

CENTRAL SERVICES

CENTRAL LIBRARY

Introduction : The year 2006-2007 marked the completion of three years of the NEHU Central Library in its new location. During the year under report, while efforts were made to equip the new library, important achievements were made in providing new electronic services to its clientele, thus optimising library usage. As part of creating awareness in automation and IT base information retrieval, Library Officers also actively contributed as Resource Persons in the University Refresher Courses and training for untrained Librarians. Special sessions for representation of important gateways by on-line provider and students orientation were also organised. The following is the report of tasks achieved during the period March 2006 to March 2007.

Inauguration of the NEHU Central Library Building : The inauguration of the building represented by a mounted plaque was inaugurated by the Honorable Union Minister for DONER and Tribal Affairs, Shri P.R. Kyndiah on 18 September 2006.

Library Budget during the year :

Books	Periodical	Other charges	
19.50 lacs	93.5 lacs	3.55 lacs	3.50 lacs for books for the new departments of Information & Technology, Electronics and Communication and basic sciences.

Library Collection - Books and Journals : During the year, the Library procured 4484 (four thousand four hundred eighty four) volumes new books and bound 419 back volumes bringing the library collection to a total of 2,38,904 volumes up to 1 March 2007. A total of 288 Foreign Journals and 264 Indian Journals were subscribed during the year.

Library Membership : With the establishment users of three new Departments the Library register record showed a total number of 3050 which includes students, teachers, research scholars and others.

Services provided by the Library : Book transactions - During the year the library witnessed active use of the library in both number of books being issued and books being consulted. The library issued a total number of 439 books on a daily basis during the year, and 400 persons consulted the library daily.

Other Services : In addition to above services the library provides following services :

1 E-mail service to all Departments on new books processed by the Library.

2 Alert service on latest trend of Departments concerned through contents page of selective journals. CD-Rom search service of which the census of India 2001 data is the latest addition for the benefit of students and research scholars.

3 Students Orientation Programmes in Library sources and on-line information through lectures, demonstration and guided tours to different service sections of the library.

4 Reprography services: This service now includes coloured printouts facility from the xerox mz.24 a newly acquired machine. It has proved to be of special advantage to the users. Altogether 1,05,939 (one lakh five thousand nine hundred thirty nine) copies were provided. A total print outs of 36,897 (thirty six thousand eight hundred ninety seven) and 2,777 coloured print outs were also taken out. A total revenue of Rs.92,988 (Rupees Ninety two thousand nine hundred eighty eight) was collected and submitted to Finance Department during the year.

On-line Journals : The library continued to receive the on-line facilities of 4000 journals through Infilbnet and the same has proved to be a boon to our teachers and research scholars specially science departments.

New Services introduced : During the year, the library has added the following two new services for the readers.

1. Library Web-site.

The NEHU Central Library is keenly aware of the need for a library website. Earlier this service could not be introduced due to poor connectivity. Therefore, with improved conditions at the campus, the library immediately took up the work of providing its library website which also includes the library OPAC . The Library is available through the NEHU website at www.nehu.ac.in by clicking at the NEHU library page.

2 Internet Service

The library also completed the work of furnishing its internet room located in the 1st floor of the library building. The internet facilities with 30 seats capacity is actively used. On a daily basis, an average of 50 students, research scholars and others avail this facility.

The above two services were inaugurated by Prof. P. Tandon, Vice-Chancellor, NEHU on 25 August 2006.

Training Conducted and Lectures organized :

1 Orientation on on-line sources and important search engines

As part of the series of Orientation Programmes for teachers, research scholars, students for accessing e-sources, the Computer Unit of the Library

arranged a one day product presentation on I-Grade Portal on the 18th August by M/S Informatics (India) Ltd Kolkata at the Committee Room of the Central Library.

2 A two months free trial to Elsevier on-line titles, scopus database and nature journals were made available for access by departments with down load facilities during September-November 2006 and also March 2007. The on-line trial facility was with a view to create users awareness and also users evaluation for future consideration. The facility was well received and appreciated by faculty members on research scholars.

3 Lecture on developments to computational processes

The Library Department and the Department of Linguistics jointly organised a lecture on the 12th July 2006 by Dr. Pushpak Bhattacharyya from IIT Bombay on Meaning: The heart of computational processing of meaning (also known as semantics). The lecture was specially beneficial to students, teachers of Library Information Science and Linguistics.

Papers Contributed during the year :

Papers contribution

1. Dr. I. Majaw, Librarian contributed a paper 'Ki Khana Lyngkot' (Khasi Short Stories) in the Silver Jubilee Souvenir of Khasi Department.
2. Dr. Lalhmachuanna, Documentation Officer submitted following papers:
 - (1) 'Subject information gateways as the Scholars' pathways for avoiding Internet chaos, during Planner 2006 convention, Inlibnet held at Mizoram University on the 9 -10 November 2006.
 - (2) 'Access to scholarly web resources' at the EMPI-Digital Library National Convention 2007. New Delhi on 18 - 20 November 2007.
3. Shri Manoj Rana, Assistant Librarian presented a paper entitled "E - Commerce: Security Issues, Problems and Prospects" in the National Seminar on Global Convergence of Commerce Education held at NEHU, Shillong from 7-8 November 2006 organized by Department of Commerce, NEHU.

Others Academic Activities :

Dr. I. Majaw, Librarian and Dr. Lalhmachuanna, Documentation Officer delivered lectures as Resource Persons on a One Week Library Orientation Programme for Librarians of SCERT, SIE, DIETS of North Eastern Region held from 12 - 16 March 2007.

Librarian, Shri P.K. Mitra, Sr. Assistant Librarian, Dr. Lalhmachuanna, Documentation Officer and Shri F. Sumer, Information Scientist delivered lectures on the 28-29 March, 2007 during the Orientation Programme for

College Teachers conducted by the Education Department, NEHU. The lectures were in optimising library usage and assessing and using web-sources and information gateways.

Shri F. Sumer, Information Scientist and Shri Manoj Rana, AL Circulation Section assisted as guest lecturer in the Department of Library & Information Science.

Statistics at a glance :

1. Budget allocation
 - Books - 19.5 lacs
 - Periodical - 93.5 lacs
2. Book collection - 2,38,904
3. Periodical Subscription
 - Foreign Periodicals - 288
 - Indian Periodicals - 264
4. Reprography services
 1. Photo copies provided including copies for official purpose - 1,05,939
 2. No. of print outs including coloured print outs - 39,644
 3. Reprography charges collected - Rs. 92,988
5. No. of Registered members -
 - Daily average issue - 439
 - Daily consultation - 400
 - Internet service - 50
6. Overdue fine, consultation facilities- Rs. 8170/-

LIBRARY (TURA)

Tura Campus Library was started in February 1996. In August 2006, new Department of Management was inducted and has its own Library. The collection of Campus Library caters to the needs of the four Departments English, Garo, Education and Rural Development and Agricultural Production, and the Management Students and Faculty members.

Tura Campus Library is the only Library in the entire Garo Hills which is fully automated. Its services extends to the needs of this Campus and the various neighboring academic and research organizations.

During 2006-07 Campus Library registered a significant impact, amidst the students and faculty and made outstanding progress in terms of collection, development and library automation. New collection of books for the Department of Management has been appreciated.

Allocation of Book Grant/Periodical Subscription During 2006-07 (Non Plan) :

(i) Book Grant	- Rs. 6.50 Lakhs
(ii) Periodical Subscription	- Rs 10.00 Lakhs
(iii) Other Grants.	
(a) Recurring Academic Expenditure	- Rs. 1.00 Lakhs
(b) Contingency	- Rs. 0.24 Lakhs
Total	- Rs. 17.74 Lakhs

Allocation 10th Plan - Rs. 13.00 Lakhs
Amount utilized upto 31.03.2007. - Rs. 13.00 Lakhs

Number of Journals Subscribed - 156

- (a) Indian Journals - 103
- (b) Foreign Journals - 53

Book collection as on 31.03.2007. - Rs. 13613

Books added during the year = 3796

- (i) Purchased - 3795
- (ii) Gift - 01

Library circulation statistics.

- (i) Books Issued - 20000
- (ii) Books Returned - 18000
- (iii) Consultation - 38000

Library Reprographic Services - 39511 (Exp.)

Technical Processing of Books under Library Automation

- (i) Bar-coding - 4500
- (ii) Data Base - 2131

Activities by Library Staff :

- (i) 2nd Phase of Library Automation completed, and Database ready.
- (ii) Bar-coding Machine purchased & Bar-coding of books are in progress.
- (iii) Training of Library staff for House keeping operation under Libsys 4- for circulation control, Acquisition, Technical processing & serial control.
- (iv) All the 4 Teaching departments Pro-Vice-Chancellor's Office and Deputy Registrar's Office connected to OPAC.

Paper presented in Seminar :

Dr. A.K. Kundu : (i) Presented a paper on "Facets of Translation and its impact on social transformation" in National Seminar : Profiling Change through Literature in Translation at NEHU, Tura Campus Department of English 1-2 November 2006. (ii) Worked as Rapporteur General in the National Seminar : Profiling Social Change through Literature in Translation, 1-2 November 2006 at NEHU, Tura Campus, Tura.

COMPUTER CENTRE

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.

Director : S.N.Rai

Staff :

Director S.N.Rai, Ph.D. (BHU)
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)

Brief Statement of Activities during the year : Research scholars and teachers/ non -teachers 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, Java Programming, Webpage Designing, Windows & MS-Office.

The Centre has been assisting Finance, Examination and Administration Departments of NEHU. Mr.P.P.Dey is maintaining the software of the Finance Department. Three Data Entry Operators of the Centre were involved in the Examination Department's works.

The CIC, BCA and MCA computer courses of IGNOU were conducted at the Centre during the weekends and some holidays throughout the year.

Seminars/Conferences :

Attended

Dr.T.K.Sinha gave a talk on Neural Networks in MATLAB in the workshop on Neural Network & Genetic Algorithm organised by St.Anthony's College, Shillong and sponsored by N.E.C., Shillong. Dr.S.N.Rai and Mr.P.P.Dey participated in the workshop from 21- 23 March 2007 at St.Anthony's College, Shillong.

Publications :

Suno, H., Rai S.N., Liebermann H.P., Buenker R.J., Kimura M., and Pichl L., 2006, Elastic and Inelastic Processes in $H^+ + NH_2$ Collisions Between 0.5 and 1.5 keV. *Phys. Rev. A* 74, 012701:1-7.

Chakravorty T. and Rai S.N., 2006, Comparative Study of Infrared and Raman Spectra of CCl_4 in Vapour and Condensed Phases : Effect of LO-TO Splitting resulting from Hetero-isotopic TD-TD Interactions, *Spectrochimica Acta A* 65: 406-413.

Singh S., Sharma S., and Dey P.P., 2006, Predicting Summer Rice Yield Based on Biophysical and Technological Parameters on Monsoon Lands of Brahmaputra Valley, India, *International Agricultural Engineering Journal*, 15(2-3):91-107.

Other activities : The Centre generated a revenue of Rs.72,359/- during the year. The Centre manages internet facility at Bijni Complex.

HEALTH CENTRE

NEHU Health Centre has two branches – one at Bijni Complex, Laitumkhrah, Shillong and the other one at the Permanent Campus, Shillong, catering to the health needs of teaching, non-teaching staff and their dependents and the students.

The Health Centre has the following staff members at present.

Medical Officers (3)
Medical Officer (1) on contract basis
Pharmacist (1)
Pharmacist on contract basis (2)
Medical Attendant (1) Female
Laboratory Technician (1)
Laboratory Assistant (1)
U.D.C (1)
L.D.C (3)
Peon (2)
Cleaners (3)
Safaiwalla (1)

The following facilities are 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 : Dressings, 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-Chemicals 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 : Credit billing facility is 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 PUBLICATIONS

NEHU Publications was created with a view to promoting and undertaking publications in various areas and for different target groups. It has mainly concerned itself with the publication of university and undergraduate textbooks, general books, supplementary reading materials, reference books, research works particularly those relating to the North-East India, Endowment Lectures delivered in the University and official publications like the University Calendar, the Annual Report, *NEHU News* and *The NEHU Journal*. NEHU Publications also published six higher-secondary textbooks as per a standing agreement with the Meghalaya Board of Higher Secondary School Education.

Apart from these, Publications is also functioning as the official printer of the University.

This is largely a self-financing unit and has developed out of a small investment made at the time of its establishment. The press for which there is a separate Press Revolving Fund is also largely self-financing. At present it has been undertaking almost all printing jobs emanating from the various Departments and Centres of the university. On the distribution front, besides opening a sale outlet at Tura Campus, it is also entering into contracts with major distributors in almost all university towns in the North-East and elsewhere in the country.

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

NEHU News: January-March, April-June, 2006 issues
The NEHU Journal, Vol. IV, Nos. 1 & 2, 2006 issue
B.Ed Special Education, Programme Guide, Centre for Distance Education
NEHU Anthology of English Verse
NEHU Anthology of English Prose
Katto Katne Shaphang ka Put ka Tem Tynrai edited by Helen Giri
Biodiversity in North East India edited by B. Kharbuli, H. Kayang, and D. Syiem
Thirty-Second Annual Report
Prospectus and Admission forms for 2006-07
Printing items from various Departments
Sixteenth Convocation Programme, Address, etc.
Folder of National Symposium on Advances in Chemistry & Environmental Impact (ACE-2006)

Printing of Abstract of ACE- 2006
Printing of Calendars, Diaries and Engagement Pads

Sales during the year relating to these categories of books is as follows :

1. Textbooks – Rs 4, 86, 785.00
2. General Books – Rs 31, 707.00

Publications has been organising some book releases and participating in several book fairs and exhibitions during the year. Among its important publication for the year include *Katto Katne Shaphang ka Put ka Tem Tynrai* edited by Helen Giri, and *Biodiversity in North East India* edited by B. Kharbuli, H. Kayang, and D. Syiem.

SOPHISTICATED ANALYTICAL INSTRUMENT FACILITY

Head : Professor B. Myrboh
Telephone : 91 364 2227283, 91 364 2505685 (O), 91 364 2231670 (R)
Fax Number : 91 364 2228213
E-mail : bmyrboh@nehu.ac.in
Postal Address : Sophisticated Analytical Instrument Facility, Bijni Complex,
Bhagyakul, Laitumkhrah, Shillong –793 003

Brief Statement of 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 : B. Myrboh, M.Sc./Ph.D. (NEHU)
R. P. Bajpai, M.Sc.(AMU), Ph.D.(Glasgow) (Temp. Attached)
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 University, Jabalpur)
P.S. Dkhar, Ph.D. (NEHU)

Seminars/Conferences/Symposia/Extension Programmes etc :

Organised

One week training programme from 16 to 21 October 2006 was conducted by Dr. P. S. Dkhar, SAIF, Shillong on “Atomic absorption spectrometer and its applications in different fields of science” for Research Officers in the Agricultural department of Government of Meghalaya.

Publications :

Published Abroad

Mizar, P. and Myrboh, B. 2006. Synthesis of substituted 4-(3-alkyl-1,2,4-oxadiazol-5-ylmethyl)-3,4-dihydro-2H-1,4-benzoxazines and 4-(1H-benzimidazol-2-ylmethyl)-3, 4-dihydro-2H-1, 4-benzoxazines. *Tetrahedron Letters*, 47 : 7823-7826.

Chakraborty, T. and Rai, S.N. 2006. Comparative study of infrared and Raman spectra of CCl_4 in vapour and condensed phases: Effect of LO-TO splitting resulting from hetero-isotopic TD-TD interactions. *Spectrochimica Acta Part A*, 65 : 406-413.

Infrastructure Facilities :

The Sophisticated Analytical facility has the following facilities :

- 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. UV-VIS-NIR Spectrometer, Varian CARY – 2390
- xii. Liquid Nitrogen Plant, Philips PLN 106.
- xiii. Liquid Chromatograph-Mass (LC-MS) Spectrometer, Model: ZQ – 4000.

Research Projects :

Ongoing

Project entitled "Pollutant in common edibles with reference to human health in urban Meghalaya" funded by the Ministry of Environment and Forest under the Supervision of Dr. Sudip Dey.

Project Cost: Rs.10.50 Lakhs

Funding Agency: Ministry of Environment and Forest, Govt. of India, Paryavaran Bhawan, New Delhi.

Other Activities :

Dr. Sudip Dey (i) delivered lectures to M. Sc. Biochemistry II Semester students, NEHU During June, 2006. (ii) delivered lectures to M. Sc. Biotechnology III Semester, St. Anthony's College during August, 2006. (iii) was invited by the Department of Biotechnology, Assam University, Silchar for delivering a talk in the Workshop on "Research Methodology in Basic Sciences" held during 13 -17 November 2006. (iv) elected as member of the Editorial Board of Electron Microscope Society of India Bulletin in December 2006. (v) was invited by the Director, Central Muga and Eri Research and Training Institute, Jorhat, Assam to be associated with an inter institutional

research project in March 2007 and (vi) delivered lectures as a resource person in UGC Sponsored Refresher Course on Life Sciences, conducted by the Department of Zoology, NEHU, Shillong in March 2007.

Dr. P. S. Dkhar attended a twenty one day Orientation programme organized by the Academic Staff College of Gauhati University for the period 6 November to 3 December 2006.

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 Sophisticated Seismic Instrumentation and Radiation detection related Instrumentation are in progress.

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 B. Tech. students of the School of Technology. So far first two semesters of B Tech (ECE) and second semester of B. Tech (IT) have been given the hands on training at the Centre.

Funds Received from Agencies other than NEHU :

1. Rs.5,70,000.00 from DST, New Delhi (against the Project entitled "Design & fabrication of a high resolution, three axis laser based Computerized Seismometer")
2. Rs.3,25,200 from DRDO, Jodhpur (against the project "Seismic optical sensor for the detection of Atomic Explosions"(for first six months)
3. Rs.3,25,200 from DRDO, Jodhpur (against the project entitled "Piezoelectric powered Radiation Detectors" (for first six months)

Research Projects :

Ongoing

Title of the project :

"Design & fabrication of a high resolution, three axis laser based Computerized Seismometer" Principal Investigator: Prof. P. V. Koparkar.

New

Title of the project(s):

1. "Seismic optical sensor for the detection of Atomic Explosions"
Total Sanctioned Amount = Rs.9,95,800.00
2. "Piezoelectric powered Radiation Detectors"
Total Sanctioned Amount = Rs.9,95,800.00

Principal Investigator : Professor P.V. Koparkar (both projects).

Other Activities : 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.

This repair work is carried out by the following sections of the Centre.

1. Electrical & Electronics
2. Optical Microscopes repair & maintenance
3. Glass Blowing
4. AC & Refrigeration Repair & Maintenance
5. Repair & Maintenance of Personal Computers, Printers, Monitors, Keyboards, Mouse etc.

Besides this, the Carpentry section does the fabrication of furniture as per the requirement received from the P & S Section of the University.