

CENTRAL SERVICES

COMPUTER CENTRE

Head : Dr. S. N. Rai (till 31/01/2008)

In-Charge : P. P. Dey (w.e.f 01/02/2008)

Telephone : 2227366 (O)

Brief Statement of Activities during the year : The Centre provides computation facility to faculty members, research scholars and students of the University, develops and maintains software for the University and conducts training programmes in computer related subjects. Research scholars, teachers and non-teaching staff members from various departments / centres utilized the facilities of the centre for computational work, documentation and internet browsing. The Centre conducted short-term computer courses in Visual Basic Programming, C Programming, Java Programming, Webpage Designing, Windows & MS-Office. The Centre also conducted computer keying test for the recruitment of Data Entry Operator. The Centre has been assisting Finance, Examination and Administration Departments of NEHU. Mr. P. P. Dey maintains the software of the Finance Department and three Data Entry Operators of the Centre are involved in the Examination Department's works. The Centre conducts CIC, BCA and MCA computer courses of IGNOU during the weekends and some holidays throughout the year. The Centre manages the internet facility for the Bijni Complex of the University.

Staff :

Director : S.N.Rai, Ph. D. (BHU) (superannuated on 31.01.2008)

Sr. System Analyst : P.P.Dey, B. Tech. (R. E. C., Warangal)

Reader : T. K. Sinha, Ph. D. (NEHU)

Systems Analysts : B. Rynjah, B. Tech. (JNTU College of Engineering, Kakinada), M.B.A.(IIT,Chennai)

Publications :

Kusakabe T., Gotanda K., Kimura M., Rai S. N., Liebermann H. -P., and Buenkar R. J. 2007. Vibrational Effect on Charge-Transfer Processes in Collision of H^+ and O^+ ions with C_2H_4 Molecules at Energies Below 10keV/u. *Phys. Rev. A*76, 042711:1-7.

Other Activities : Dr. T. K. Sinha gave 3 talks on MATLAB and its application in the Workshop on Scientific Computing organised by the Centre for Science Education, NEHU from 12st March to 14th March, 2008 at NEHU, Shillong.

The Centre generated revenue of Rs. 88,724/- during the year.

HEALTH CENTRE

In-Charge : Dr. V.S.V. Prasad
Telephone : 2224639 (O), 2227369 (R)
E-mail ID : vsvprasad @ post.com

NEHU Health Centre has two units - one at Bijnai complex, Laitumkhrah, Shillong and the other one at the Permanent Campus, Shillong catering to the health needs of teaching and non-teaching staff alongwith their dependents and the students.

Sr. Medical Officers : V.S.V. Prasad, (MBBS DH & HM)
I. Hussain,
M. Marwein

Facilities Available :

Consultation : Medical Officers are available for consultation at fixed hours as well as for emergency consultation outside duty hours.

Pharmacy : The required medicines are purchased from wholesale suppliers and stocked at the Health Centre. These medicines are issued to the patients based on the prescription by the Doctors.

Dressing Room : Dressing, injections and minor surgical procedures are carried out in the Dressing Room.

Sports : First Aid service is provided at sports meets and tournaments.

Ambulance : Ambulance service is provided during emergency for transporting the severely ill patients from residence to Clinic/Hospital.

Laboratory : Bio-chemical and Clinical pathology tests for blood and urine analysis has been started in the Health Centre.

In-patient treatment : Patients requiring in-patient treatment are referred to the Hospitals within and outside Shillong depending upon the necessity.

Credit billing facility : We have credit billing facility available for patients admitted in Nazareth and K.J.P. Hospitals in Shillong and C.M.C. Hospital at Vellore.

Voluntary Blood Donors : Health Centre maintains a list of Voluntary Blood Donors from among NEHU community and arranges for Blood Donors in case of emergency for the needy among NEHU community as well as community outside of NEHU.

NEHU PUBLICATION

In-charge : Professor A C Mohapatra
Tele-fax : 91 0364 2226316
E-mail : NEHUPL@gmail.com
Assistant Editor : Mr. Bedarius Shylla

NEHU Publication Cell was established with a view to promoting and undertaking publications in various academic areas and for different target groups of the University community. It has mainly concerned itself with the publication of University and undergraduate textbooks, supplementary reading materials, reference books, research works particularly those relating to the North-East, Endowment Lectures delivered in the University and official publications such as the University Acts and Statutes, Ordinances, the Annual Report, *NEHU News* (quarterly) and *The NEHU Journal* (Biannually). Apart from these, Publication Cell is also functioning as the official printer of the University with the printing press attached to it.

