

SCHOOL OF TECHNOLOGY

Dean (Officiating): Professor M.K. Mahanti (till 26th September(FN) 2006)
Professor K. Ismail (w.e.f. 26th September (AN) 2006)
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The School of Technology was established in the year 2006 and at present it consists of Departments of (i) Electronics and Communication Engineering (ECE), (ii) Information Technology (IT) and (iii) Basic Sciences and Social Sciences (BSSS). Department of ECE and IT offer B.Tech. programmes in ECE and IT, respectively, while Department of BSSS offers courses on Engineering Chemistry, Engineering Physics, Engineering Mathematics, Biotechnology, Environmental Science, Statistics, Communication Skills, Management and Economics that are common to the students of B.Tech. Qualified teachers have been appointed and a permanent building for the School of Technology is nearing completion. Launching of B.Tech. programmes in NEHU will go a long way in the development of technical manpower in the region.

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Head : Dr. L. Joyprakash Singh
Telephone : 0364-272 3661 (O), 9436349192 (M)
E-mail : jplairen@nehu.ac.in Or jplairen@gmail.com

Thrust Area : The thrust area of the Department is to train the students for Electronics and Communication industries and develop their capacity for tackling engineering problems in the field of Electronics.

Brief Statement of Academic Activities : The Department has started the B.Tech. programme in Electronics and Communication Engineering from August 2006 onwards. Laboratory equipments costing around Rs. 27 lakhs have been procured to run the first year classes. Planning for procuring equipments for the second year laboratory classes have already been initiated. Revision of the syllabus has been taken up. Since this is a new Department, regular departmental meetings are held to discuss about the planning and development of the Department.

Faculty :

Readers : L. Joyprakash Singh, M.Tech (Tezpur), Ph.D. (Jadavpur)
Sushanta Kabir Dutta, M.Tech. (Manipal)
Lecturers : Juwesh Binong, B.E. (Bhavnagar)
Vijay Kumar Nath, M.Tech. (Tezpur)
Rajkishur Mudoi, M.Tech. (Tezpur)

Visiting Professors/Fellows/Scholars :

- (i) Prof. E.N. Lall was a visiting Professor in the Department and taught English to the B.Tech. students.
- (ii) Mr. C. Marthong visited the Department as a guest teacher and taught the students Elements of Electrical Engg., Engg. Drawing and Engg. Mechanics.

Students Intake :

Enrolment capacity : 60

Actual admission : SC/ST/Genl. Male/Female From Meghalaya/Outside
B.Tech. 3 9 26 29 9 13 25

Courses Conducted : Semiconductor Devices & Circuits (Theory & Lab), Network Theory, Elements of Electrical Engineering (Theory & Lab), Engineering Mechanics, Elements of Civil Engineering and Engineering Graphics.

Other Activities :

Dr. L.J. Singh, Mr. V.K. Nath and Mr. R.K. Mudoj attended an AICTE sponsored QIP short term course on Biomedical, Speech and Image Processing at IIT Guwahati organized by the Department of Electronics and Communication Engg. on 26-30 December 2006.

Mr. J. Binong attended NICT-2006 Conference at Guwahati organized by NASSCOM from 31 August to 2 September 2006.

Mr. S.K. Dutta and Mr. J. Binong attended the workshop on Digital Library at Mizoram University organized jointly by ISI Kolkata and Mizoram University on 12-16 March 2007.

Dr. L.J. Singh, Mr. J. Binong and Mr. R.K. Mudoj attended the workshop on Neural Network and Genetic Algorithm organized by St. Anthony's College, Shillong on 21-23 March 2007.

DEPARTMENT OF INFORMATION TECHNOLOGY

Head : Mr. Somanath Tripathy
Telephone : 0364-2723611 (O), 9436303692 (M)
E-mail : somanath.tripathy@gmail.com

Thrust Area : The thrust area of the Department is to train the students for I.T. industries and develop their capacity to tackle unknown engineering problems.

Brief Statement of Academic Activities : The Department has started B.Tech programme in Information Technology from August 2006 onwards. Planning and development of the Department is in progress.

Faculty :

Readers : S. Tripathy, M.Tech. (Andhra)
I. Hussain, M.Tech. (Tezpur)

Lecturers : S. Roy, M.Tech. (Tezpur)
 A.K. Maji, M.Tech. (Bengal Engg. and Sc. Univ.)
 S. Neog, M.Tech. (Tezpur)

Students Intake :

Enrolment capacity (B.Tech.) : 60

Actual admission :	SC/ST/Genl./OBC	Male/Female	Total
	3 4 19 8	26 8	34

Courses Conducted : Computer and Information Technology, Introduction to C & C++, Introduction to Computer Programming and Computer Programming Laboratory, Programming C & C++ Laboratory.

Seminars/Workshops attended by Faculty :

S. Tripathy presented papers entitled (i) 'Robust Mutual Authentication for low cost RFID systems' in the 4th Intl. IEEE Conf. on Industrial Informatics, INDIN06, IEEE explorer, held at Singapore 15-18 August 2006, (ii) 'RPAKE: RCA based Password Authenticated Key-Exchange scheme' in the IEEE INDICON 2006, IEEE explorer, held at Delhi 15-17 September 2006, (iii) 'Efficient Remote User Authentication and Key Establishment for Multi-Server Environment' in the 3rd International Conference on Distributed Computing & Internet Technology, ICDCIT 2006, held at Bhubaneswar 20-23 December 2006, (iv) 'CARMA: Cellular Automata-based Remote Mutual Authentication' in the 9th Intl. Conf. on Information Technology, ICIT 2006, IEEE Computer Society, held at Bhubaneswar 18-21 December 2006, (v) 'A Secured Response Algorithm with Query Authentication for Wireless Sensor Networks' in the 5th Asian International Mobile Computing Conference, AMOC-2007, held at Kolkata 3-6 January 2007 and (vi) 'Securing Wireless Sensor Networks Against Spurious Injections', in Proc. of communication Systems software and middleware, COMSWARE 2007, IEEE explorer held at Bangalore 9-10 January 2007.

Other Activities :

I. Hussain published a paper entitled (i) 'Fault Tolerant Task Scheduling in Real Time Multiprocessor System' and (ii) 'Optimising route Cache Life-time in Ad.hog Networks using frequent routes' in proceedings of NaSCOIT, June 2006, (Nepal).

Mr. S. Tripathy received IEEE-IES Scholarship on August 2006 in IEEE INDIN 2006 Conference held at Singapore.

Mr. S. Roy was selected as a member of Program Committee of National Conference on Trends in Advance Computing 2007 (NCTAC'07).

Mr. S. Roy attended Tata Consultancy Service-Excellence in Computer Science (TECS'07) week organized by TRDDC-Pune and ISI-AU Winter School on Image Processing conducted by Indian Statistical Institutes (ISI), Kolkata, at Assam University, Silchar, Assam.

Mr. A.K. Maji attended QIP-STC on Biomedical speech and image processing at IIT, Guwahati on 26-30 December 2006 and workshop on Neural Network and Genetic Algorithm at St. Anthony's College, Shillong on 21-23 March 2007. He delivered lecture on E-Commerce and M-Commerce in

the Refresher course on Emerging trends in Commerce and Economics held in the Department of Commerce, NEHU on 26th March to 16 April 2007.

DEPARTMENT OF BASIC SCIENCES & SOCIAL SCIENCES

Teacher-in-charge : Dr. A. K. Das
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E-mail : dask_anup@yahoo.co.in

Thrust Area of Research : The chosen thrust areas of the Department of Basic Sciences & Social Sciences (BSSS) is to carry out research in the fields of Basic & Applied Mathematics, Basic & Applied Physics, Chemical Science & Technology, Basic & Applied Environmental Sciences, Biotechnology and Basic & Applied Economics.

Brief Statement of Academic Activities : The Department having been functional only from October 2006, no extra academic activity could be planned and executed except for conducting core courses of Basic Sciences & Humanities which appear in the B.Tech curricula of Department of Electronics & Communication Engineering (ECE) and Department of Information Technology (IT).

Faculty :

Lecturers :

Mathematics	M. D. Kushwaha, M.A./Ph.D (BHU) M. M. Singh, M.Sc. (BHU), Ph.D. (PU) S.M.N. Mawiong, M.Sc. (NEHU)
Physics	A.K. Das, M.Sc. (IIT), Ph.D (CU) R.S. Kharwanlang, M.Sc. (NEHU) Amal Medhi, M.Sc. (Gau.)
Chemistry	A.B. Chetry, M.Sc. (Gau.) A.Sinha, M.Sc.(Lucknow), Ph.D. (NEHU) Lokman H. Choudhury, M.Sc./Ph.D. (IIT) Jyoti Narayan, M.Sc./M.Phil/Ph.D.(KU)
Statistics	Phrangstone Khongjee, M.Sc. (NEHU)
Env. Science	Krishna Upadhaya M.Sc./Ph.D (NEHU)
Biotechnology	Hiranjit Choudhury, M.Sc./Ph.D. (NEHU)
English	Evapynhun Giri, M.A./M.Phil (NEHU)
Economics	Veronica Pala, M.A./M.Phil (NEHU)

Courses Conducted : The following Core Courses of the B.Tech Programmes of ECE and IT have been conducted :

English & Communication Skill, Engg. Mathematics I, Engg., Physics I, Engg. Chemistry I, Engg. Physics Laboratory, Engg. Chemistry Laboratory, Applied Mathematics I, Applied Physics I, Engg. Mathematics II, Engg.

Physics II, Engg. Chemistry II, Applied Mathematics II, Applied Physics II, Applied Chemistry II, Elements of Environmental Sciences, Biotechnology, Applied Physics Laboratory and Applied Chemistry laboratory.

Other Activities :

Shri P. Khongjee attended Refresher Course in Jamia Millia Islamia, New Delhi, (7 -27 November 2006)

Dr. M. M. Singh attended Refresher Course in Mathematics in Pondicherry University from 6-26 October 2006

The following persons were appointed during the year :

Shri Sainkumar M.N. Mawiong as Lecturer in Mathematics

Shri Regenel S. Kharwanlang as Lecturer in Physics

Shri Amal Medhi as Lecturer in Physics

Dr. Lokman H. Choudhury as Lecturer in Chemistry

Dr. Jyoti Narayan as Lecturer in Chemistry

Shri Phrangstone Khongjee as Lecturer in Statistics

Dr. Krishna Upadhaya as Lecturer in Environmental Sciences

Dr. Hiranjit Choudhury as Lecturer in Biotechnology

Smt. Evapynhun Giri as Lecturer in English

Smt. Veronica Pala as Lecturer in Economics

Other relevant information not covered above :

Smt. V. Pala attended the UGC-ASC Orientation Course organized by the Department of Education, NEHU, Shillong during 21 March-18 April 2007. She is also working as Coordinator in the preparation of the UNDP-sponsored Meghalaya Human Development Report.

Dr. M.M. Singh attended and participated in the Orientation and Training Programme for academic counsellors sponsored by IGNOU and N.E.H.U., Shillong on 2-3 March 2006. He taught the Mathematical Olympiad participants at Department of Mathematics, NEHU , 22 January to 3 February 2007.