

IX CENTRAL SERVICES

COMPUTER CENTRE

The Centre provides computation facility to faculty members, research scholars and students of the University and conducts training programmes in computer related subjects and develops software for the University. The Centre generates fund for the University by way of conducting in-service courses for various govt. organisations and by letting out PCs to IGNOU. The Centre also manages Internet facility of the University at Bijni Complex.

During the year under report, it organised short term courses in Windows & MS- Office, Web Designing, and Visual Basic. The Centre also taught Accounting Information System course to 23 students of 4th semester M.Com. A week long computer training on Research Methodology was organised during the month of February 2002 for 25 participants from NE Region, which was conducted by the North East Regional Institute of Education, NCERT, Shillong. Students, Research Scholars and Teachers/Staff from various departments/ centres are the main users of the facilities at the Computer Centre for their computational work, documentation and Internet browsing. CIC, BCA and MCA computer courses of IGNOU are conducted at the Centre during the weekends throughout the year. Two M.Sc. Physics students completed their project work under the guidance of Dr.T.K. Sinha, using the facilities of the Centre. Dr.Sinha also taught the Thermal Physics course in the Department of Physics. Software was developed for the Health Centre, NEHU for stock and inventory management.

Head: Dr. S N Rai

Staff:

Director	S.N.Rai, Ph.D (BHU)
Sr.Lecturer	T.K.Sinha, Ph.D (NEHU)
Sr.Systems Analyst	P.P.Dey, B.Tech (REC Warangal)
Systems Analyst	B.Rynjah, B.Tech (Kakinada Engineering College)
Systems Analyst	S.Ghosh, M.E (Jadavpur Engineering College)

Students intake: 20 per short term course per batch.

Courses conducted during the year: Short term courses in (i) Windows & Ms-Office (ii) Webpage Designing (iii) Visual Basic.

Seminars/Conferences:

A 5-day (11-15 March 2002) *School on Recent Trends in Intelligent Computing Techniques* was organised in collaboration with CVPRU, Indian Statistical Institute, Kolkata.

Research programmes/projects:

In collaboration with Prof. R. N. Sharan, Dept. of Biochemistry on the project funded by ICTP, Trieste, Italy.

Other activities:

(1) Dr.S.N.Rai is working with the theoretical chemistry group of the University of Wuppertal, Germany as a Research Associate since September 1, 2001.

LIBRARY

During the year, the NEHU Central Library has made significant progress in terms of book collection and library automation. This is due to the financial support received by the Library. The following are the areas, which may be projected:

Book Budget: During the period the book budget was as follows:

Non-Plan	Plan
10.80	66.84 (Lakhs)

With the above substantial amount at disposal, the Library was able to procure most of the books required by the departments. In addition to this the following areas have been strengthened.

1. Art and architecture.
2. Colonialism and Imperialism.
3. Translation into English.
4. African and Commonwealth Literature.
5. Human Rights.
6. Subject Encyclopedias.
7. Women's Studies.
8. Physical Education.
9. North East books.
10. Hand books and government publications.
11. Social Science abstract.
12. Different aspects of Linguistics and Anthropology.

Other developments during the year under report are:

1. LAN connection with 32 records placed in different location was installed.
2. The old server and some of the notes were upgraded.
3. Windows NT version of LIBSYS 4 installed.
4. More than 34,000 records in CDS/ISIS converted to LIBSYS.
5. OPAC is now available for readers retrieval.
6. House-Keeping functions of data entry started in Periodical, Circulation and Documentation Section.

1. Library Membership:	Students	-	1567
	Research Scholars	-	620
	Teaching staff	-	219
	Non-teaching staff	-	341
	College Teachers	-	285
	Others	-	92
	Total	-	3124

2. Daily Average Issue and Consultation:

Daily average issue			
1999-2000	2000-2001	2001-2002	
276	376	351	

Average daily consultation			
1999-2000	2000-2001	2001-2002	
445	339	437	

Other Statistics:			
	1999-2000	2000-2001	2001-2002
Total Collection	2,03,436	2,08,680	2,16,095
Books added	3,671	5,244	7,415
Journal subscribed	491	625	496
Books processed	3,272	3,500	4,088

New appointment:

1. During the period Mrs. I. Majaw was appointed as the University Librarian. She took over the charge on 13th September 2001.
2. Shri. Lalhmachhuana was appointed as a Documentation Officer. He took over Charge on 12th September 2001.

