (middle left)
4. New dining space for students at NIT-Sikkim student mess (middle right)
5. Inauguration of the electronics society, Anuvrat, with the president Ms. Mona Rajhans and student working committee members from various academic years (bottom left)
6. Technical quiz competition held at NIT-Sikkim by Anuvrat (bottom right)



IX. OTHER FACULTY/ STUDENT ACTIVITIES

1. Community service drive by NIT Sikkim: Director Prof. A. B. Samaddar with faculty, students and local school students – picture top left;
2. NIT students at play with local school students – picture top-right;
3. NIT students after at a friendly faculty-student cricket match, with the Director A.B. Samaddar - picture middle left);
4. Faculty picnic at proposed permanent NIT Sikkim site at Khamdong – picture middle right;
5. Students performing at fest at NIT Sikkim campus at Ravangla - picture -bottom left;
6. Faculty of NIT Sikkim with students at NIT Sikkim fest - picture bottom right);

The above are glimpses of many activities starting to develop on NIT Sikkim campus apart from studies.



The above are glimpses of many activities starting to develop on NIT Sikkim campus apart from studies.

X. Research and Projects Granted

Name of Project	Name of Faculty with Department	Broad area of research	Reference Number	Funding Agency	Under Scheme	Status	Amount of Sanction Granted
Implementation of the Ensemble Transform Kalman Filter based Data Assimilation system in ROMS model using ARGO data.	Dr. Nurujaman	Physics	No.SR/FTP/ES-88/2012	Department of Science & Technology	Fast Track, DST	Project Sanctioned	
<i>Asymmetric Synthesis of Bio active Natural Products and related Compounds using Carbohydrate as Chiral template</i>	Dr. Sumit Saha	Chemistry	IFA 12-CH45	Department of Science & Technology	INSPIRE Faculty Award Scheme	Initiated on November 26, 2012	35 lakhs for five years (7 lakhs /year)


Publications (2011-2012 academic years):

By Prof. Dr. Arun B. Samaddar (some notable publications):

1. Barik, R.K., Samaddar, Arun B. and Samaddar, Shefalika, G., 2011, Service Oriented Architecture based SDI Model for Geographical Indication Web Services, International Journal of Computer Applications , Vol. 25, No. 4, pp. 42-49.

Constitution of Reporting Team

Report Prepared & Compiled By:

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Photo courtesy: The students and faculty members of NIT- SIKKIM.

Appendix A: SAR report of AG Sikkim 2011-12

Appendix B: C.A. Audit report 2011-2012 (attached overleaf)