This is largely a self-financing unit and has developed out of a small investment made during the very inception of the University. At present, the press has been undertaking almost all printing jobs emanating from the various Departments and Centres of the University. The press is also acquiring new printing equipments for the modernisation of printing.

Printing, reprinting and publication of the following works were taken up during the period under report:

NEHU News: January-June, July -December, 2007 issues

NEHU Anthology of English Verse

Report on Workshop for College Principals of Meghalaya for College Development Council

Printing of PG Diploma & Entrepreneurship Programme Guide for Centre for Distance Education (CDE)

Printing of Floriculture Study Materials in Assamese & Khasi for CDE

Printing of Floriculture Programme Guide for CDE

BA & BSc Syllabi

Khasi-Hindi-English Dictionary for Hindi Cell

Thirty third Annual Report

Prospectus and Admission forms for 2007-08

Printing items from various Departments

Seventeenth Convocation Programme, Address, Citations, etc.

Printing of Calendars, Diaries and Engagement Pads.

SOPHISTICATED ANALYTICAL INSTRUMENT FACILITY

Head : Professor B. Myrboh

Telephone : 2227283 (O), 2505685 (O), 2231670 (R)

Fax : 2228213

E-mail ID : bmyrboh@nehu.ac.in

Brief Statement of Academic Activities : The Centre provides analytical services, conducts training / workshops and also offers limited repair and

maintenance services in computerized instrumentation and compressor based system.

Scientific Staff

Professor	: R. P. Bajpai, M. Sc. (AMU), Ph. D. (Glasgow)
S.S.O.	: Taposh Chakraborty, Ph. D. (NEHU)
S.O.	: Sudip Dey, Ph. D.(NEHU)
	: Begonia Dkhar, M. Sc.(NEHU)
	: Debashish Dey, Ph. D. (Rani Durgabati, Jabalpur)
	: P. S. Dkhar, Ph. D. (NEHU)
	: S. K. Prasad, M. Sc. (NEHU)
	: J. Sohtun, M. Sc. (NEHU)

Seminars/Conferences/symposia/extension programmes etc.:

Organised

A two day Wokshop on instrumentation and maintenance of Sophisticated Analytical Instruments” was organized on 12-13 April, 2007 for people involved in operation and maintenance of sophisticated instruments in different departments of NEHU, which was coordinated by Dr. T. Chakraborty, SAIF, NEHU. Altogether 26 participants were present. Two Senior Technical Officers from SAIF, IIT Madras, Chennai covered various aspects pertaining to instrumentation, vacuum technique, preventive and breakdown maintenance of sophisticated instruments, etc.

Attended

Dr. P. S. Dkhar attended a three day National Workshop on Trace element Research jointly organized by the Department of Physics, NEHU and UGC-DAE Consortium for Scientific Research on 4-6 March, 2008 at NEHU, Shillong and presented a poster entitled “Trace element analysis of soils along the Darranga- Dawki profile, North Eastern India.

Publications :

Book Publications

Dey S. 2007. “Role of Scanning Electron Microscopy in Understanding Insect Corneal Nipple and Other Structures” in Modern Topics on Microscopy Education and Research, p. 336-344.

Funds Received From Agencies other than NEHU :

From DST, New Delhi: : Rs. 31 lakhs

Dr. S. Dey. Assessment of Heavy Metals and Other Pollutants in Common Edibles with Reference to Human Health in Urban Meghalaya. Ministry of E & F, Govt. of India (Rs. 10.05 lakhs).

Infrastructure Facilities :

The following sophisticated analytical facilities are available:

- i. Scanning Electron Microscope; (a) JEOL JSM 6360 (b) JEOL JSM 35CF

- ii. Transmission Electron Microscope JEOL JSM 100CX
- iii. FT-NMR. Bruker ACF – 300
- iv. Microscope with Image Analyser, LEICA
- v. CW NMR, Varian EM – 390 (90MHz)
- vi. Atomic Absorption Spectrometer, PE 3110
- vii. Graphite Furnace, AAS6 Vario EA
- viii. CHNOS Analyser, PE 2400
- ix. FT-IR, BOMEM DA – 8.02
- x. ICP – AES, Labtam 8440M
- xi. Liquid Nitrogen Plant, Philips PLN 106.
- xii. Liquid Chromatograph-Mass (LC-MS) Spectrometer, Model: ZQ – 4000.
- xiii. A new 400 MHz BRUKER model AVR - 400
Has been procured and is in the process of being installed.

Research Projects:

Ongoing

Assessment of Heavy Metals and Other Pollutants in Common Edibles with Reference to Human Health in Urban Meghalaya. Principal Investigator: Dr. Sudip Dey. Sponsored by Ministry of Environment & Forests, Govt. of India (Rs. 10.05 lakhs).