Staff on Study Leave: Miss Z.R.D. Lyngdoh, JLA, underwent B.Lib.Sc. training and secured First Class 1st position.

Staff Training and Exposure Visit to other Libraries for Library Automation:

1. Training Workshop: Shri Lalhmachhuana, Documentation Officer, attended the ICSSR training workshop on "Social Science Research Resources in the Internet Era" conducted at the National Social Science Documentation Centre, New Delhi from 28 to 31 January, 2002 under the Indo-Dutch Programme on Alternatives in Development.
2. LIBSYS Training: Shri P.K. Mitra, Assistant Librarian and Shri B. Sten, J.L.A., visited Hyderabad University for exposure and exchanges in implementation of LIBSYS from 23 to 30 March 2002.

Publications:

Lalhmachhuana and J.C.Binwal. 2001. Crossdisciplinary subject: a conceptual analysis. *Journal of Library and Information Science*, 26(1): 67-78.

Binwal, J.C. and Lalhmachhuana. 2001. Knowledge representation: concept techniques and the analytico-synthetic paradigm. *Knowledge organisation*, 28(1): 5-16.

LIBRARY (TURA)

The Tura Campus of NEHU was established in February 1996 with 2 postgraduate departments, i.e., English and Garo, to cater to the needs of the people of Garo Hills. In August 2001 the Department of Education was established. Despite limited manpower, the library managed classification and cataloguing. The Campus Library is catering to the needs of our faculty and students.

Total collection upto 31.03.2002: 5760

Break up: a. No. of books purchased - 5549 | 5760
 b. No. of books on gift - 211 |

Books added during the year 2001-2002 = 2226
 a. No. of books purchased - 2208 | 2226
 b. No. of books on gift - 18 |

No. of Journals Subscribed: 82
 (Calendar Year 2002) a. Indian Jls. - 53 | 82
 b. Foreign Jls. - 29 |

Fund allocation for Books and Journals:

Books a. Education Books, Jls. & Encyclopaedia, Furniture, etc. | Rs.4.16 Lakhs
 (One-time grant for new Department of Education.
 b. Special grant to clear outstanding Bills ----- Rs.1.00 Lakhs
 c. Special grant for the World Book Fair, Tura Campus Book Rs.12.35 Lakhs

Fund allocated for Journal subscription (2001-2002): Rs. 2.00 lakhs

No. of registered members Total: 146

a. Students - 113 |
 b. Faculty Members - 14 | - 146
 c. Non-Teaching - 19 |

Library Consultation Statistics:

a. Total daily consultation - 95
 b. Ref. Material - 30
 c. Text Books, Jls., Etc. - 65

Circulation Statistics: 68 V/day

a. Students - 52 vols |
 b. Faculty Members & - 16 vols | - 68
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Reprographic Services: Total No. of exposures provided to students = 39428

Lectures delivered by Library staff in UGC refresher course: Dr. A.K. Kundu, Senior Asstt. Librarian delivered lectures in 1st & 2nd refresher courses in Garo Language & Literature at NEHU, Tura Campus.

Publications:

Kunda, A.K. 2000. Vivekananda of Ranganathan: P.N. Kaula. *Herald of Library Science*, 39(1-2): 68-69.

Kundu, A.K. 2000. Financial Famine and University: Library Development. *Indian Journal of Information Library Society*, 13(1-2): 79-84.

HEALTH CENTRE

The NEHU Health Centre caters to the health needs of the students, staff (Teaching & Non-Teaching) and their dependants, who are nearly 10,000. It has 2 branches, one at Bijni Complex and the other at the Permanent Campus and are manned by qualified doctors including lady doctors and assisted by a number of para-medical staff.

The doctors are available for regular consultation at fixed hours as well as for emergency consultations. The Health Centres stock all necessary medicines and dispenses them. Besides, dressings, injections minor surgical operations are also done at the Health Centres. First Aid and Medical Attendance are also provided during athletic meets and various tournaments conducted by NEHU. Regular immunisation facilities are available and the Health Centres participate in the National Pulse Polio Programme every year. They also have a well-equipped Ambulance Service. Equipment necessary for conducting pathological and biochemical test has been acquired.

The patients requiring in-patient treatment are referred to the local hospitals recognised by NEHU. As all specialists are not available in Shillong, some cases are referred to hospitals outside the State. NEHU has credit billing system with Christian Medical College Hospital, Vellore as well as with some local hospitals like Nazareth and K.J.P. Synod Hospital. The Health Centres maintain a list of voluntary donors from among NEHU community and arranges blood-donation in case of emergency not only for the University community, but also for the needy at large.

UNIVERSITY PUBLICATIONS

The NEHU Publications Cell was created with a view to promoting and undertaking publications in various areas and for different target groups. It has mainly concerned itself with publication of University level and under-graduate textbooks, general books, supplementary reading materials and reference books particularly those relating to the North East. It has also taken up publication of Endowment Lectures delivered at the University and official publications like the University Calendar Volume I and II and the Annual Report.

Apart from these, the Cell publishes six higher-secondary level textbooks as per standing agreement with the Meghalaya Board of Higher Secondary Education.

The Cell 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 by large self-financing. At present this Cell is revamping its different units based on elaborate prepared blueprints. A first consequence of this is the procurement of a new crown-size offset machine, which can print by plates and poly masters, and the opening of a NEHU Publication sale outlet at Tura Campus.

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

1. Prospectus for the year 2001-2002.
2. Reprinting of *History of Modern World*.
3. Reprinting of *Dr. Jekyll and Mr. Hyde*.
4. Printing of University Gate Passes.

5. Printing of Human Nature: The Anthropological Perspective.
6. Printing of NEHU News (October-December 2001).
7. Reprinting of *NEHU Anthology of English Prose*.
8. Reprinting of *NEHU Anthology of English Verse*.
9. Printing of the 27th Annual Report.
10. Printing of the Cover Page of the Revised Estimates for 2001-2002 and Budget Estimates for 2002-2003.
11. Printing of Ka Mer Ka Sdad: Conference, Confluence (The Role of Rivers and Waters in Khasi Culture and Vision).
12. Printing of Colour pamphlet relating to the US ambassador's visit.
13. Printing of the text of the US ambassador's address.

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

1. Textbooks - Rs.2,05911/-
2. General Books - Rs. 79,900/-

REGIONAL SOPHISTICATED INSTRUMENTATION CENTRE

The Department of Science & Technology, Government of India had established the RSIC-NEHU in order to cater to the analytical requirement of the scientific community in the region. In addition to analytical services, the RSIC-Shillong conducts training workshops, offers limited repair and maintenance services in computer instrumentation and compressor based system.

Head: Dr. B. Myrboh

Staff: Dr. Taposh Chakraborty, Sr. Scientific Officer

Dr. Sudip Dey, Scientific Officer

Dr. T.S. Basu Baul, Scientific Officer

Mr. Thomas Job K, Scientific Officer

Mrs. Begonia Dkhar, Scientific Officer

Dr. Debashish Dey, Scientific Officer

Dr. P.S. Dkhar, Scientific Officer

Activities

Analytical Services: Table below gives the utilization of the equipment during the year:

Name of the Instrument	External	Internal	Total
NMR	3	53	56
FT-NMR	126	560	686
AAS	1372	441	1813
SEM	64	22	86
TEM	26	22	48
ICP	-	-	-
CHNOS	165	279	444
FT-IR	121	372	493
UV-Vis-NIR	14	47	61
Liquid Nitrogen Plant	577 lit.	3420 lit.	3997 lit.

Seminars/Workshop (organized)

- (i) The Centre organised a workshop on "Application of HPLC & LC-MS" on 18th June 2001.
- (ii) A 2-day workshop was organized on "Trace Element Analysis" in application in geological, water, biological, environmental samples, etc. (November 29-30, 2001)
- (iii) The Centre in association with the Indian Society of Analytical Scientists, Mumbai and the ISAS Regional Chapters-Nagpur and Shillong organized a 2-day national symposium on "An Integrated Approach to Pollution Control and Preservation of Environment" (March 8-9, 2002).

Publications:

Basu Baul, T.S., S.Dutta, E.Rivarola and S.Choudhuri. 2001. Synthesis, Characterization of diorganotin(IV) complexes of N-(2-hydroxyarylidine)aminoacetic acid and antitumour screening in vivo in Ehrlich ascites carcinoma cells. *Appl. Organometal. Chem.*, 15: 947-953.

Basu Baul, T.S., S.Dhar and E.R.T.Tiekink. 2001. X-ray structure of dibutylbis {5-[(E)-2-(2-methylphenyl)-1-diazenyl]-2-hydroxybenzoato}tin(IV). *Main Group Met. Chem.*, 24: 293-294.

Basu Baul, T.S., S.Dkhar, S.M.Pyke, E.R.T.Tiekink, E.Rivarola, R. Butcher and F.E.Smith. 2001. Synthesis and Characterization of Triorganotin(IV) complexes of 5-[(E)-2-(aryl)-1-diazenyl]-2-hydroxybenzoic acids. Crystal and molecular structures of a series of triphenyltin 5-[(E)-2-(aryl)-1-diazenyl]-2-hydroxybenzoates (aryl = phenyl, 2-methylphenyl, 3-methylphenyl and 4-methoxyphenyl). *J. Organometal. Chem.*, 633: 7-17.

Chakraborty, T. and A.L. Verma . 2002. Vibrational Spectra of CCl₄; Isotopic Components and Hot Bands. *Spectrochimica Acta Part A*, 58: 1013-1023.

Dey, S. 2001. Role of Electron Microscopy and Spectroscopy in Assessment of water quality and Aquatic life. In B.K.Sharma, ed. *Water quality Assessment, Biomonitoring and Zooplankton Diversity*. Shillong: Dept. of Zoology, North Eastern Hill University, 118-130.

Dey, S., S.N. Ramanujan, C.R. Bhattacharjee, and P.S. Dkhar. 2001. Disturbances in cellular features and elemental homeostasis in the integument of a fresh water fish *Channa punctata* (Block) in relation to hydrogen ion concentration of polluted water. *Cytobios*, 106 (Suppl.2): 333-334.

Dey, S., J. Arjun, M. Das, C.R. Bhattacharjee and P.S. Dkhar. 2001. Effect of prenatal led toxicity on surface ultrastructural features, elemental composition and infra red absorption characteristics of the skin of albinomice. *Cytobios*, 106 (Suppl-2): 245-254.

Syng-ai, C., T.S. Basu Baul and A. Chatterjee. 2001. Inhibition of cell proliferation and antitumor activity of a novel organotin compound. *J. Environ. Path. Toxicol. Oncology*, 20: 333-342.

Syng-ai, C., T.S. Basu Baul and A. Chatterjee. 2002 Antiproliferative and cytotoxic effect of a novel organotin compound on mammalian cells both in vitro and in vivo. *Mutat. Res.*, 513: 49-59.

Research Programmes: The Centre has ongoing research projects sponsored by different funding agencies.

UNIVERSITY SCIENCE INSTRUMENTATION CENTRE

The USIC was established by the UGC after the recommendation of its visiting team for the fifth five-year plan in order to cater to the need of different departments of the University for repair and maintenance of their widely different equipment. Over the years it has achieved its objective within the limitation of the availability of necessary spare parts and other raw material in this remote place. It has been given status of USIC level II in the last five year plan. At present it can take up jobs related to Electrical and Electronic Section, Mechanical Section, Glass Blowing Section and Carpentry Section, which are reasonably equipped with necessary machines and tools.

Head: Professor Y S Jain

Other activities: Activities of the USIC have mainly centred around its basic objective of repair and maintenance of scientific equipment of different departments. Within its limitations of acquiring necessary spare parts, electronic components, raw material, etc. It has completed its task within reasonably short period. The glass blowing section has been doing repair work of Laboratory glassware and has fabricated glass components as per requirement of the users. The electrical and electronic section has done repair of several equipment, including voltage stabilizers, magnetic stirrers, heating mantles, spectrophotometers, BOD, incubators, refrigerators, etc. It also completed successfully the assignment of drawing power lines in different department as required by the University. In addition to the fabrication of small components of different equipment, the mechanical section has also done work related to steel/iron furniture including making of steel almirahs. The carpentry section has been constantly engaged in making different items for different sections of the University, viz. specially designed filing cabinets for examination department, computer tables, etc.

Research programme: A research and development programme has been undertaken to develop scientific equipment for laboratory teaching.