New

Endocrine Regulation of Reproduction and Enhancement of Facundity in the Muga Silkworm *Antharaea assamensis* Helfer. Co-investigator: Dr. S. Dey. Sponsored by DST, New Delhi (Rs. 28.87 lakhs).

Khasi Traditional Edibles & Their Food-Value with Reference to Some Major Nutrients. Principal Investigator: Dr. S. Dey. Sponsored by Ministry of Tribal Affairs, Govt. of India. (Rs. 2.50 lakhs).

Completed

A Lab-to-Land Programme on Structural Biological Applications in Non-Mulberry Sericulture with Reference to Increased Silk Output. Principal Investigator: Dr. S. Dey. Sponsored by NEC, Govt. of India, Shillong (Rs. 10.02 lakhs).

Academic/Professional Collaborations : Dr. S. Dey has research collaboration with Central Muga & Eri Research & Training Center, Jorhat, Assam, and Northeast Institute of Science & Technology (CSIR), Jorhat.

Other Activities : Five students have obtained their Ph.D. degree from Gauhati University, Guwahati and another student has obtained his Ph.D. Degree from Assam University, Silchar, Assam under the joint supervision of Dr. S. Dey. Dr. S. Dey has been recognized as Research Supervisor for Ph.D. degree in the Center for Environmental Sciences, NEHU, Shillong. Dr. S. Dey participated in a Seminar on Fish Biodiversity organized by St. Anthony's College on August 2007. Dr. S. Dey participated in a Workshop on Advanced Techniques in Life-Science Research, SAP-Sponsored Programme of the

Department of Life-Sciences, Assam University, Silchar held on 24-28 February, 2008 as a Resource Person.

UNIVERSITY SCIENCE INSTRUMENTATION CENTRE

Head : Professor P.V. Koparkar
Telephone : 2721161 (O), 2551335 R
Email : chimanee @ sancharnet.in

Thrust Area of Research in the Centre : The main thrust area of research in the Centre is related to Instrumentation and its allied fields. At present work related to Sophisticated Seismic Instrumentation and Radiation detection related Instrumentation are in progress.

Brief statement of academic activities : From August 2007 session, the Head, USIC and Technical officers of USIC have been taking theory and practical classes in the Department of Basic and Social Sciences, School of Technology, NEHU.

Faculty :

Professor : P. V. Koparkar, M. Sc., Ph.D.(Nagpur)
Technical Officers : S. De, M. Sc. (Gau), M. Tech.(Tezpur)
Frieda Cajee, B.E.,P.G.Diploma (Gau)

Courses conducted : Practical classes related to Mechanical/Carpentry Workshop are being conducted by the USIC staff for engineering students of the School of Technology, NEHU.

Publications :

Book/Book Chapter/Proceedings

Koparkar, P.V. and Arun, R. A 2008. Universal, real-time three channel Data Acquisition System for Seismic studies, Proc. Int. Symposium on "Sensors, Signal Processing, Communication, Controls and Instrumentation", pp.121-124.

Funds received from agencies other than NEHU :

DST, New Delhi : Rs.3.8 Lakh
DRDO, Jodhpur : Rs.3.0 Lakh
DRDO, Jodhpur : Rs.3.00 Lakh

Research Projects:

Ongoing

1. "Design & fabrication of a high resolution, three axis laser based Computerized Seismometer". DST, New Delhi Rs.11,41,400.00, P.I. Prof. P.V. Koparkar.

2. "Seismic optical sensor for the detection of Atomic Explosions" DRDO Jodhpur, Rs.9,95,800.00, P.I. Prof. P.V. Koparkar.
3. "Piezoelectric powered Radiation Detectors". DRDO Jodhpur, Rs.9,95,800.00. P.I. Prof. P. V. Koparkar.

Other activities :

Prof. P. V. Koparkar gave a lecture on "Nanoscience: Convergence of Physics, Chemistry, and Life Sciences" on the National Science Day celebrations organized by IPA and Ramkrishna Mission, at Ramkrishna Hall, Shillong.

USIC is involved in repairs and maintenance of instruments used by PG students in the laboratories as well as by the research scholars from different departments/centres. Besides this, the carpentry section does the fabrication of furniture as per the requirement received from the P & S Section of the University.

CAMPUS DEVELOPMENT DEPARTMENT

Campus Development Department is entrusted with the responsibility of all the works related to construction and maintenance of infrastructure such as buildings, roads, electricity and water. Also, it helps in planning of future growth of the University Campus. The activities taken up by the department during the year under report are given below: