

North-Eastern Hill University

Mawkynroh - Umshing, Shillong - 793 022
Tel: +91 -364 - 2721001 (4 lines) Fax : +91 - 364 - 2721000
Website : www.nehu.ac.in

NEHU Publications, Permanent Campus, Shillong

NEHU ANNUAL REPORT 2016 - 17

North-Eastern Hill University



Forty Third Annual Report

2016 – 2017





Forty Third

Annual Report

North-Eastern Hill University

Shillong

Forty Third

Annual Report



2016 – 2017

From the Vice-Chancellor's Desk



Greetings from North-Eastern Hill University!

It gives me great pleasure to place before you this 43rd Annual Report on activities and achievements of NEHU for the year 2016-17. There has been much that NEHU has achieved for 43 years of its existence and what had been accomplished in the year 2016-17 is another significant milestone towards excellence.

NEHU is committed to achieving what it has been set up as objectives with a vision to develop academic leadership, keeping in consonance with the national and global perspective that values diversity and inclusion.

Its mission is, therefore, to achieve excellence in teaching, learning and research, capacity building, social outreach, skill development and innovative academic programmes.

The eight schools of the University have 44 teaching departments and two centres, located on Shillong and Tura campuses. The total of 343 teachers and 5152 students gives rise to a teacher-student ratio of 1:15. As many as 9278 students were awarded their degrees/diplomas in 2016-17, of which 1693 from NEHU and 7585 from affiliated colleges.

Research activities in 2016-17 were impressive and promising, with 63 authored/edited books, 276 papers published in India and 265 abroad. Of 541 papers, 320 are published in the UGC-approved journals, 218 are indexed in Elsevier's Scopus, and 155 in Web of Science. The NEHU faculty held seven international and 92 national/regional seminars or conferences, with a total of 371 presentations. In addition, faculty members of the University were actively involved in 167 research projects supported by various government funding agencies. Many academic departments have also academic collaborations with other institutions within and outside the University.

The prospect for continual growth and development of NEHU calls for augmented resources through filled posts, increased financial support and internal revenue, and above all

From the Vice-Chancellor's Desk

greater commitment towards excellence on the part of the academic community. The students, teaching and non-teaching staff, and all stakeholders are to be thanked for their hard work and endeavours towards this end. I also express my thanks to the members of the Editorial Board for their efforts in bringing out

this Annual Report for perusal and information of all readers.



Prof. S. K. Srivastava
Vice-Chancellor

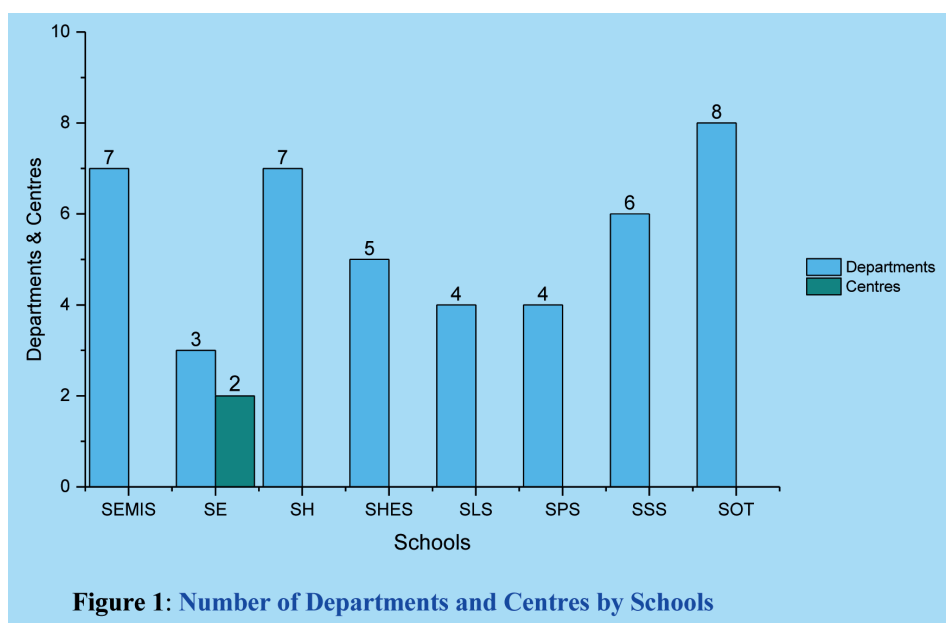
Executive Summary

North-Eastern Hill University (NEHU), established in 1973 by an Act of Parliament, is the oldest Central University in North-East India with its headquarters at Shillong and a Campus at Tura in the West Garo Hills District of Meghalaya. The main objective of the University *is to disseminate and advance knowledge, and to pay special attention to the improvement of the social and economic conditions and welfare of the people of the hill areas in North-East India, particularly their intellectual, academic and cultural advancement.*

This 43rd Annual Report presents the activities and achievements of the University for the period from 1 April 2016 to 31 March 2017. It is based on the information collected from the departments/centres and administrative units of the University.

Background

The University has eight schools, namely School of Economics, Management and Information Sciences (SEMIS), School of Education (SE), School of Humanities (SH), School of Human and Environmental Sciences (SHES), School of Life Sciences (SLS), School of Physical Sciences (SPS), School of Social Sciences (SSS), and School of Technology (SOT) with 44 Departments and two Centres as shown in **Figure 1** below:



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There are thirty-five departments within Shillong Campus and nine departments at Tura Campus. While many departments offer only the postgraduate and PhD programmes; some others offer the undergraduate degrees as well, but all departments and centres are actively involved in research projects. Several departments are supported by the Central Government funding agencies like the Special Assistance Programme (SAP) of the University Grants Commission (UGC) and the FIST Programme of the Department of Science and Technology. Two departments (Botany and Chemistry) are recognized by the UGC as Centres for Advanced Studies. The University also has 65 affiliated colleges (35 permanent and 30 provisional affiliations), including NEIGRIHMS (offering MBBS and MD/MS courses) and some minority institutions. It is also one of the first few select Universities, which grants affiliation to Minority Educational Institutions from all over the country.

NEHU is the recipient of a number of endowments of many organizations and individuals. The University has instituted several awards like the Dr. Shankar Dayal Sharma Literary Award, Prof. M. K. Khare Memorial Prize, Smt. Sarada Krishna Iyer Memorial Award, U Tirot Sing Memorial Prize, Prof. M. N. Karna Young Sociologist Award, Rajendra Kumar Sunheri Devi Jain Charitable Award, Kiang Nongbah Award and Dr. D. S. Babu Memorial Award. Several faculty members of the University have been honoured in recognition of their contribution towards high academic distinction in the country.

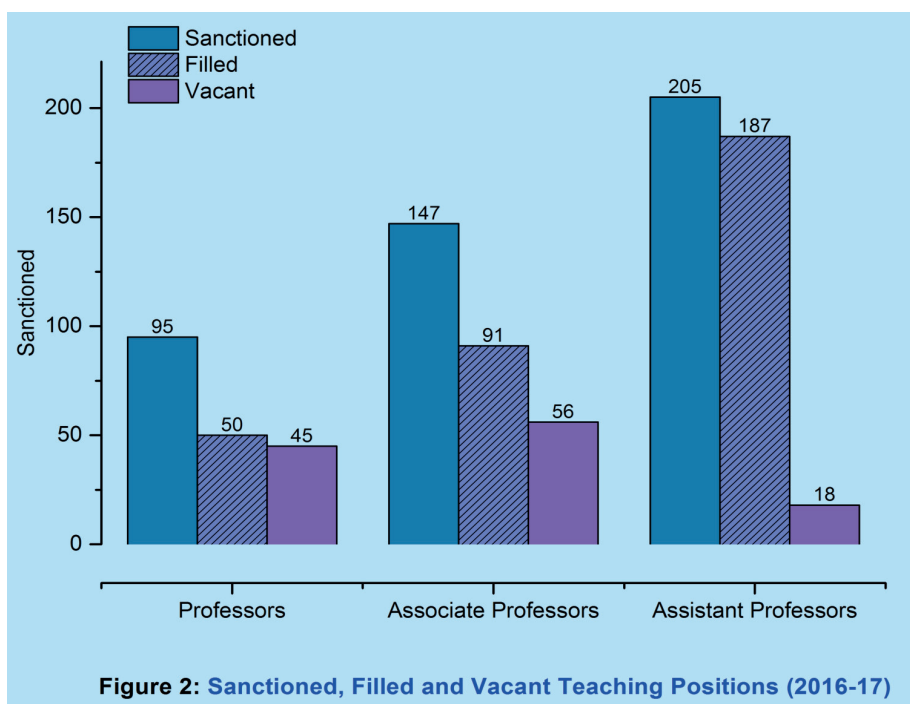
The University has a number of centres, units and cells, known as *Central Services*, which carry out and facilitate the educational and research activities as well as the health, sports and other activities for the general welfare of the University community. Such Central Services include Central Libraries, Voice and Data Networks, Health Centres, Career and Counselling Cells and Student's Welfare Cells (one on each campus at Shillong and Tura). Other Central Services include Guest Houses, Hostels including International Hostels, College Development Council, UGC-Human Development Centre, Bioinformatics Centre, Computer Centre, Hindi Cell, Equal Opportunity Cell, Pension Cell, Women's Cell, RTI Cell, Internal Quality Assurance Cell, National Service Scheme Cell, Publication Unit, Sophisticated Analytical Instrument Facility, Design Innovation Centre, Sports Department, and Campus Development Department (all located on Shillong Campus).

NEHU also provides space for other institutions, namely IGNOU, ICSSR-NERC, English and Foreign Languages University, Sports Authority of India, and the Shillong Science Centre, which are functioning within the Shillong Campus.

Teaching and Non-Teaching Staff

- ☛ The University has 447 sanctioned posts, of which 328 have been filled under the three categories of teaching position, viz., Professors, Associate Professors, and Assistant Professors, as given in **Figure 2**. In 2016-17, there were altogether 343 teachers (including those from erstwhile Mizoram and Nagaland campuses).
- ☛ As for the non-teaching staff, the University has 1017 sanctioned posts; of which 67 are in Group A, 185 in Group B, and 765 in Group C. As many as 409 non-teaching posts were lying vacant during 2016-17; of which 71 and 321 were from Group B and Group C, respectively.

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Student Enrollment

NEHU is a leading University in North-East India that attracts students and scholars not only from the North-East but also from other parts of the country and abroad. Almost all departments have conducted entrance tests for admission to their respective programmes as per the University Rules. The University has adopted the Choice-Based Credit System (CBCS) at the postgraduate level and in some departments at the undergraduate level as well.

- During 2016-17, as many as 5152 students were enrolled for degrees/diplomas in various departments of the University, thereby giving rise to a student-teacher ratio of 15:1 (i.e., there were about 15 students enrolled for every one teacher during the period under report).
- Student enrollment for degrees in various departments of the University has increased from 4812 in 2015-16 to 4929 in 2016-17 (2.43% more than it was last year). However, the number of students enrolled on diploma and certificate courses has declined from 459 in 2015-16 to 223 in 2016-17.
- The enrollment of students for various degrees and programmes of the University is given in **Table 1**. As many as 3874 students (75%) were enrolled for degrees at the UG/PG level (including nine overseas students), and 1055 research scholars (21%) were admitted to the MPhil/PhD programmes (including six overseas students). As many as 3707 students out of 5152 belonged

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Table 1: Student Enrollment in Departments of the University							
Degree/Diploma	ST	SC	OBC	General	Male	Female	Total
BA LLB(Honours)	280	5	0	17	131	171	302
BArch	37	4	2	54	50	47	97
BTech	379	86	35	353	662	191	853
MA	1266	61	30	89	429	1017	1446
MSc	542	5	15	79	274	367	641
MCom	84	3	2	14	47	56	103
MLISc	57	1	1	1	25	35	60
MTTM	50	0	0	7	30	27	57
MBA	47	7	14	32	49	51	100
MCA	25	2	2	18	31	16	47
MEd	38	1	0	4	7	36	43
LLM	14	0	0	6	5	15	20
MTech	44	7	3	51	68	37	105
MPhil	77	8	9	30	46	78	124
PhD	563	50	50	267	423	507	930
Post-Doctoral	1	0	0	0	1		1
PG Diploma	28	0	9	3	27	13	40
FC-SEDE	175	0	3	5	75	108	183
GRAND TOTAL	3707	240	175	1030	2380	2772	5152
%	71.95	4.66	3.40	19.99	46.20	53.80	100.00

to the Scheduled Tribes (72%); 2380 are males (46%) and 2772 females (54%), i.e., there were about 86 male students per 100 female students.

- ☛ The number of research scholars who have registered for the PhD programmes has increased from 813 in 2015-16 to 930 in 2016-17; while the registered-MPhil scholars have gone up from 100 in 2015-16 to 134 in 2016-17. Almost all research scholars were given scholarship of different types, such as UGC-Non-Net Fellowship, CSIR-UGC-NET Fellowship, National Fellowship for Higher Education of ST, etc.

Degrees Awarded

- ☛ The Twenty-Fourth Convocation of the University was held on April 28, 2017. Eminent scientist and Hon'ble Member of *NITI Aayog* **Dr. Vijay Kumar Saraswat** graced the occasion as the Chief Guest.
- ☛ As many as 9278 students were awarded their degrees/diplomas in 2016-17, of which 1693 from NEHU departments and 7585 from NEHU-affiliated colleges/institutions. The number of students awarded degrees/diplomas during 2016-17 was 3.19% less than 9584 in 2015-16.
- ☛ Out of 1693 students from NEHU Departments, 1077 and 155 were awarded their Master's degrees (64%) and MPhil/PhD degrees (9%), respectively.

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- Of the total students awarded degrees and diplomas from NEHU departments, 78% were Schedule Tribes (ST) and 19% of them belonged to the Schedule Castes (SC) and Other Backward Communities (OBC). Further, 63% were females and 37% males, i.e., there were only 58 males per 100 females awarded degrees/diplomas from NEHU departments (see **Table 2A**).

Degree/Diploma	SC	ST	OBC	General	Male	Female	Total
BA LLB	3	26	3	0	7	25	32
BEd-SEDE	59	62	7	29	65	92	157
BTech	39	21	4	0	56	8	64
MA	33	693	3	5	194	540	734
MSc	50	221	3	1	115	160	275
MCom	9	25	0	0	6	28	34
MLISc	1	24	0	0	5	20	25
LLM	5	3	0	0	1	7	8
MCA	1	6	0	0	4	3	7
MBA	8	23	2	0	18	15	33
MTech	39	17	3	2	43	18	61
PG Diploma	3	36	1	0	20	20	40
FC-SEDE	1	66	0	1	28	40	68
MPhil	10	28	1	8	17	30	47
PhD	31	73	2	2	46	62	108
GRAND TOTAL	292	1324	29	48	625	1068	1693
%	17.25	78.20	1.71	2.84	36.92	63.08	100.00

- As for NEHU-affiliated colleges, 99% of 7585 students were awarded the Bachelor's degrees of different categories; and about 83% of them were Schedule Tribes (see **Table 2B**).
- The gender difference in number of students with the Bachelor's degrees from NEHU-affiliated colleges is not as high as that at the university level, i.e., there were 92 males per 100 females compared to 58 males per 100 females at the University level.

Publications and Presentations

- During 2016-17, departments and faculty members of the University organised 99 educational events (40 more than last year) including conferences, seminars, symposia and workshops; of which 92 were regional and national, and 7 of them were international.
- The University faculty made a total of 371 presentations at national and regional events (i.e., 95% of 389 in 2015-16 or 5% less than it was last year) and 110 at international events (i.e., 89% of 124 in 2015-16 or 11% less than it was last year).
- Scholarly publications by faculty members included 276 research papers in journals published in India (i.e., 1% more than 273 last year) and 265 in journals published abroad (i.e., 1.06 times as many as 251 in 2015-16 or 6% more than it was last year).

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Table 2B: Students of NEHU-Affiliated Colleges Awarded Degrees/Diplomas

Degree/Diploma	SC	ST	OBC	General	Male	Female	Total
BA (Pass)	218	2338	20	15	1108	1483	2591
BA (Honours)	157	2267	13	15	1117	1335	2452
BSc (Pass)	3	37	0	3	24	19	43
BSc (Honours)	141	737	12	13	456	447	903
BSc Home Sc (Honours)	2	12	0	0	0	14	14
BCom (Pass)	41	158	2	3	110	94	204
BCom (Honours)	268	467	7	6	474	274	748
BBA (Honours)	89	0	0	3	61	31	92
BCA (Honours)	15	20	1	0	21	15	36
BSW	10	45	0	0	17	38	55
BSC (Nursing)	6	24	5	10	2	43	45
MBBS	14	14	0	6	18	16	34
LLB	15	31	0	0	24	22	46
BEEd	6	10	2	3	11	10	21
BTech	100	58	6	47	149	62	192
MBA	17	8	0	2	13	14	27
MCA	4	10	1	0	5	10	15
MSW	3	17	0	0	4	16	20
PGDCA	0	14	0	0	9	5	14
MD	8	0	0	4	7	5	12
DM	1	0	0	1	2	0	2
GRAND TOTAL	1118	6267	69	131	3632	3953	7585
%	14.74	82.62	0.91	1.73	47.88	52.12	100.00

- ☛ Of 541 research papers, 320 are published in the UGC-approved journals (59%), 218 are indexed in Elsevier's Scopus (44%), and 155 or 29% in Web of Science (Clarivate Analytics, previously known as Thompson Reuters).
- ☛ The faculty have also authored/edited about 63 books (13% more than it was last year), despite a 17% decline in number of book chapters contributed to edited volumes compared to 250 in 2015-16, including proceedings of seminars and conferences.
- ☛ In addition to teaching and extension activities, faculty members of the University were actively involved in 167 research projects during the period under report (9% greater than 153 in 2015-16). Of these, 43 new projects were sanctioned (3 times as many as 14 in 2015-16), 98 projects are ongoing, and 28 projects were completed. These projects are supported by various funding agencies like UGC, DST, DBT, CSIR, DRDO, ICMR, DAE (BRNS), ICSSR, ICAR, NEC, etc.

Academic Collaboration

- ☛ Academic collaboration is an integral part of teaching and research as enshrined in the Act and Statutes of NEHU. One of its main goals is *to co-operate or collaborate with any other University or authority in such manner and for such academic purposes*. During the year under report, the

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University has signed Agreements/MoUs with several institutions. Many faculty members have also academic collaborations with eminent scholars and scientists from within and outside the University. Some research projects are also collaborated with NEIGRIHMS, DRDO, IGCAR, BARC, IITs, etc.

Hostel Accommodation

- ☛ The number of students who were given hostel accommodation has increased more than twofold, i.e., from 936 in 2015-2016 to 2092 in 2016-17. So about 41% of the students admitted to various programmes of the University were provided with hostel accommodation on both the campuses.
- ☛ As many as 1220 students living in hostels are Scheduled Tribes (58%), and 61% of them were males. The different categories of students residing in hostels are given in **Figure 3**.

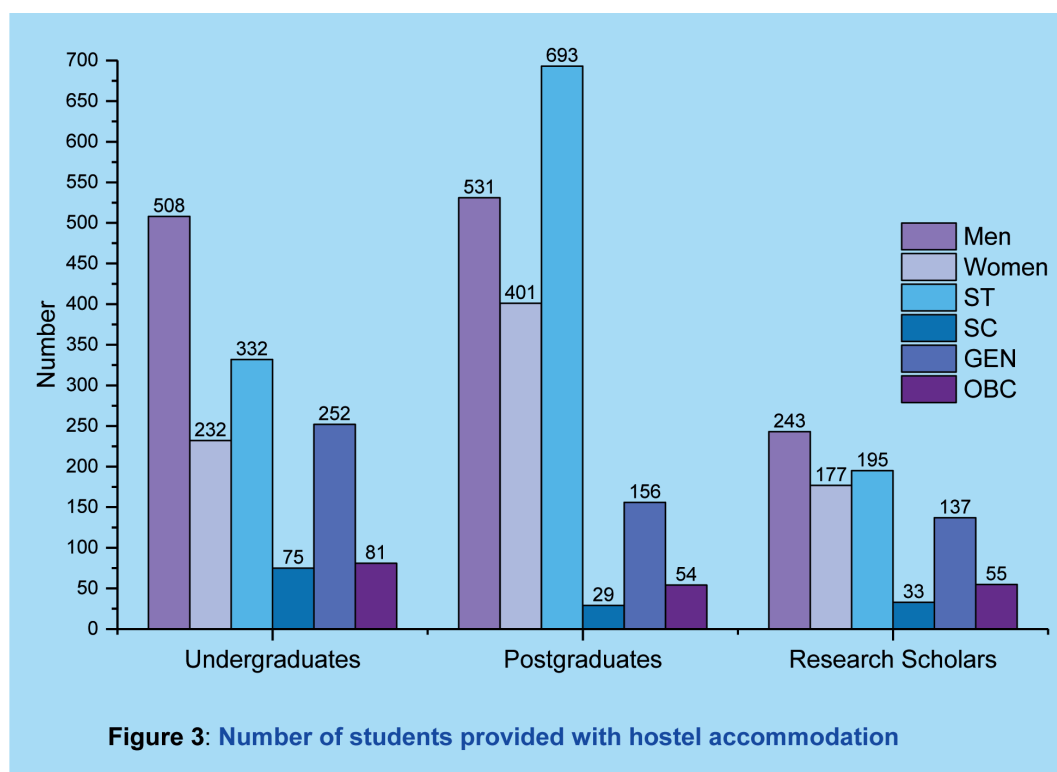


Figure 3: Number of students provided with hostel accommodation

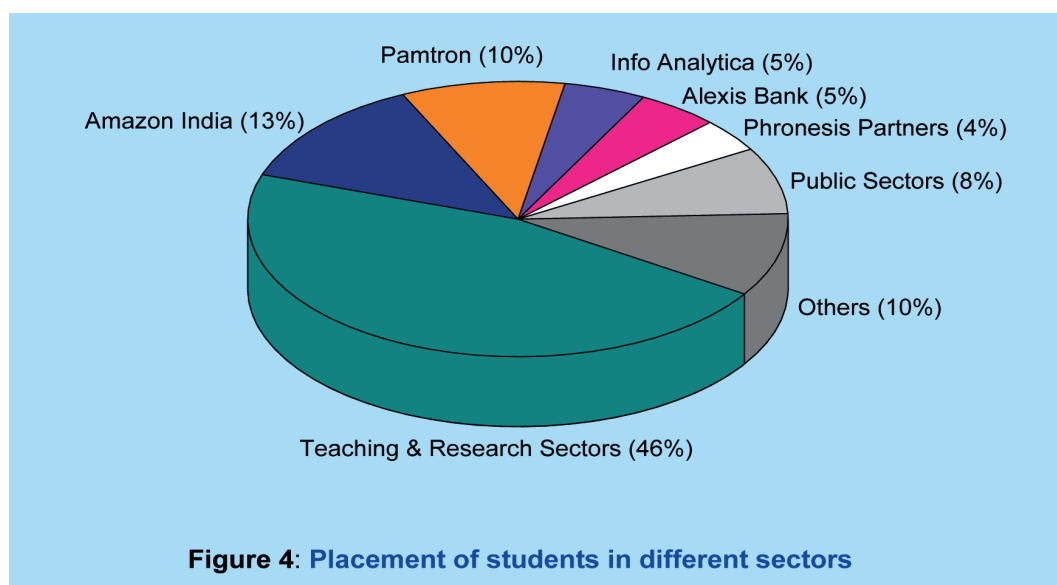
Placement of Students

- ☛ In addition to the academic and administrative processes in the University, the Career and Counselling Cell (CCC) was established in 2008 to help the students acquaint with information on job avenues and placements in different institutions and concerns. The CCC regularly

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publicizes different matters relating to counselling and guidance, training, career, internship and job opportunities. It also interacts with reputed industries and other concerns to keep the students informed of the high demand market areas and to establish industry-university linkages. It organizes seminars, interactive sessions and special lectures on emerging professional trends and events, job profiles, entrepreneurship, leadership roles, soft skills, etc.

- Details of NEHU students placed in various sectors and establishments, based on records given by the CCC and other departments of the University, are given in **Figure 4**. There were 102 students who got placements during 2016-17, of which 46% were in research and teaching sectors, and about 8% and 46% of them were in public and private sectors, respectively.



Other Activities

- The Bioinformatics Centre** at NEHU serves as a nodal Centre for the newly constituted North-East Bioinformatics Networks by the DBT in all the North-Eastern states. It also operates the DBT-sponsored Online Access Facility of Library Resources for 36 Secondary and Senior Secondary Schools in the North-Eastern States, and monitors the DBT e-Library Consortium Facility for NEHU. Apart from carrying out researches in biodiversity, the Centre also provides training to all disciplines of research in biotechnology, and serves as one of the seven Examination Centres for BINC Exams.
- The NEHU Data and Voice Network** facilities on the two Campuses enable the faculty, research scholars and students to access Internet in addition to *UGC-INFONET* and *INFLIBNET* resources. All academic departments have digital class rooms with Wi-Fi connection and an on-line access to over 3500 journals.

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- ☛ The University also has a **Sophisticated Analytical Instrumentation Facility** and a **Super Power Computer** to facilitate research activities. The Centre acquires and develops capability for preventive maintenance of the analytical instruments. During the year under report, it organised two short-term training courses and two workshops on the use and application of sophisticated instruments and analytical techniques.
- ☛ **The Central Library** at Shillong has increased the collection of books/volumes from 284,510 in 2015-16 to 289,483 in 2016-17; but the number of subscribed journals published in India has decreased from 153 in 2015-16 to 126 in 2016-17. The number of subscribed journals published abroad has, however, slightly increased from 135 in 2015-16 to 137 in 2016-17. The Library has also started introducing an automated device, viz., *Lex Air Digital Capture Book Reader* that enables a visually-impaired library user to hear the words/text/line from a book/document through a text-to-audio conversion. Moreover, the Library is in the process of using *Koha*, an Integrated Library Management System with a focus on the cloud environment. **As for Tura Campus**, the library collection of books has increased from 26,017 in 2015-16 to 27,776 in 2016-17, and the number of subscribed Indian journals has declined from 120 in 2015-16 to 71 in 2016-17, although the number of journals published abroad remains more or less the same. The Library also extends its services to the neighbouring colleges in the West Garo Hills District.
- ☛ **The College Development Council** (CDC) is an intermediary between the University and the affiliated colleges by providing necessary guidance and advice, especially in affiliation, promotion, coordination and improvement of educational standards in affiliated colleges. During 2016-17, the CDC had taken the following major actions: (i) Coordinated for 43 Inspection Teams to 43 colleges, (ii) Permission to start four new colleges, (iii) Two new colleges were provisionally affiliated, (iv) Thirteen colleges were provisionally affiliated for new subjects/courses, (v) Twenty-five colleges were given provisional affiliation, (vi) Fourteen colleges were permitted to start new courses, and (vi) one college was permitted to start a new PG Department.
- ☛ **The UGC-Human Development Centre** had given training of 548 participants belonging to various universities and colleges recognized by the UGC. It had conducted four Orientation Programmes, four Refresher Courses, five Short-Term Courses, and one Summer School in which scholars from the University and other institutes served as resource persons.
- ☛ **The Centre for Distance Education** is the only nodal agency of the Rehabilitation Council of India to spread teaching and learning among children with disability in the North-Eastern region through various modes of distance learning systems. The Centre started the BEd Special Education (BEd-SEDE) in 2007, while the Foundation Course on Education of Children with Disability (FC-SEDE) in 2010. During the current year, as many as 183 students were admitted to the BEd-SEDE programme, 99 were given the BEd-SEDE and 67 their FC-SEDE certificates.
- ☛ **The Sports Department** organized different Inter-College Tournaments in Football, Badminton, Basketball and Table Tennis (men and women), and in Chess (mixed) at various places. It also organized the 1st Vice-Chancellor Indoor Tournament 2016, the Inter-College Cross Country and the NEHU-Cross Country Run 2016 for students, teaching and non-teaching members of the University to commemorate the birth anniversary of **Major Dhyani Chand**, which is celebrated

Executive Summary

as the National Sports Day. A team of the University staff also took part in the Inter-Office Indoor Games 2016 organised by the Meghalaya State Government Employees Federation. In addition, NEHU teams such as badminton, basketball, volleyball, and women's football team participated in the East-Zone Inter-University Tournament - 2016.

- ☛ **The NSS Cell of NEHU** conducted many social welfare events like Pulse Polio Immunization, blood donation, trekking, training and awareness programmes. Eighteen Blood Donation Camps and Twenty-eight Camps on *Healthy Youth for Healthy India* were organized in various places in Meghalaya during 2016-17. The Cell also organized and coordinated 15 workshops and seminars on topics like Disaster Management, Drug Abuse, Digital India, Waste Management, Youth Leadership, etc. Several environmental programmes were also organized including cleaning drives and tree plantation of 2420 saplings. Many *Swachh Bharat* programmes were conducted, besides skill development and village welfare programmes. Several programmes had been conducted for the residents of the model village of Lawsotun including installation of 35 Solar Street Lights. The Cell has also adopted another eight villages for the benefits of various welfare programmes.
- ☛ **The Internal Quality Assurance Cell** functions as a mechanism to mobilize, monitor, and maintain the momentum of quality consciousness among stakeholders in order to improve the academic and administrative performance of the University. It also functions as an internal assessment and accreditation body of the University.
- ☛ **The Campus Development Department** completed the construction of Guest House near Guwahati Airport at a cost of 6.32 crore rupees. In addition to several renovation and repair works, construction works are ongoing for the Butterfly Park Dome at Shillong, Service building and twenty-bedded Guest House on Tura Campus.
- ☛ As regards the financial position, the total receipt of the university during the year 2016-17 was 253.49 crore rupees, of which 215.44 crore rupees from the Government of India including the UGC (i.e., an increase of 28.36 crore rupees from 187.08 last year). A total amount of 248.57 crore rupees was utilized for various purposes of the University.

Conclusion

The overall performance of the University is above par in terms of enrollment, student-teacher ratio, female-to-male ratio enrollment, research volume and reputation. The University's potential for excellence in teaching and research has also been endorsed by the National Assessment and Accreditation Council (NAAC), which accredited the University with **A Grade** in 2017, thereby securing its status for three consecutive times. According to the Indian Citation Index 2016, NEHU ranked 13 among the 44 Central Universities in respect of the number of publications, and secured 4th position in the citation index. The University is, however, striving for getting more publications in those journals indexed in Web of Science and Scopus databases. The University has also performed well in teaching and research productivity as reflected in PhD theses, research projects, and academic collaborations; but, it also needs to be more focused on those areas envisioned in its aims and objectives keeping in view the socio-economic realities and timeliness of research quality in well-defined target areas.

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I

SCHOOL OF ECONOMICS, MANAGEMENT AND INFORMATION SCIENCES

Dean : Prof. B. Mishra
Telephone : 0364-2723131(O)/0364-2726178 (R)/9436101398 (M)
E-mail : deanemis@nehu.ac.in, bmishra_nehu@hotmail.com

The School of Economics, Management and Information Sciences comprises seven departments, namely Agri-Business Management and Food Technology (Tura), Commerce, Economics, Journalism and Mass Communication, Library and Information Science, Management, and Tourism and Hotel Management. All the departments offer the Master and PhD programmes, and the Department of Economics also offers the MPhil programme.

The major areas of specialization and thrust areas of academic activities are: Economics of North East India with emphasis on Upland Economy, Public Economics and Policy, Economics of Agriculture, Rural Development, Human Development, Financial Economics,

Quantitative Economics and Econometrics in the discipline of Economics; Accounting, Finance and Control, and Management of Small Business in the discipline of Commerce; Information Technology, Retrieval and Management and Computer Applications in the discipline of Library and Information Science; Cross-Cultural Management, Entrepreneurship, Small Business and Tourism Management, Micro-Finance, Business Process Re-engineering, Banking Sector Reforms, Agri-Business and Rural Marketing in the discipline of Management; Sustainable Tourism and Community Participation in the discipline of Tourism and Hotel Management; Film Studies, Print Journalism and cultural Studies in the discipline of Journalism and Mass Communication.

DEPARTMENT OF AGRI-BUSINESS MANAGEMENT AND FOOD TECHNOLOGY (TURA CAMPUS)

Head : Dr. Sheena Haorongbam
Telephone : 03651-223107
E-mail : amftnehutura@gmail.com

Faculty : 3

Designation	Name and Qualification	Specialization
Assistant Professor (3)	Sheena Haorongbam, MSc & PhD (Panjab Univ)	Biochemical, Analytical and Nutritional Aspect of Plant-Based Foods, Process and Preservation of Foods, Its Health Impacts and Food Habits
	Gino A. Sangma, MBA (NEHU)	Marketing Management and Agribusiness Management
	R. Sasikumar, MSc (GB Pant Univ)	Fruits and Vegetables Processing Technology Food Biotechnology Beverage Technology Fermentation Technology

Thrust Areas of Research

Management of Small Business; Entrepreneurship; Supply Chain Management; Micro Finance; Rural Marketing; Agri and Food Marketing; Tourism Development; Food Biotechnology; Food Processing Technology; Food Packaging Technology; Fermentation Technology; Traditional Knowledge and Food Habits; Certification and Quality Assurance of Foods; Post-Harvest and Processing Technology and Management of Fruits and Vegetables; Skill Development; Rural Extension Services; Food Analysis and Hygiene; Underutilized Forest Resources.

Brief Statement of Academic Activities

The Department offers the MBA programme in Agri-Business and Food Technology. During the current year under report, the Department admitted five students for the MBA programme, and eight students completed their MBA degree successfully. The Department organized the HR Conclave, SYNERGOS 2016 on “Skilling the Unskilled: Handling the Corporate Dilemma” in collaboration with the Department of Management, NEHU, Tura Campus, held on 21 May 2016. Faculty members of the Department have contributed three research papers published in journals.

Students’ Profile

Enrolment Capacity: MBA – 15

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MBA	01	04	01	03		01	02	03	05

Department of Agri-Business Management and Food Technology (Tura Campus)

Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MBA	04	04		08			06	02	08

Courses Conducted

Postgraduate: MBA (Agri-Business and Food Technology)

Semester I

Management Concepts; Managerial Economics; Computer Applications; Business Environment; Quantitative Analysis for Managerial Decision; Accounting for Managers; Financial Management; Management of Food and Agribusiness.

Semester II

Business Communication; Agri-Business Marketing; Human Resource Management in Agri-Business; Operations Management; Supply Chain and Retail Management; Legal Aspects of Business; Fundamentals of Food Processing and Preservation; Tax Laws.

Semester III

Research Methods; Entrepreneurship and New Venture Development; Agricultural Credit and Co-operative Management; Agribusiness Management; Agri and Food Marketing; Farm Business Management; Agricultural Project Management; Agricultural Input Management; ICT in Agribusiness; Food Chemistry and Analysis; Food Microbiology; Unit Operations in Food Processing; Post Harvest Management of Horticultural Crops; Food Additives and Regulations.

Semester IV

Strategic Management; Intellectual Property Rights; Commercial Horticulture; Commodity

Futures Trading; International Trade in Agriculture; Livestock Production Management; Cereal and Bakery Technology; Food Hygiene and Sanitation; Total Quality Management in Food Industry; Beverages and Fermentation Technology; Project/Dissertation.

Seminars/Conferences/Symposia/Workshops

Organised

Co-organized the *HR Conclave, SYNERGOS 2016 in Mapping Skills and Competencies for Future Managers* in collaboration with the Department of Management, NEHU, Tura Campus, on 9 May 2015.

Attended

Gino A. Sangma

Attended the national conference on *Enhancing Nutritional Security through Climate Smart Farming Practices* organized by the Cooch Behar Association for Cultivation of Agricultural Sciences on 17-18 March 2017, and presented an oral presentation on “Sustainable Utilization and Conservation of Natural Resources in West Garo Hills Region of Meghalaya.” Also, he attended the international conference on *Knowledge Transfer and Transformation: Global and Local Business for Competitiveness and Social Justice* organized by the Nepalese Academy of Management and International Federation of the East Asian Management Association from 27-29 March 2017 at Kathmandu, Nepal, and presented an oral

presentation on “Destination Marketing of Tourists Spots: A Study of Garo Hills in Meghalaya, India.”

Publications

Published in India

Sasikumar, R., Vivex, K. (2016). Optimization of sugar substitutes in therapeutic beverages using response surface methodology. *International Journal of Agricultural and Food Science*, 6(2):19-23.

Vivek, K., Singh, P., Sasikumar, R. (2016). Optimization of iron rich extruded *Moringa*

oleifera snack product for anaemic people using response surface methodology (RSM). *Journal of Food Processing & Technology*, 7: 639, doi: 10.4172/2157-7110.1000639.

Sasikumar, R., Vivek, K., Chakaravathy, S., Deka, S.C. (2017). Effect of post-harvest quality parameters on ultra-sonication treatment of Khoonphal (*Haematocarpus validus*) of Meghalaya, North-East India. *Journal of Food Processing & Technology*, 8: 668, doi: 10.4172/2157-7110.1000668.

Department of Commerce

DEPARTMENT OF COMMERCE

Head : Dr. A. P. Pati
Telephone : 0364- 272- 3161
E-mail : hodcom@nehu.ac.in

Faculty: 7

Designation	Name and Qualification	Specialization
Professor (2)	N. M. Panda, MCom (Utkal), PhD (Manipur)	Management Accounting and Entrepreneurship
	V. K Shrotriya (On lien), MCom, PhD (MJP Rohilkhand)	Human Resource Management and Organisation Behaviour
Associate Professor (2)	A. P. Pati, MCom, PhD (Utkal)	Finance
	K. C. Kabra, MCom, PhD (Vidyapeeth)	Accounting and Finance
Assistant Professor (3)	Ricky A. J. Syngkon, MCom & PhD (NEHU)	Managerial Economics and Entrepreneurship
	S. G. Maji, MCom, PhD (Burdwan)	Accounting and Finance
	S. Kharmawphlang, MCom & PhD (NEHU)	Entrepreneurship and Marketing

Thrust Areas of Research

The Department aims at imparting education that is needed for creating and management of business enterprises in an emerging economy of North-East India. Keeping in view the importance of Business Research both at national and regional levels, it also conducts socially relevant research work, awareness programmes, etc. The thrust areas of research in the Department are Accounting and Finance and Entrepreneurship and Small Business.

Brief Statement of Academic Activities

There are seven regular teachers including two Professors (one on lien), two Associate Professors, and three Assistant Professors. Currently, the Department has 100 students

at the Master's level (including two overseas students) and 20 students at the doctoral level. Besides regular teaching and research works, the Department conducts seminars, workshops, awareness programmes, career counselling sessions and discussions on contemporary topics for the students to enhance their understanding and presentation skills and to share the outcome of their PhD/project/field work. Specifically, all PhD scholars need to present their progress of research work twice in a year and these presentations are organized on every Friday. The Department organized a national conference on *Contemporary Issues in Accounting and Finance* on 21-22 October 2016. Faculty member Dr. S. G. Maji was given the best paper award at the international conference on *Management Practices for the New Economy* (ICMAPRANE)

School of Economics, Management and Information Sciences

at Jaipuria Institute of Management, Noida (10-11 February 2017). The Vice-President of the Institute of Company Secretaries of India, New

Delhi, visited the Department and delivered a lecture on 28 September 2016.

Students' Profile

Enrolment Capacity: MCom – 50, PhD -Variable

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MCom	47	53	03	83		14	70	30	100
PhD		02		01		01		02	02

Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MCom	05	30		28		07	20	15	35
PhD	01	01		01		01	01	01	02

Students Awarded PhD Degree

Name of Student	Title of Thesis	Name of Supervisor & Joint Supervisor
Mr. Saad Salih Hussein	Budgeting in Oil Refineries of Iraq: A Case Study of North Refineries Company	Dr. S. G. Maji (Supervisor) Prof. N. M. Panda (Joint Supervisor)
Ms. Shimti Kharmawphlang	Institutional Financing for Micro and Small Enterprises in India: A Study of Meghalaya	Prof. N. M. Panda (Supervisor)

Research Fellowships: 12

UGC Non-Net	National Fellowship for Higher Education	Maulana Azad Minority Fellowship	UGC NET JRF/SRF
05	01	02	04

Fieldwork/Educational Tour of Students:

Students went to Kerala, Mumbai and Goa.

Teacher-in-Charge: R. A. J. Syngkon.

Places/Institutions Visited: Kerala, Goa and Mumbai.

Duration of Tour: 18 days (24 January to 10 February 2017).

Purpose of Tour: To enable the students to see, experience and learn about the diverse socio-economic and cultural lives of people in these places, and to observe entrepreneurial activities in a different socio-economic and cultural setting/context.

Department of Commerce

Courses Conducted

Postgraduate: MCom

Semester I

Business Environment; Organization Behavior; Financial Analysis and Reporting; Statistics for Decision Making; Managerial Economics.

Semester II

Financial Management; Human Resource Management; International Business; Services Management; NGO Management; Accounting for Services.

Semester III

Financial Markets and Instruments; Entrepreneurship; Cost and Management Accounting; Financial Risk Management; Management of Small Enterprise; Business Survey and Research.

Semester IV

International Business; Strategic Management, Security Analysis and Portfolio Management; Project Planning and Control; Human Resource Management.

PhD Courses

Research Methodology; Management Theory and Entrepreneurship; Organisational Behaviour; Literature Review in concerned area.

Seminars/Conferences/Symposia/Workshops

Organized

The Department organized a national conference on *Contemporary Issues in Accounting and Finance* on 21-22 October 2016 with K.C. Kabra as Coordinator and S.G. Maji as Joint Coordinator.

Attended

Dr. A. P. Pati

Presented a paper on “Transformation and Sustainability: A Case of Indian Microfinance Institutions” at the 6th annual international conference on *Sustainability* organized by IIM, Shillong (2-4 March 2017).

Dr. S. G. Maji

Presented an award-winning paper entitled “Regulatory Capital, Competition and Risk Taking Behaviour of Indian Banks” at the international conference on *Management Practices for the New Economy* (ICMAPRANE), Jaipuria Institute of Management, Noida (10-11 February 2017).

Publications

Published in India

Ezhilarasi, G., Kabra, K.C. (2016). Corporate governance and environmental disclosures: Evidence from polluted companies in India. *Research Bulletin*, 42(III): 38-49.

Ezhilarasi, G., Kabra, K.C. (2017). Factors influencing environmental disclosures: Evidence from India. *The IUP Journal of Accounting Research and Audit Practices*, XVI (1): 7-24.

Ghose, B., Kabra, K.C. (2016). Capital structure determinants of the Indian manufacturing sector: An empirical study. *International Journal of Applied Management Research*, 3(1&2): 68-81.

Maji, S. G., Hazarika, P. (2016). Does competition influence the financial soundness of banks? Evidence from the Indian banking sector. *Indian Journal of Finance*, 10(10): 27-41.

- Maji, S. G., Hazarika, P. (2016). Factors affecting credit risk of Indian banks: Application of dynamic panel data model. *Research Bulletin*, 42 (I): 85-96.
- Roy, P., Pati, A. P. (2017). Mission drift in microfinance: An empirical assessment of the Indian situation. *Finance India*, XXXI (1): 209-222.

Published Abroad

- Hussein, S., Maji, S. G., Panda, N. M. (2016). The association between budget goal clarity and managerial performance in Iraqi oil refinery: The role of budget goal difficulty and budget participation. *Middle East Journal of Management*, 3(4):343-358.
- Laskar, N., Maji, S. G. (2016). Disclosure of corporate social responsibility and firm performance: Evidence from India. *Asia-Pacific Journal of Management Research and Innovation*, 12(2): 145–154.
- Laskar, N., Maji, S. G. (2016). Corporate sustainability reporting practices in India: Myth or reality? *Social Responsibility Journal*, 12(4): 625-641.
- Maji, S. G., Goswami, M. (2016). Intellectual capital and firm performance in emerging economies: The case of India. *Review of International Business and Strategy*, 26(3): 410-430.
- Maji, S. G., Goswami, M. (2017). Intellectual capital and firm performance in India: A comparative study between original and modified value added intellectual coefficient model. *International Journal of Learning and Intellectual Capital*, 14(1): 76-89.
- Maji, S. G., Hazarika, P. (2016). Bank capital and risk adjustment decision in emerging

markets: The case of India. *International Journal of Financial Services Management*, 8(3): 272-289.

- Ghose, B., Kabra, K. C. (2016). What determines firms' zero-leverage policy in India? *Managerial Finance*, 42(12): 1138-1158.

Honours/Awards/Recognitions

Dr. A. P. Pati is a member of the Editorial Board of the *Journal of Integrated Research and Development*, *Orissa Journal of Commerce*, *NEHU Journal*, and *Kushagra International Management Review*.

Other Activities

Dr. A. P. Pati

Resource person in a panel discussion on *Demonetisation and Its Effect* organised by Sankardev College at Hotel Pinewood, Shillong, on 15 November 2016, and a technical session of the 6th Annual International Conference on *Sustainability* at IIM, Shillong (2-4 March 2017). He also delivered lectures at the refresher course in *Economics* organised by UGC-HRDC, NEHU, Shillong (September 2016).

Dr. K. C. Kabra

Resource person during the national seminar on *Foreign Trade – A Strategy for Economic Growth of the NE Region of India* organised by Shillong Commerce College, Shillong (1-2 April 2016), and delivered two lectures on “Goods and Services Tax” during the refresher course in *Economics* at UGC-HRDC, NEHU, Shillong (26 September 2016).

Dr. S. G. Maji

Reviewer for the *Journal of Financial Economic Policy* (Emerald), *International*

Department of Commerce

Journal of Learning and Intellectual Capital (Inderscience) and *International Journal of Corporate Strategy and Social Responsibility* (Inderscience).

Dr. R. A. J. Syngkon

Imparted training on “Effective communication,” “Motivation” and “Leadership” at the Regional Training Institute, Shillong (2 October 2016).

DEPARTMENT OF ECONOMICS

Head : Prof. U. K. De
Telephone : 0364-2723171/2723182
E-mail : utpalkde@gmail.com
Website : <http://nehu-economics.info>

Faculty: 13 (one on lien)

Designation	Name and Qualification	Specialization
Professor (6)	N. Srivastav, MA (Rajasthan), PhD (IIT Kanpur)	Industrial Economics
	E. D. Thomas, MA & PhD (NEHU)	Macroeconomics, International Economics and Rural Economics
	P. Nayak, MA & PhD (IIT Kharagpur)	Human Development, Women Empowerment
	B. Mishra, MA & PhD (Utkal)	Public Economics, Political Economy
	U. K. De, MPhil, PhD (Burdwan)	Econometrics, Environment and Resource Economics, Economics of Agriculture and Rural Development, Empowerment of Women
	B. Panda, MPhil (Berhampur), PhD (Utkal)	Development Economics, Rural Economics
Associate Professor (2)	P. S. Suresh, MPhil (SV Univ), PhD (Hyderabad)	Financial Economics
	S. Umdor, MA & PhD (NEHU)	Indian Economy, Local Government Finance
Assistant Professor (5)	W. Tariang, MA & PhD (NEHU)	Agriculture Economics, Gender and Poverty
	D. Nongkynrih, MA & PhD (NEHU)	Labour Economics
	D. W. Thangkhiew, MA & PhD (NEHU)	Macroeconomics
	V. Pala, MA & PhD (NEHU)	Microeconomics, Quantitative Economics
	D. Das, MSc (Guwahati), PhD (IIT Guwahati) (on lien)	Econometrics

Department of Economics

Thrust Areas of Research

Environmental and Resource Economics, Applied Econometrics, Economics of Education and Gender, Economy of North-Eastern Region, Budgetary Theory and Political Economy, Analysis of Poverty, Labour Market and Agricultural Economic Issues.

Brief Statement of Academic Activities

During the year, the Department concentrated on its regular postgraduate teaching programme and research. Besides, there was continuous interaction with the students, preferably through power point presentations, field exposures, analytical tools and computer programs. The Department also followed continuous monitoring of research activities through periodical progress report seminar presentations of the research scholars, who presented their progress at least twice a year.

The Department organised one invited lecture on *Asian, India and China: Great Transformation* delivered by Prof. Biswanath Bhattacharyay, Former Advisor of Asian Development Bank and presently a Visiting Faculty of McGill University (12 May 2016). There was also

an interaction on *Gender Inequality in Indian Democracy: The Economic Costs* on 31 March 2017 with Dr. Shamika Ravi, Senior Fellow of the Brookings Institution, Washington D.C., Prof. Rahul Ravi of the John Molson School of Business, Canada, and Mudit Kapoor, Associate Professor, Development Economics, ISI, Delhi. The Department also organised an awareness programme on *The Benefits of Commodity Future Trading and Hedging (Risk Management and Price Discovery)* and *How Various Industries Can Manage Risk and Safeguard Themselves from the Adverse Effect of High Price Fluctuation* on 27 April 2016, where experts from Multi Commodity Exchange of India Ltd, Kolkata, interacted with the faculty members, research scholars and students of both the Departments of Economics and Commerce.

Moreover, faculty members of the Department participated in a number of regional, national and international seminars/conferences. They also published books and research papers in various national and international journals. The course curricula of postgraduate studies have been revised and that of undergraduate semester system is in the process of revision.

Students' Profile

Enrolment Capacity: MA – 55, PhD – Variable

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MA	26	29	02	46	02	05	29	26	55
MPhil		01				01		01	01
PhD	02	02		02		02		04	04

Degree Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MA	21	24		45			21	24	45
PhD		01		01			01		01

School of Economics, Management and Information Sciences

Students Awarded PhD Degree

Name of Student	Title of Thesis	Name of Supervisor & Joint Supervisor
Ms. Wandinecia Tariang	Poverty and Socio-Economic Characteristics of Female-Headed Households: A Case Study of Rural Areas of East Khasi Hills Districts of Meghalaya	Prof. E. D. Thomas (Supervisor), Dr. P. S. Suresh (Joint Supervisor)

Research Fellowships: 10

CSIR- UGC-NET	UGC Non-Net	National Fellowship for Higher Education	ICPR Fellowship
04	05		01

Field work/Educational Tour of Students

Teacher-in-Charge: V. Pala

Places/ Institutions Visited: Gangtok

Duration of Tour: 12 days

Purpose of Tour: To expose students to other cultures and economies and to help them learn through observations, various good practices that are important for economic development and national integration.

Courses Conducted

Postgraduate: MA

Semester I

Microeconomics Analysis I; Macroeconomics I, Mathematics for Economists; Economics of Growth and Development I; Classical Political Economy.

Semester II

Microeconomics II; Macroeconomics II; Techniques of Statistical Analysis; Economics of Growth and Development II. *Open Course:* Budgetary Theory and Practice; Econometrics.

Semester III

Historical Perspective of Modern Economics I; International Economics; Industrial Economics. *Open Course:* Economics of Agriculture; Economy of North-Eastern Region.

Semester IV

Historical Perspective of Modern Economics II; Indian Economic Problems and Policy; Environmental Economics; Labour Economics; Financial Economics.

MPhil/PhD Courses

Research Methodology in Economics; Contemporary Economic Issues; Review of Literature.

Seminars/Conferences/Symposia/ Workshops

Organized

Prof. B. Panda

Organised an academic interaction programme on the topic *Gender Inequality in Indian Democracy: The Economic Costs* in the Committee Room of the Dean, SEMIS, NEHU, Shillong (31 March 2017) with

Department of Economics

Dr. Shamika Ravi, Senior Fellow of the Brookings Institution, Washington D.C., Prof. Rahul Ravi of the John Molson Scholl of Business, Canada, and Mudit Kapoor, Associate Professor, Development Economics, ISI, Delhi.

Dr. D. Nongkynrih

Coordinator for the consultative workshop on *Situational Analysis of Children and Women in Meghalaya, 2016 (in the Context of UNICEF's Country Programme for 2018–2022)* organized by UNICEF, OKDISC and Asian Confluence at Asian Confluence, Shillong (10 June 2016).

Attended

National

Prof. N. Srivastav

Presented a keynote address in the inaugural session and chaired the first technical session of the UGC-sponsored national seminar on *Food Security in India: Issues and Challenges* organized by the Department of Economics, J.B. College (Autonomous), Jorhat in collaboration with the Don Bosco Institute, Jorhat (30 September 2016). He also chaired a session on the theme of “Emerging Trends of Border Trade- Opportunities and Challenges” during the national seminar on *Border Trade in North-East India: A Politico-Economic Perspective* organized by Women's College, Shillong (21 October 2016).

Presented a paper entitled “Health Care Services in the Tribal Areas of Assam in the Context of Sustainable Goals” with J. Basumatary at the 5th Conference on *Health Economics and Policy: Current Issues in India* jointly organized by the Indian Health Economics and Policy Association (IHEPA), IDSK

and Azim Premji University, Kolkata (15 December 2016).

Prof. B. Mishra

Delivered a lecture and chaired one technical session during the national seminar on *Emerging Trends and Challenges of Micro Finance in North-East India* at the Department of Management, NEHU, Tura Campus, Tura (24-25 November 2016).

Deliver a keynote address and chaired one technical sessions during the national seminar on *Regional Rural Banks in India: Challenges and Prospects* at Khatra Adibasi Mahavidyalaya, Khatra, Bankura (16-17 November 2016).

Presented a paper entitled “The Role of Government and Economic Development: A Case Study of Jammu and Kashmir” at the national seminar on *Issues and Strategies of Environment and Development in India* at the Department of Economics, B.P. Chaliah College, Nagarbera, Kamrup, Assam (27-28 October 2016).

Prof. U. K. De

As keynote speaker/resource person presented papers on: (i) “Factors behind Farmers’ Response to Climate Change in India’s North-East” at the national conference on *Revisiting Rural Development - Dynamics and Discontent* held at Sidho Kanho Birsha University, Purulia, West Bengal (30-31 March 2017), and also chaired two sessions of the conference, (ii) “Role of Road Infrastructure in Agriculture and Rural Development in a Backward Economy” at the national seminar on *Development Perspectives for India: Emerging Issues and Challenges* held at Raiganj University, West Bengal (27 March 2017), and also

acted as chairperson of a session of the seminar, (iii) “Microfinance Institution and Economic Empowerment of Women: A Case of Jharkhand State” during the UGC-sponsored national seminar on *Women’s Economic Empowerment and Inclusive Growth* held at Kavi Nazrul Islam Mahavidyalaya, Churulia, West Bengal (7-8 March 2017), and also chaired a session of the seminar, (iv) “Scope of Women Empowerment through Self-Help Group in Informal Activities: A Case of Jharkhand” during the UGC-sponsored national seminar on *Globalisation and the Unorganised Sector in India* held at Jogesh Chandra Chaudhuri College, Kolkata (6-7 January 2017), and also chaired a session of the seminar, (v) “Empowerment of Women through Self-Help Group” at the national seminar on *Emerging Trends and Challenges of Micro Finance in North-East India* held at the Department of Management, NEHU, Tura Campus, and participated as a resource person in a group discussion on *Demonetization in India* at the same event (24-25 November 2016).

Presented papers on: (i) “Environmental Awareness in the Residential Choice in Dimapur Town, Nagaland” (Co-author: V. Vupru) at the national seminar on *Issues and Strategies on Environment and Development in India* organized by B.P. Chaliha College, Kamrup, Assam in collaboration with UGC (27-28 October 2016), and (ii) “Self-Help Group as an Alternative for Empowerment of Women” as an invited speaker at the state level workshop on *Financial Inclusion and Rural Empowerment in Jharkhand: Issues, Progress and Prospects* organized by the Indian Statistical Institute in collaboration

with NABARD, Jharkhand (21-22 March 2016).

Prof. B. Panda

Delivered an invited lecture on (i) “Impact of Terrorism/Insurgent Activities on Economic Development of the Country” at the workshop on *Homeland Security* held at North Eastern Police Academy, Shillong (27 April 2016), and (ii) “MGNREGA and Assets Creation” to the nodal officer and project staff at the workshop on *Knowledge Resources for Study on MGNREGA* organised by the Tata Institute of Social Sciences (TISS), Mumbai held at Janta Conference Hall, Government of Sikkim, Gangtok (3-4 November 2016), and (iii) “Act East Policy, Transactions Costs and Development of the North East” in the national brainstorming session on *Act East to India’s North East: How to Reap the Dividend* organised by ASEAN Study Centre, ICSSR, Shillong (8-9 August 2016).

As a resource person presented a paper on (i) “Act East Policy and Economic Development of the North East” at the international seminar on *Border Trade in North East India: A Politico-Economic Perspective* organised by Women’s College, Shillong (21-22 October 2016), and (ii) “Understanding ASEAN Economies” at the national workshop on *Capability Building For South East Asia Studies for Research Scholars and Researchers* organised by the ASEAN Study Centre, ICSSR, Shillong, and the Department of Political Science, NEHU at ICSSR complex, NEHU, Shillong (22 November 2016).

Delivered a keynote address and presented a paper entitled “Social Entrepreneurship and Economic Development: Some Reflections”

Department of Economics

during the UGC-sponsored national seminar on *Social Entrepreneurship as the Best Solution to the Problems of Mass Poverty and Climate Change* organised by Jorhat College, Jorhat, Assam (30 September to 1 October 2016).

Dr. S. Umdor

Participated as a resource person at: (i) workshop on *Socio-Economic Transition in NE India* for senior teachers of universities and colleges on 14 November 2016 organized by UGC, Human Resource Development Centre, Guwahati University, Guwahati (14-20 November 2016), (ii) national seminar on *Emerging Trends and Challenges of Microfinance in Northeast India* organized by the Department of Management, NEHU, Tura (24-25 November 2016), and (iii) training programme for administrative officers of Government of Meghalaya on *Gender Budgeting* organized by the Meghalaya Administrative Training Institute, Government of Meghalaya, Shillong (1-3 February 2017).

Presented a paper entitled “14th Finance Commission and Its Implication on Meghalaya” at the national seminar on *Towards a New Regime of Fiscal Federalism in India: Implications of the Fourteenth Finance Commission* organized by OKDISCD (28-29 March 2017).

Dr. V. Pala

Presented a paper on “Disparities in Poverty and Consumption among Social Groups in Indian States” at the workshop on *Causes of the Varying Performance of Indian States* jointly organized by the German Institute of Global and Area Studies, Centre for the Study of Regional Development and Indian

Institute of Dalit Studies, JNU, New Delhi (21-22 November 2016). She also delivered a keynote address on “Type of Development in Meghalaya and Nature of Displacement” at the seminar on *Displacement: Search for Alternatives in Meghalaya*, Loyola College, Williamnagar (24 February 2017).

Dr. D. Nongkynrih

Presented papers on: (i) “Status of Children and Women in Meghalaya: An Overview” at the consultative workshop on *Situational Analysis of Children and Women in Meghalaya, 2016 (in the Context of UNICEF’s Country Programme for 2018–2022)* organized by UNICEF, OKDISCD and Asian Confluence, Shillong (10 June 2016), (ii) “Women’s Work in North East India” at the 58th Conference of the Indian Society of Labour Economics organized by IIT, OKDISCD and TISS, Guwahati (24-26 November 2016), (iii) “BBIN and the North East of India” at the Delhi Policy Group’s round-table discussion on *Advancing BBIN Sub-regional Cooperation* organized by the Delhi Policy Group and the Asia Foundation, New Delhi, at Guwahati (30-31 January 2017), (iv) “Border Trade between North East India and Bangladesh” at the national seminar on *India’s North Eastern States and Eastern Neighbours: Borderlands, People and Connectivity* organised by the Young Scholars Forum, Asian Confluence, Shillong and ICWA, New Delhi, Shillong (9-10 March 2017), and (v) “Skill Development in Meghalaya: A Case of Educated Unemployed” at the seminar on *North East India Since 1947: Society, Polity and Economy in the State of Meghalaya* organised by OKDISC Guwahati, Shillong (16-17 March 2017).

International

Prof. U. K. De

Chaired a session on *Health Statistics and Demography* of the international conference on *Bioinformatics and Biostatistics for Agriculture, Health and Environment* at the University of Rajshahi, Bangladesh (19-23 January, 2017), and presented a paper on “An Application of Vector Error Correction Model to Analyze the Impact of Climate Change on Agricultural Productivity in India’s North-Eastern Region” with Girijasankar Mallik. He was also a member of international advisory committee of the same conference.

As a keynote speaker presented a paper on “Climate Change, Agricultural Productivity and Farmers’ Response in India’s North-East” at the INSEARCH 2016: Third international integrative research conference on *Development, Governance and Transformation* held at BARD, Comilla, Bangladesh (27-28 December 2016), and chaired a session on *Business, Banking, Finance and Market*.

Presented papers on: (i) “Women in MGNREGA in India’s North-East” at the international conference on *Social and Political Issues (ICSPI) 2016* held at Sanur Paradise Plaza Hotel, Bali, Indonesia by Faculty of Social and Political Sciences, Universitas Indonesia (19-21 October 2016), and (ii) “Sustainable Agricultural Management, Productivity Growth and Impact of Climate Change in India’s North-East” at the 3rd ISA Forum of Sociology on *The Futures We Want: Global Sociology and the Struggles for a Better World* held at University of Vienna, Austria (10-14 July 2016).

Dr. W. Tariang

Presented a paper titled “Poverty and Inequality in the Matrilineal Society of Meghalaya in the North-Eastern Region of India” at the 3rd International Conference on *Poverty and Sustainable Development – Strategies for Meeting SDGs* organized by TIIKM in Colombo, Sri Lanka (8-9 December 2016).

Publications

Published in India

De, U. K., Ghosh, B.N. (2016). Involvement of women in natural resource collection in rural Jharkhand, India. *Indian Journal of Gender Studies*, 23(2): 306-323.

Nayak, P., Mahanta, B. (2016). Gender disparity and women empowerment in Assam. *International Journal of Applied Management Research*, 3 (1&2):1-22.

Nongkynrih, D., Bhattacharjee, S. (2016). Geography as an opportunity: North-East connecting India with ASEAN. *Man and Society: A Journal of North-East Studies*, XIII: 37-52.

Srivastav, N., Basumatary, J. (2016). Maternal health care utilisation in Assam: A community wise analysis. *Journal of Social Sciences Bodoland University*, ISSN: 2320-0952-4541: 1-14.

Umdor, S. (2016). Energy demand and supply outlook for Meghalaya, India: Some issues for consideration. *Indian Journal of Power and River Valley Development*, 66: 95-101.

Umdor, S., Swer, C. (2017). Access and participation of rural households in credit markets in Meghalaya. *Economic Affairs*, 62(1): 11-21.

Published Abroad

- De, U. K., Ghosh, B.N. (2016). Land acquisition in Singur for industrialization: SEZ, politics and economic intricacy. *South Asian Journal of Policy and Governance*, 38(1): 77-93.
- De, U. K., Vupru, V. (2017). Location and neighbourhood conditions for housing choice and its rental value: Empirical examination in an urban area of North-East India. *International Journal of housing Markets and Analysis*, <https://doi.org/10.1108/IJHMA-10-2016-0072>.
- Hassan, S. U., Mishra, B. (2017). Government expenditure and economic growth in the state of Jammu and Kashmir: A unit root test and co-integration analysis. *International Journal of Statistics and Econometrics*, 18(2):58-86.
- Hassan, S. U., Mishra, B., Suresh, P. S. (2016). A multi- dimensional approach to the determinants of tax revenue: The case of the state of Jammu and Kashmir (India). *ELK Asia Pacific Journal of Finance and Risk Management*, 7(3):66-194.
- Kharshiing, R. B., Pala, V. (2016). Government educational incentives and enrolment in Indian state. *International Journal of Economic and Business Review*, 4(2):101-113.
- Lhoungu, V., Mishra, B., Suresh, P. S. (2016). Public expenditure and economic growth in Nagaland: A time series analysis. *International Journal of Research in Social Sciences*, 6(10):2249-2496.
- Singha, K., Nayak, P. (2016). Economics, ethnicity and autonomy movement in Meghalaya: An analysis. *Journal of Community Positive Practices*, 16(1): 37-55.
- Srivastav, N., Basumatary, J. (2016). The major trends in public health care spending in India and its relationship with health care outcomes among North Eastern States. *Management in Health Journal*, XX(3):15-27.
- Thangkhiew, D. W. (2016). Determinants of external finance in Indian iron and steel industry. *EPRA International Journal of Economic and Business Review*. 4(6):37-43.

Books

- De, U. K., editor. (2016). *India's Look East Policy and North-East India*. Concept Publishing Company, New Delhi, ISBN: 9789351251927.
- Fernandes, W., Pala, V., Bharali, G., Dutta, B., editors. (2016). *The Development Dilemma: Displacement in Meghalaya 1947-2010*. North Eastern Social Research Centre, Guwahati, ISBN:189762567.

Book Chapters/Proceedings

- Nayak, P. (2016). Brahmaputra: Economic lifeline of Assam. In: *The Mahabahu Brahmaputra Flood and River Management Agency of Assam*. K. K. Dwivedi (Ed.). Guwahati, Assam, p. 77-85.
- De, U. K. (2016). Emerging trends of India ASEAN trade and India's Look East Policy. In: *Look East Policy and North-East India: Achievements and Constraints*. U.K. De (Ed.). Concept Publishing Company, New Delhi, p. 3-15.
- De, U. K. (2017). Climate change, agricultural productivity and farmers' response in India's North-East. In: *Global Encyclopedia of Public Administration, Public Policy, and Governance*. Aka Firoz Ahmad (Ed.). Springer, Chapter 1, p.1-19.

- Panda, B. (2017). Act east policy, transactions costs and development of the North East. In: *Act East and India's North East*. C. J. Thomas and K. Sarada (Eds.). Pentagon, New Delhi, Chapter 3, p.37-56.
- Panda, B. (2016). Social entrepreneurship and economic development. In: *Social Entrepreneurship as the Best Solution to the Problems of Mass Poverty and Climate Change*. Nilima Bora (Ed.). Assam Computers, Tinsukia, Chapter 1, p.1-7.
- Pala, V., Dubey, A. (2017). Poverty and nutrition in the North-Eastern region of India. In: *Rethinking Economic Development in Northeast India: The Emerging Dynamics*. Deepak K. Mishra and Vandana Upadhyay (Eds.). Routledge, New Delhi, Chapter 5, p.97-135.
- Pala, V. (2016). Unequal access to water: Implications for poverty and educational attainment. In: *Proceedings of the International Conference on Water Resource Management in the Eastern Himalayan Region*. St. Anthony's College, Shillong, p. 141-150.
- Funds Received from Agencies including NEHU/UGC**
- Rs. 1. 80 lakhs from NEHU as a Non-Plan Grant

Research Projects

Ongoing: 5

Title of Project	PI/CO-PI	Funding Agency	Rupees in Lakh
Identifying Pathways out of Durable Inequalities	V. Pala (Co-PI) Prof. A. Dubey (PI), CSRD, JNU; Dr. K. K. Mishra (Co-PI), BHU; Prof. R. Pandey (Co-PI), BHU; Dr. G. Sridevi, Univ of Hyderabad (Co-PI)	ICSSR, New Delhi	40.00
Act East Policy, Entrepreneurial Efficiency and Transactions Costs	B. Panda (PI)	Ministry of External Affairs	4.90
Technical Quality and Economic Assessment of the Category B Assets under MGNREGA in Sikkim	B. Panda (PI)	TISS, Mumbai as a consultant	1.00
Socio-Economic Status and Working Conditions of Female Domestic Workers in Shillong	D. Nongkynrih	ICSSR-NERC	1.50
Quality of Higher Education in India: A Study of Internal and External Quality Assurance at the Institutional Level	D. Nongkynrih (Team Member)	NUEPA, New Delhi	4.20

Department of Economics

Completed: 2

Title of Project	PI/CO-PI	Funding Agency	Rupees in Lakh
Brahmaputra and the Socio-Economic Life of People of Assam	P. Nayak (PI), B. Panda (Co-PI)	Tetra Tech India Ltd	5.05
Educated Unemployed Among the Youths: A Case Study of Meghalaya	D. Nongkynrih	ICSSR, New Delhi	4.00

Academic Collaborations

Prof. B. Panda

Collaborated with Prof. Aswani Kumar of the Tata Institute of Social Sciences, Mumbai, on a research project entitled “Technical Quality and Economic Assessment of The Category B Assets Under MGNREGA in Sikkim” in the capacity of consultant and North East expert on MGNREGA.

Honours/Awards/Recognitions

Prof. U. K. De

Vice-President of North-East India Council for Social Science Research for the year 2016-17, and he was Visiting Scientist of the Indian Statistical Institute, Kolkata (3-30 January 2017). He was also awarded as an outstanding reviewer of the *Journal of Financial Economic Policy* (Emerald) for the year 2015.

Prof. B. Panda

Selected and empanelled by ICCR, Government of India, as Chair Professor for deputation to its academic chairs in universities abroad in 2017.

Other Activities

Prof. N. Srivastav

Delivered: (i) two lectures on “Quality Assurance and Accreditation in Higher Education

in India” and “Economics of Happiness: A Case Study of India” at the 36th UGC-HRDC sponsored orientation programme organized by UGC-HRDC, NEHU (20 June 2016), (ii) two lectures on “Higher Education in India: Role and Need of Quality Assurance” and “Accreditation and on Learning Deficits in Higher Education in North-East India” at the special summer school on *Professional Development of Teachers* organized by UGC-HRDC, NEHU (27 June -15 July 2016), (iii) two lectures “Some Contemporary Issues and Challenges of Higher Education in India” and “Recent Developments in Economics of Happiness” at the 37th Orientation Programme (General) organized by UGC-HRDC, NEHU (29 August 2016), (iv) two lectures “Sustainable Development: Some Conceptual Issues” and “Behavioural Economics of Saving: Some Recent Development” during the refresher course in *Economics* organized by UGC-HRDC, NEHU (8-9 September 2016), (v) one lecture on “Future Prospects and Career Opportunities in the Economics and Commerce” at an orientation programme organized by the University of Science and Technology: Meghalaya (21 September 2016), (vi) two lectures on “Environmental Economics: Some Contemporary Issues” during the short-term course in *Environmental Sciences* organized by UGC-HRDC, NEHU (4 October 2016),

(vii) two lectures on “Quality Assurance and Accreditation of the Higher Education in India” and on “Interdisciplinary Research in Economics of Happiness” at the 38th Orientation Programme (General) organized by UGC-HRDC, NEHU (18 February 2017), and (viii) two lectures on “The Assessment of Quality of Higher Education in India” and on “Some Qualitative and Quantitative Aspects of Happiness: An Analytical View” at the 39th Orientation Programme (General) organized by UGC-HRDC, NEHU (3&6 March 2017).

Prof. P. Nayak

Delivered a lecture on “Statistical Tools in Research: Uses and Abuses” at the Department of Management, NEHU, Tura Campus (8 April 2016).

Prof. U. K. De

Delivered lectures as a resource person on (i) “Socio-Economic Sustainability in East-Jaintia Hills District in Meghalaya” at a one-day symposium on *Socio-Economic Awareness, Upliftment and Sustainability in East-Jaintia Hills* held at St. Anthony’s College, Byndihati Campus, Khliehriat, Meghalaya (14 December 2016), (ii) “Transition of Agricultural Practices in West Bengal since Independence” at the Department of Economics, Rajshahi University, Bangladesh (23 January 2017), (iii) Two lectures on “Methods on Measuring Diversity” and two lectures on “Globalisation and Integration of Countries” during the refresher course in *Economics* organised by UGC-HRDC, NEHU during 8-28 September 2016.

Reviewer for the *Journal of Developing Areas*, and *Journal of Financial Economic Policy*.

Prof. B. Panda

Delivered lectures on: (i) “The Evolving Political Economy of North East India and Challenges to Development” at the Department of Philosophy, NEHU (25 May 2016), (ii) “Social Entrepreneurship and Economic Development: Some Reflections with Reference to NER” to the students and faculty of the Department of Business Management, Tezpur University, Tezpur (27 January 2017), (iii) “Dynamics of Development in a Tribal Economy: Some Reflections” as a resource person at the refresher course in *Tribal Studies*, UGC-HRDC, NEHU (13 May 2016), and (iv) four lectures titled: (a) “Issues and Challenges in Economic Development: The Case of NER” (b) “Development of NER” (c) “ACT East Policy and Transaction Cost” and (d) “Economic Development and Rural Non-Farm Economy” during the refresher course in *Economics*, NEHU (9 & 15 September 2016).

Moderated the following academic sessions:

- (i) “Social Entrepreneurship and Poverty” at the national seminar on *Social Entrepreneurship as the Best Solution to the Problems of Mass Poverty and Climate Change* organised by Jorhat College, Jorhat, Assam (September 30 - October 1, 2016),
- (ii) “Impact of Border Trade: Economic and Socio-Cultural” at the international seminar on *Border Trade in North East India: A Politico-Economic Perspective* organised by Women’s College, Shillong (21-22 October 2016), and (iii) “Gender Inequality in Indian Democracy: the Economic Costs” with Dr. Shamika Ravi, Senior Fellow of the Brookings Institution, Washington D.C., Prof. Rahul Ravi of the John Molson Scholl of Business, Canada,

Department of Economics

and Dr. Mudit Kapoor, Associate Professor, Development Economics, ISI, Delhi, as resource persons in the Committee Room of the Dean, SEMIS, NEHU (31 March 2017).

Member of the Advisory Committee constituted by ICSSR to review the progress of its sponsored project entitled *Agenda 2020: India's Maritime Infrastructure, Governance and Naval Diplomacy*.

Dr. V. Pala

Attended and completed the refresher course in Economics conducted by the Department at UGC-HRDC, NEHU (8-28 September 2016).

Participated in the panel discussion on "Youth Unemployment in North East India" at the 58th Conference of Indian Society of Labour *Economics on Development and Employment in North East India* jointly organised by IIT, Guwahati, OKDISC,

Guwahati and TISS Guwahati at IIT Guwahati (24-26 November 2016).

Dr. D. Nongkynrih

Attended and completed the refresher course in *Economics* held by the Department at UGC-HRDC, NEHU (8-28 September 2016).

Delivered lectures on: (i) "Literature Review" at the 36th Orientation Programme, UGC-HRDC, NEHU, Shillong (30 May–26 June 2016), and (ii) "Data Collection and Literature Review" during the UGC-HRDC 38th Orientation Programme held at NEHU (23 January to 19 February 2017). She also participated in panel discussion on "Women's Work in North East India" at the 58th Conference of the Indian Society of Labour Economics on *Development and Employment in North East India* at IIT, Guwahati (24-26 November 2016).

DEPARTMENT OF JOURNALISM AND MASS COMMUNICATION

Head: Dr. Kamaljit Chirom

Telephone: 0364-272-3401

Email: kchirom@nehu.ac.in

Faculty: 3

Designation	Name and Qualification	Specialization
Assistant Professor (3)	Kamaljit Chirom, PhD (MU)	Film Studies, Communication Research, Advertising
	N. Barath, MPhil (HCU)	Print History, Media and Culture Studies, Development Communication
	Karen L. Donoghue, MA (SMU)	New Media, Television Studies

Thrust Areas of Research

Film Studies, Culture and Media, Television, New Media, Print Culture, Development Communication.

Brief Statement of Academic Activities

The Department is running the MA (Journalism and Mass Communication) and the first batch of students passed out in 2016. The Department is also engaged in other academic activities like lectures from invitees, film festivals, photo exhibition programmes, visit to media or media-related institutions and organisations.

Students' Profile

Enrolment Capacity: MA (Journalism and Mass Communication) - 20

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MA	12	08		15		05	12	08	20

Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MA	05	06		08		03	08	03	11

Courses Conducted

Postgraduate: MA (Journalism and Mass Communication)

Semester I

Mass Communication; Theory and Principles; History and Growth of Journalism; Print Journalism – Reporting Practice (Theory and

Department of Journalism and Mass Communication

Practical); Print Journalism - Editing Practice (Theory and Practical).

Semester II

Media; Culture and Society (Open); Film Production (Theory and Practical); Television Studies (Open); Radio Production (Theory and Practical).

Semester III

Public Relations; Basic Photography (Open); Advertising; Communication Research; Advertising and Public Relations (Practical); Internship.

Semester IV

Media Law; Ethics and Management; New Media; Film Studies; Communication for Development; Media and Gender.

Seminars/Conferences/Symposia/Workshops

Organized

N. Bharath

Organized a one-day exhibition of *Comic Posters* in collaboration with the EILU as part of a three-day workshop on *Grassroots Comics* under a campaign titled “No Stereotypes Please” on 6 April 2016.

Karen L. Donoghue

Organized a workshop on *Gender Sensitization* in the Department in collaboration with Bridging the Gaps-Youth Camps on 6 May 2016.

Organized a two-day photo exhibition on *Student Photo-Exhibition* in the Cluster of Classrooms, NEHU, Shillong (15-16 November 2016).

Dr. Kamaljit Chirom

Organized a photo exhibition on the *Life and Works of Sir Marc Aurelstein* in

collaboration with Indira Gandhi National Centre for Arts at the Multi-Use Convention Hall, NEHU, Shillong (22-31 August 2016).

Organized a three-day film festival on MIFF in Shillong in collaboration with Mumbai International Film Festival at the Old Guest House Auditorium, NEHU (1-3 March 2017).

Attended

Dr. Kamaljit Chirom

Kamaljit Chirom presented a paper on “Narrative Construction in Wari Liba Performance” at the national conference on *Verbal Art: Exploring the Ethnography of Speaking Strategies* at NEHU, Shillong (23-24 February 2017).

Karen L. Donoghue

Presented a paper on “Social Media News as Disruptive Technology” at the *10th Convention PLANNER-2016* jointly organized by the Information and Library Network Centre, Gandhinagar, Gujarat, and NEHU, Shillong (9-11 November 2016).

Publications

Published in India

Chirom, K., Sethi, G. (2016). Folktales and early Manipuri cinema. *Communication Today*, 18(3): 95-102.

Chirom, K., Sethi, G. (2017). Shot length and narrative in Ishanou. *Media Mimansa*, 10 (3): 2-6.

Book Chapters

Chirom, K. (2016). People of Manipur. In: *Manipur Bhasha O Sahitya*. A. K. Seram (Ed.). NAGREE Publishers, Sylhet (Bangladesh), p. 77-84.

DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE

Head: Prof. Moses M. Naga
Telephone: 0364-272-3148/3142 (O)
Email: mosesmnaga@gmail.com

Faculty: 6

Designation	Name and Qualification	Specialization
Professor (1)	Moses M. Naga, MLISc & PhD (NEHU)	Application of Management Concepts and Management Principles in Libraries and Information Centres, Information Management on Centrally Sponsored Rural/Urban Development Schemes with Special Reference to North-East India, Information Literacy and Reading Habits of Students
Associate Professor (1)	Bikika Laloo, MLISc (NEHU), PhD (Gauhati)	User Studies, Collection Development, Library and Information Science Education, Professional Development Activities in Librarianship
Assistant Professors (4)	Paokholun Hangsing, MLISc (Delhi), PhD (NEHU)	Media Content Analysis, Digital Libraries, Library Consortia, LIS Education and Professional Competencies
	Jacqueline Jeane Thabah, MLISc & PhD (NEHU)	Knowledge Organisation, Research Methodology, Competency Studies of Library and Information Professionals
	Jiarlimon Khongtim, MLISc, PGDCA (NEHU)	Computer Applications, Research Methodology
	S. Ravikumar, MSc in LISc (Madras), PhD (Mizoram)	Scientometrics, Information Retrieval, Library Software

Thrust Area of Research

The thrust areas of teaching and research of the Department are: Knowledge Organisation, Information Storage and Retrieval, Information/Knowledge Management, Information Literacy, Reading Habits of Students, Tapping, Preservation and Conservation of Indigenous Knowledge of the North-East India, Users'

Needs and their Information Seeking Behaviour, Computer Applications and Applications of Information Communication Technology in Managing Libraries and Information Centres, Digital Libraries, Information Management with special reference to centrally sponsored Rural/Urban Development Schemes in North East India.

Department of Library and Information Science

Brief Statement of Academic Activities

The Department remained vibrant and active throughout the year under report. Most of its faculty and PhD scholars were academically productive in terms of attendance and paper presentations at seminars and conferences as well as publications in journals of national and international repute. The faculty have contributed towards various academic activities,

such as seminars, conferences, refresher courses, summer schools, etc.

The Department has been keeping pace with the rapid advances in Information Communication Technology and their impact on library and information profession, on the one hand, and the ever-changing and increasing needs of users, on the other. The last revision of the syllabus was made in July 2013, which is currently in the process of revision.

Students' Profile

Enrolment Capacity: MLISc – 31; PhD - Variable

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MLISc	09	20		29			28	01	29
PhD	04	03		06		01	04	03	07

Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MLISc	06	18	2	22			21	03	24
PhD	01	01	01	01			01	01	02

Students awarded PhD Degree

Name of Student	Title of Thesis	Name of Supervisor
Jacqueline Jeane Thabah	Structuring Competency Model for Library Professionals	P. Hangsing
Manoj Rana	Personality Traits and Job Satisfaction: A Study of Library Professionals of North-East India	Moses M. Naga

Placement of Students: 5

1. Batritimon Hujon, Librarian, Meribon KH Memorial College Sohiong, West Khasi Hills Meghalaya.
2. Iakibansuk Pyngrope, Librarian, Woodland Nursing Institute Laitkor, Shillong, Meghalaya.
3. Wanteikupar Kshiar, Assistant Librarian, Mawsynram Border Area College, West Khasi Hills, Meghalaya.
4. Nisha Mary Syiemiong, Librarian, St. Anthony's College Extension Byndihati Campus, Jaintia Hills, Meghalaya.
5. Sengdang R. Marak, Library Assistant, Mendipathar College, North Garo Hills, Meghalaya.

Research Fellowship

UGC NET JRF/SRF: 1

Courses Conducted

Post Graduate: MLISc

Semester I

Foundations of Library and Information Science; Knowledge Organization I (Theory); Knowledge Organization I (Practice); Information Sources and Services; Foundation of Computer Application.

Semester II

System Analysis and Design; Knowledge Organisation II (Theory); Knowledge Organisation II (Practice); Library Software Package (Theory and Practice); Library Housekeeping Operations.

Semester III

Information Retrieval; Research Methodology; Collection Development; Database Management System; Information Communication Technology.

Semester IV

Management of Library and Information Systems; Digital Libraries; E-Learning and Content Management System (Theory and Practice); Information Sources and Services (Practice).

Dissertation.

PhD Courses

Research Methodology in Library and Information Science, Advance in Knowledge Management and Organizational Studies, Advance in Library and Information Management, Trends in Libraries and Librarianship, Advances in Information System Studies, Review of Literature.

Fieldwork/Educational Tour of Students

Teacher-in-Charge: Bikika Laloo

Institutions Visited: The National Library, Central Reference Library, British Council Library, American Centre Library, Calcutta University Library and Kolkata Book Fair.

Duration of Tour: 7 days (31 January- 6 February 2017).

Purpose of Tour: To collect vital information on the activities, services and facilities provided by the libraries visited and submit a complete Study Tour Report to be evaluated by an external expert during the 2nd Semester Examination.

Seminars/Conferences/Symposia/Workshops

Organized

The Department organized a workshop on *Koha Open Source Library Software* (25-30 July 2016).

Attended

Prof. Moses M. Naga

Presented the following papers: (i) "Disruptive Innovations for Libraries: Adopt, Adapt and Evolve" at the 10th Convention PLANNER-2016 organized by the INFLIBNET Centre, Gandhi Nagar, Gujarat, in collaboration with NEHU, Shillong (9-11 November 2016), and (ii) "Information Literacy Model: A Framework for Orally Communicating Rural Publics" at the international conference on *Library and Information Services in the Knowledge Society: Innovative, Value Added Services and Best Practices* organised by the Department of Library and Information Science, Mizoram University, Aizawl (1-3 March 2017).

Department of Library and Information Science

Delivered a keynote address on “Librarianship at a Cross Road” during the two-day national seminar on *International Librarianship and Comparative Librarianship* organised by the Department of Library and Information Science, Guwahati University, Guwahati (27-28 March 2017).

Dr. Bikika Laloo

Co-chaired a session of the 10th Convention PLANNER-2016 held at NEHU (9-11 November 2016). She also delivered a lecture at the UGC-sponsored national workshop on *Digital Library: Issues, Challenges and Opportunities*, 2016, conducted by Karmashree Hiteswar Saikia College, Guwahati.

Dr. P. Hangsing

Presented a theme paper entitled “Disruptive Innovations for Libraries: Adopt, Adapt and Evolve” at the 10th Convention PLANNER-2016 organized by the INFLIBNET Centre, Gandhi Nagar, Gujarat, in collaboration with NEHU, Shillong (9-11 November 2016); and three papers at the international conference on *Library and Information Services in Knowledge Society: Innovative, Value Added Services and Best Practices* organized by the Department of Library and Information Science, Mizoram University, Aizawl (1-3 March 2017).

Publications

Published in India

Guite, F., Hangsing, P. (2016). Preferred rural development information sources of digital illiterates. *e-Library Science Research Journal*, 5(2), <http://lsrj.in/ArticleDetails.aspx?id=730>.

Hirak, M., Hazarika, J., Kumar, S. R. (2016). Use and implementation of library management

software in selected college libraries of Assam: A special reference with koha and soul. *International Research Journal of Multidisciplinary Science and Technology*, 6:31-38.

Hkawng, Z., Naga, M. M. (2016). Information literacy and reading habits of students of Kachin Theological College and Eastern Theological College of Jorhat in India: A baseline survey. *e-Library Science Research Journal*, <http://lsrj.in/ArticleDetails.aspx?id=707>.

Kharbudon, I. M., Naga, M. M. (2016). Urban poverty and development programmes: A review. *e-Library Science Research Journal*, 5(2), <http://lsrj.in/ArticleDetails.aspx?id=760>.

Lendina, Naga, M. M. (2016). Information communication technology in rural development: A literature review. *Global Journal of Multi-disciplinary Studies*, 5(10), <http://gjms.co.in/index.php/gjms2016/issue/view/80/showToc>.

Ravikumar, S., Sawian, E. (2016). Collection development policy of the library and its relevance to the syllabus: A study of St. Anthony's college. *Pearl: A Journal of Library and Information Science*, 10(3): 198-203.

Sharma, S., Ravikumar, S. (2017). Assessing the credibility and accuracy of financial newspapers stock recommendation. *International Journal of Commerce, Business And Management*, 6(2):2319-2828.

Published abroad

Astuti, P. A. A., Hangsing, P. (2016). Social media and efforts to coax young voters in

Jakarta, Indonesia. *Journal Scriptura*, 6 (1):1-13.

Nongrang, K., Laloo, B. (2016). Bibliometric study of biochemistry literature in North Eastern Hill university during 2000 to 2010. *COLLNET Journal of Scientometrics and Information Management*, 10(2):197-207.

Book Chapters/Proceedings

Astuti, P. A. A., Hangsing, P. (2017). Information literacy: Best practices on the dissemination of election information on social media to encourage the political participation of young voters in Jakarta, Indonesia. In: *International Conference Proceedings on Library and Information Services in Knowledge Society: Innovative, Value Added Services and Best Practices*. Excel India Publishers, New Delhi, p.442.

Guite, F., Hangsing, P., Laloo, B. (2017). Disruptive health information channels of rural women: A case study of Kangpokpi, Manipur. In: *International Conference Proceedings on Library and Information Services in Knowledge Society: Innovative, Value Added Services and Best Practices*. Excel India Publishers, New Delhi, p. 384.

Hangsing, P. (2016). Application of innovative services in the library. A theme paper of the 10th Convention PLANNER – 2016. *Disruptive Innovations for Libraries: Adopt, Adapt and Evolve*. INFLIBNET Centre, Gandhinagar, <http://hdl.handle.net/1944/2031>.

Laloo, B. (2016). Skills for library professionals in the digital era. In: *Digital Library: Issues, Challenges and Opportunities*. Gitika Das (Ed.). Global Publishing House, Visakhapatnam, p. 16-19.

Nongpiur, S.M.L., Hangsing, P. (2017). Indigenous knowledge of Khasi foodstuffs in Umroi village, Meghalaya. In: *International Conference Proceedings on Library and Information Services in Knowledge Society: Innovative, Value Added Services and Best Practices*. Excel India Publishers, New Delhi, p. 318.

Singh, S., Ravikumar, S. (2016). Citation concentration in aslib proceedings journal: A comparative study of 2005 and 2015 volumes, <http://hdl.handle.net/1944/2036>.

Other Activities

Dr. Jacqueline Jeane Thabab

Supervisor of Re-organisation of the Documentation Centre of State Resource Centre, Bijni Complex, NEHU, Shillong (August 2016 – March 2017).

Supervisor of organising the Library of St. Dominic Higher Secondary School, Mawkhar, Shillong (October – December 2016).

Dr. S. Ravikumar

Delivered lecture during a short-term course in SPSS on the following topics: (i) “Referencing” (ii) “Correlation” organized by UGC-HRDC, NEHU (18-23 July 2016). He also delivered lectures during a short-term course in research methodology with special reference to SPSS on: (i) “Hands on Correlation” (ii) “Hands on Regression” (iii) “Hands on ANOVA” and (iv) “Referencing” organized by UGC-HRDC, NEHU (27 June to 2 July 2016). Furthermore, he delivered a lecture on “Referencing in Academic” during the 37th Orientation Programme organized by UGC-HRDC, NEHU (8 August to 4 September 2016).

Department of Management

DEPARTMENT OF MANAGEMENT (TURA CAMPUS)

Head: Prof. J. U. Ahmed
Telephone: 03651-224566 (0)/9436316065 (M)
E-mail: jaynaluahmed@yahoo.co.in

Faculty: 10

Designations	Name and Qualifications	Specialisations
Professor (2)	G. Singaiah, MCom (Andhra), PhD (Utkal Univ),	Cross Cultural Management, Marketing and Entrepreneurship Development
	J. U. Ahmed, MCom, PhD (Assam)	Finance, Banking and Statistical Methods
Associate Professor (2)	A. Bhattacharjee, MCom, PhD (Gauhati)	Human Resource Management and Development, Economics, Rural Marketing and Entrepreneurship Development
	K.C. Biswal, MCom (BU), PhD (Berhampur Univ)	Accounting and Finance, Management Information System and E-commerce, Microfinance
Assistant Professor (6)	D. Bhagat, MBA (Assam Agri Univ), PhD (Gau Univ)	Agri-Business Management, Supply Chain Management and Quantitative Technique
	Kh. Devananda Singh, MBA (IGNOU), PhD (Manipur)	Accounting and Finance, Entrepreneurship and Agricultural Finance
	S.B.A. Mazumder, MBA (Assam)	Marketing and Finance
	S.L.S. Akoijam, MBA (Amity), PhD (Manipur Univ)	International Business and Marketing
	Thrinadha Rao Bandaru, MBA & PhD (Pondicherry Univ)	Tourism and Human Resource Management
	Bimal Deb Nath, MBA (Devi Ahilya), PhD (NEHU)	Information System and Information Technology

Thrust Areas of Research

The thrust areas of the Department are entrepreneurship development, small business management, cross-cultural management,

international business, tourism management, supply chain management, micro-finance and rural credit management, business process re-engineering, agri-business, e-commerce, corporate finance, bank finance, portfolio

School of Economics, Management and Information Sciences

management, information technology and social marketing.

Brief Statement of Academic Activities

During the period under report, the Department published two issues of its bi-annual international journal. The faculty members published books and research papers in various national and international journals and edited books. They also participated and presented papers in a number of national and international seminars and conferences. The faculty members also

organised seminars/workshop/symposiums/conferences and participated in MDP, FDP, refresher courses, and orientation programmes. The Department is instrumental in establishing the North Eastern Region Chapter of the Institute for Supply Management – ISM India, an affiliate of ISM, USA, for boosting the supply chain management education in the North-East with Dr. Deepak Bhagat as President. The Department has also published one issue of the *International Journal of Applied Management Research* with Prof. G. Singaiah as Chief Editor and Dr. Deepak Bhagat as Managing Editor.

Students' Profile

Enrolment Capacity: MBA-General – 33, MBA-Services – 10, PhD -Variable

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MBA-General	16	17	03	06	09	15	15	18	33
MBA-Services	06	03	01	04	03	01	07	02	09
PhD	04	04	01	03		04	03	05	08

Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MBA-General	27	15	01	20	12	09	31	11	42
PhD	02				02			02	02

Placement of Students: 10

- Aditya Sharma, Customer Service Officer, Axis Bank, North-East Circle.
- Manisha Tiwari, Customer Service Officer, Axis Bank, North-East Circle.
- Partha Pratim Sharma, Customer Service Officer, Axis Bank, North-East Circle.
- Punam Swargiary, Customer Service Officer, Axis Bank, North-East Circle.
- Pranjal Dahal, Assistant Sales Manager, Vodafone Spacetel Ltd, Guwahati.
- Ankita Sutradhar, Ground Staff, Indigo Airlines, East location.
- Nijwm Wary, Ground Staff, Indigo Airlines, East location.
- Worchipem, Business Developer, Pune Institute of Business Management, Guwahati.

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9. Amarjit Kaushik, Sales Manager, IFFCO TOKYO Life Insurance, Guwahati.
10. Deebyajyoti Koch, Research Assistant, Indian Institute of Entrepreneurship, Tura.

Courses Conducted

Postgraduate: MBA (General) and MBA (Service Management)

MBA (General)

The Department offers thirty-two courses for the MBA programme, out of which twenty are core courses and one project work equivalent to two courses. Besides these, ten special courses, five each from two specialisation groups are to be pursued. The dual specialisation courses are based on four functional areas of management, viz., Financial Management, Marketing Management, Human Resource Management and Agri-Business Management.

MBA (Service Management)

The Department offers thirty-two courses for MBA (Service Management), out of which twenty are core courses and one project work equivalent to two courses. Besides these, ten special courses, five from any one of the functional areas and five from any one of the sartorial areas are to be pursued. The specialisation courses are based on four functional areas of management, viz., Finance, Marketing Management, Human Resource Management and Agri-Business Management; and three sartorial areas of Management, viz., Banking and Insurance, NGO Management, and Tourism Management.

PhD Courses

Business Research Methods; Management Thoughts and Thinkers; Emerging Issues in Business.

Industrial Tour of Students

Teachers-in-Charge: Sunildro L. S. Akoijam and Thrinadha Rao Bandaru.

Places Visited: Trivandrum, Ernakulum, Bangalore and Kolkata.

Duration of Tour: 15 days (19 January to 6 February 2017).

Purpose of Visit: A long industrial visit of the second semester students (43 students) of the Department was carried out for practical industrial exposure.

Seminars/Conferences/Symposia/Workshops

Organised

The Department organised: (i) Management development programme on *Managing Organisational Change* on 5-6 April 2016 at NEHU, Tura, with Dr. Deepak Bhagat as Director and Dr. S.L.S. Akoijam as Coordinator, (ii) Annual HR Conclave on the theme of *Skilling the Unskilled - Handling the Corporate Dilemma* on 21 May 2016 with Dr. A. Bhattacharjee as Coordinator, (iii) Two-day international seminar on *E-commerce and SMEs in Developing Economics: Growth and Strategies* on 29-30 June 2016 at NEHU, Tura, with Dr. Bimal Debnath as Coordinator and Dr. T.R. Bandaru as Joint Coordinator, (iv) National seminar on *Emerging Trends and Challenges of Micro Finance in Northeast-India* on 24-25 November 2016 with Dr. K.C. Biswal as Coordinator, (v) *Management Fest-Mosaic 2016* on 4-5 November 2016 to promote industry academia interface with Dr. S.L.S. Akoijam as Coordinator, and (vi) Hosted the session on *Green Power: Engaging Business and*

Consumers to Influence Policy as part of the Northeast Green Summit 2016, organized by NEHU, Tura Campus, in collaboration with the Lalit Kala Akademi, New Delhi, and Vibgyor Media Solutions (5 November 2016). Dr. A. Bhattacharjee was the coordinator of the event.

The Department in collaboration with the Placement and Counselling Cell, NEHU, Tura, organised: (i) *Faculty Development Programme (FDP)* on 22 February to 4 March 2017 with Dr. A. Bhattacharjee as Coordinator, (ii) *Three-day Entrepreneurship Awareness Camps*, which was sponsored by EDII, North-East Region, Guwahati, on 8-29 March 2017 with Dr. A. Bhattacharjee as Coordinator. Besides, the Department in collaboration with the Placement and Counselling Cell, NEHU, Tura, and the Indian Statistical Institute, Kolkata, organised: (i) workshop on *Application of Statistics in Social Sciences and Official Data for PhD students* on 5-11 December 2016 with Dr. Abhigyan Bhattacharjee as Coordinator, (ii) workshop on *Application of Statistics in Social Sciences for Research Scholars* during March 20-24, 2017 with Dr. Abhigyan Bhattacharjee as Coordinator, and (iii) workshop on *Modern Ecological and Agricultural Practices with Statistical Methodologies and R Software* during 30-31 March 2017 with Dr. A. Bhattacharjee as Coordinator.

Attended

Dr. A. Bhattacharjee

Presented the following papers: (i) “Employability Skill and Competency of the Management Graduates for Rural Development in North-East India” at

the two-day international conference on *Rural Development* organised by the Department of Social Entrepreneurship and Corporate Social Responsibility, Xavier Institute of Development Action and Studies, Jabalpur (4-5 February 2016), (ii) “A Study on Restructuring of Skills and Competencies in E-Business” at the international seminar on *E-Commerce and SMEs in Developing Economies: Growth and Strategies* organised by the Department on 29-30 June 2016, (iii) “Business Solutions for SMEs and Start-ups: A cursory Look” at the international seminar on *E-Commerce and SMEs in Developing Economies: Growth and Strategies* organised by the Department on 29-30 June 2016, (iv) “Measuring the Effects of Job Satisfaction among Academicians: Snippets from Central Universities of North-East India” at the international conference on *Management Perspectives Transforming Business Practices for Innovation, Development and Governance* organised by Amity Business School, Amity University Rajasthan, Jaipur (1-2 September 2016), (v) “Socio-Economic Facets of Local Haat System: Glimpses of Haats in the Garo Hills Region of Meghalaya” at the 1st National Conference of North East India Commerce and Association on *Trade and Industries in North-East India: Challenges and Strategies* held at Gauhati Commerce College, Guwahati (23-24 September 2016), (vi) “Cross Border Trade Dynamics of Indo-Bangladesh through the Land Custom Stations of Meghalaya” at the international seminar on *Economic Dependence of North East India and Its Bordering Nations* organised by the Department of Economics, Assam

Department of Management (Tura Campus)

University, Silchar (8-9 November 2016), and (vii) “An Assessment on Sustainable Livelihood Promotion through Integrated Basin Development Programme, Meghalaya” at the national seminar on *Emerging Trends and Challenges of Micro Finance in North-East India* organised by the Department on 24-25 November 2016.

Dr. K. C. Biswal

Presented papers on: (i) “Make-in-India: Challenges and Opportunities with Reference to North-Eastern Region” at the 37th Orissa Commerce Conference and national seminar organised by the P.G. Department of Business Management, Fakir Mohan University, Vyasa Vihar, Odisha (12-13 February 2017), and (ii) “Status of Micro Finance in Northeast India” and “Degree of Financial Inclusion among rural Households: An Empirical Detection in Dalu Region of Meghalaya” at the national seminar on *Emerging Trends and Challenges of Micro Finance in Northeast-India* organised by the Department on 24-25 November 2016.

Dr. D. Bhagat

Presented a paper entitled “Determinants of Occupational Stress in Health Care Professionals: A Critical Review” at the national conference on *Management in Current Scenario: Trends, Issues and Challenges* organised by the Assam Institute of Management (3-4 March 2017).

Served as technical session co-chairman at the national seminar on *Potential and Prospects of Horticulture in North- Eastern Region* organised by the Department of Horticulture, NEHU, Tura (27-28 March 2017).

Dr. Kh. Devananda Singh

Presented papers on: (i) “Challenges Faced by Bamboo Based Enterprises in Dimapur District, Nagaland” during the two-day national seminar on *Entrepreneurship and Skill Based Education for Global Competitiveness* organized by the Centre for Entrepreneurship and Skill Development, Manipur University, Manipur (29-30 July 2016), (ii) “Financial Institutes and MSMEs in West Garo Hills District, Meghalaya” at the national seminar on *25 Years of Economic Reforms in India and Its Impact on North East India* organized by NE-ICSSR, Shillong (9-10 December 2016), and (iii) “Entrepreneurial Intention among the Trainees of Regional Vocational Training Institute for Women, Tura” at the national conference on *Quality Education in the Present Educational Scenario* organized by the North East Regional Institute for Education, Umiam, Meghalaya (23-24 February 2017).

Dr. Sunildro L. S. Akoijam

Presented the following papers: (i) “Destination Marketing of Tourist Spots: A Study of Garo Hills in Meghalaya, India” at the international conference on *Knowledge Transfer and Transformation: Global and Local Business for Competitiveness and Social Justice* organized by NAM and IFEAMA, Kathmandu, Nepal (27-29 March 2017), (ii) “Branding of Tourist Destinations: A Case Study of Manipur in India” at the international conference on *Business Management* organized by Faculty of Management Studies and Commerce, University of Sri Jayewardenapura, Colombo, Sri Lanka (7-8 December 2016), (iii) “A Study on Gossaigaon Brahma Sewa

Ashram and Its Contributions in Rural Development” at the national seminar on *Emerging Trends and Challenges of Micro Finance in North East India* organized by the Department on 24-25 November 2016, (iv) “Technology, Innovation and Entrepreneurship: An Exploratory Review” at the international seminar on *Business Research-Exploring Innovations in Services Sectors* organized by the Department of Commerce, SRM University, Chennai (31 August 2016), (v) “Supply Chain Performance of MSMEs in Manipur” at the national seminar on *Entrepreneurship and Skill Based Education for Global Competitiveness* by the Centre for Entrepreneurship and Skills Development, Manipur University (29-30 July 2016), (vi) “Supply Chain Management: A Case study of Selected Web Portals in Manipur” at the international seminar on *E-Commerce and SMEs in Developing Economies: Growth and Strategies* organised by the Department during 29-30 June 2016, and (vii) “Special Interest Tourism: A Case study of Manipur” at the international seminar on *Advancements in Tourism and Hospitality Marketing* held by the Department of Tourism and Hotel Management, NEHU, Shillong (17-18 May 2016).

Publications

The Department has published one issue of the *International Journal of Applied Management Research* (IJAMR; ISSN 2347-2839) with Prof. G. Singaiah as Chief Editor and Dr. Deepak Bhagat as Managing Editor. The journal is a bi-annual, peer-reviewed international journal focusing on management and allied areas.

Published in India

- Barman, M., Bhattacharjee, A. (2016). Market mechanism and functionaries of local haats: An empirical study in the Garo Hills Districts of Meghalaya. *IBMRD's Journal of Management and Research*, 5(2): 1-11.
- Bhattacharjee, A., Singh, M. (2016). An analysis of the correlates of job satisfaction predictors of central university academics in North-East India. *ANVESHA, The Journal of Management*, 9(4): 21-30.
- Biswal, K.C., Narzary, D. (2017). Entrepreneurship opportunities for the young generation in North-East India. *The International Manager-International Journal of Recent Trends in Management, Commerce and Accountancy, Economics and Allied Research*, 4: 107-127.
- Biswal, K.C., Narzary, D. (2017). Make in India challenges and opportunities with reference to north-eastern region. *International Journal of Recent Trends in Management, Commerce, Accountancy and Economics and Allied Researches*, 4(13): 82-96.
- Biswal, K.C., Sangama, T.J. (2017). Determinants of corporate saving in Indian power industry with reference to Tata power limited and reliance infrastructure limited. *International Journal of Recent Trends in Management, Commerce, Accountancy and Economics*, 4: 54-74.
- Mazumder, S. A. (2017). Remittances: A review. *PRAYAS An Internal Journal on Multidisciplinary Studies*, IV(I): 25-55.
- Mazumder, S. B. (2016). The remittance market in India. *PRAYAS An International Journal of Multidisciplinary Studies*, III(I): 54-67.

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- Singh, K.D. (2016). Determinants of microenterprise development in north eastern region of India: Evidences from Imphal West District of Manipur. *Journal of Rural Development*, 35 (2): 191-209.
- Singh, K.D. (2016). Entrepreneurial credit in select villages of West Garo Hills district, Meghalaya - An exploration. *Spectrum-An International Journal of Humanities and Social Sciences*, 4 (2):148-153.
- Singh, K.D. (2016). Stages involved in bamboo based enterprises in Dimapur District, Nagaland. *The International Journal of Research in Commerce, IT and Management*, 6 (2): 71-78.
- Singh, M., Bhattacharjee, A. (2016). Facilities availability and its effect on job satisfaction among central university academics of North-East India. *Amity Management Review: A Journal of Amity Business School*, 5(1):47-56.
- Books**
- Bhagat, D., Akoijam, S. L. S. (2016). *Agricultural Marketing: Issues and Challenges*. Biotech Books, New Delhi, ISBN: 978-81-7622-392-8.
- Biswal, K.C. (2017). *Micro Finance: Issues and Challenges in New Era*, Himalaya Publishing House Pvt Ltd, Mumbai, ISBN: 978-93-5273-318-7.
- Biswal, K.C., Chanda, M. (2017). *Degree of Financial Inclusion among Rural Households: An Empirical Detection in Dalu Region of Meghalaya*, *Micro Finance: Issues and Challenges in New Era*. HPH, Mumbai, ISBN: 978-93-5273-318-7.
- Biswal, K.C., Narzary, D. (2016). *Factors Affecting Dividend Policy: A Study on Selected Indian Automobile Companies, Service Management Theory and Practices*. HPH, Mumbai, ISBN: 978-93-5262-410-2.
- Biswal, K.C., Narzary, D. (2017). *Status of Micro Finance in North-East India: An Empirical Study*, *Micro Finance: Issues and Challenges in New Era*. HPH, Mumbai, ISBN: 978-93-5273-318-7.
- Biswal, K.C., Singaiah, G. (2016). *Service Management Theory and Practices*. Himalaya Publishing House Pvt Ltd, Mumbai, ISBN: 978-93-5262-410-2.
- Debnath, B. (2016). *E-Commerce Strategies for Small and Medium Enterprises*. Excel India Publishers, ISBN: 978-93-86256-25-6.
- Singh, K.D. (2016). *Women Entrepreneurship in India*. New Century Publications, New Delhi 110 002, ISBN: 978-81-7708-425-2.
- Book Chapters/Proceedings**
- Akoijam, L.S. S., Meitei, I. C. (2016). Branding of tourist destinations: A case study of Manipur in India. In: *Conference Proceedings of International Conference in Business Management 2016, Colombo, Sri Lanka*. ICBM 2016 and Faculty of Management Studies and Commerce, Sri Jayewardenepura University, Colombo, p. 383-398.
- Akoijam, L.S.S., Sangma, A. G. (2017). Destination marketing of tourist spots: A study of Garo Hills in Meghalaya, India. In: *Conference Proceedings of International Conference on Knowledge Transfer and Transformation 2017, Kathmandu, Nepal*. D.K. Gautam and D. Rana (Eds.). Nepalese Academy of Management, Kathmandu, Nepal, p. 549-561.
- Nath, S.D., Bhattacharjee, A. (2016). Adoption of human resource information systems

- in small and medium enterprises: An evaluative study. In: *E-Commerce Strategies for Small and Medium Enterprises*. B.D. Nath (Ed.). Excel India Publishers, New Delhi, p. 47-52.
- Sarkar, L., Debnath, B. (2016). A study on e-marketing portals for start-ups. In: *E-Commerce Strategies for Small and Medium Enterprises*. B. D. Nath (Ed.). Excel India Publishers, New Delhi, p. 26-34.
- Sharma, A., Debnath, B. (2016). Online advertising and its features on E-Commerce. In: *E-Commerce Strategies for Small and Medium Enterprises*. B.D. Nath (Ed.). Excel India Publishers, New Delhi, p. 151-162.
- Singh, K. D. (2016). Behind agricultural credit and beyond - An empirical analysis in West Garo Hills District of Meghalaya. In: *Development Perspectives of North East India: A Holistic Overview*. R. M. Pant and M. K. Shrivastava (Eds.). Akansha Publishing House, New Delhi, p. 127-142.
- Singh, K. D. (2016). Entrepreneurial credit in matrilineal society: An experience from West Garo Hills District of Meghalaya, In: *Women in Entrepreneurship*. E. N. Singh (Ed.). Ruby Press & Co., New Delhi, p. 213-229.
- Singh, K. D. (2017). Development institutions and their interventions in entrepreneurship development in Dimapur district, Nagaland, with special reference to bamboo based enterprises. In: *Exploring North East India - Past and Present*. O. Ranjit Singh (Ed.). Global Publishing House, Visakhapatnam, India, p. 48-64.

Research Projects

Ongoing: 6

Title of the Project	PI/Co-PI	Funding Agency	Rupees in lakh
An Evaluation of Micro Finance Scheme in Garo Hills of Meghalaya (A study on Self-help Groups in Three Districts of Garo Hills)	K. C. Biswal	ICSSR, New Delhi	15.00
A Comparative Study on Income and Employment Pattern in Patrilineal and Matrilineal Societies of Rural North East India: A Socio-Economic Assessment	Deepak Bhagat	ICSSR, New Delhi	8.00
Dynamics of Cross-border Trade and Assessment of the Socio-Economic Impact on the Tribal Populace of Border Regions of Meghalaya	Abhigyan Bhattacharjee	ICSSR, New Delhi	8.00
Local Market Research on Agriculture Commodities in LAMP Cluster at Garo Hills, Meghalaya	Abhigyan Bhattacharjee	MBMA/ MBDA, Govt of Meghalaya	6.05
A Diagnostic Study on Financial Structure of Tea Estates of Barak Valley of Assam	J. U. Ahmed	ICSSR, New Delhi	6.00

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Behind the Traits and Development Stages of Agripreneurship - A Study of Bamboo-Based Entrepreneurs in Imphal West and Chandel Districts, Manipur	Kh. Devananda Singh	NABARD, Mumbai	6.20
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Honours/Awards/Recognitions

Dr. T. R. Bandaru

Awarded the PhD degree from the Department of Tourism Studies, Pondicherry University, Puducherry (14 November 2016) for his thesis on “Organisational Evaluation of Andhra Pradesh Tourism Development Corporation Limited, Vishakapatnam Division.”

Other Activities

Prof. J. U. Ahmed

Chaired a technical session of the international seminar on *E-commerce and SMEs in Developing Economies: Growth and Strategies* organized by the Department of Management, NEHU, Tura (29-30 June 2016). He was also chairman of the *Faculty Development Programme* organized by the Department of Management and the Placement and Counselling Cell, NEHU, Tura (22 February to 4 March 2017).

Resource person in: (i) *Annual HR Conclave on the Theme Skilling the Unskilled - Handling the Corporate Dilemma* organized by the Department of Management (21 May 2016), (ii) Three-day *Entrepreneurship Awareness Camps* organized by the Department of Management and the Placement and Counselling Cell, NEHU, Tura (8-29 March 2017), and (iii) Workshop on *Application of Statistics in Social Sciences and Official*

Data for PhD students organized by the Department of Management and the Placement and Counselling Cell, NEHU, Tura (5-11 December 2016).

Dr. D. Bhagat

Referee for the *Journal of Business Theory and Practice* and the *International Journal of Business and Management*.

Dr. Sunildro L. S. Akoijam

Attended and completed an orientation programme organized by HRDC, JNU, New Delhi (3-28 October 2016).

Dr. T. R. Bandaru

Resource person in: (i) two sessions on “Data Coding, Entry and Analysis Using SPSS” during the *Ten-Day Research Methodology Course in Social Sciences for PhD Students* organised by the Department of Management, NEHU, Tura (24 May to 2 June 2016), and (ii) one session on “Opportunities for Agri-Tourism Entrepreneurship in Meghalaya” during the two-month training programme for *Young Graduate Students* organised by the Department of Agribusiness and Food Technology Management, NEHU, Tura (20 February 2017).

Dr. Bimal Deb Nath

Attended and completed a UGC-sponsored orientation course at UGC-HRDC, North Bengal University, Siliguri (Nov-Dec 2016).

DEPARTMENT OF TOURISM AND HOTEL MANAGEMENT

Head: Dr. Punit Gautam

Telephone: 09436565987

E-mail: pg20120301@rediffmail.com

Faculty: 4

Designation	Name and Qualification	Specialization
Associate Professor (2)	Punit Gautam, MTA, DPhil	Tour Packaging, Eco and Sustainable Tourism, Tourism Impacts
	Saurabh Kumar Dixit, MTM, PhD	Hospitality/Tourism Management, Consumer Behaviour; Gastronomic Tourism; Tourism Marketing
Assistant Professor (2)	Benjamin F. Lyngdoh, MCom, PhD	Accountancy and Finance
	Sharad Kumar Kulshreshtha, MTA, PhD	MICE Tourism, Events Management, Tourism and Service Marketing, Rural and Sustainable Tourism, Emerging Concepts of Tourism

Thrust Areas of Research

Hospitality and tourism studies in general, sustainable tourism, entrepreneurship, emerging tourism trends, tourism service marketing and tourism promotion in region through a synthesis of the socio-economic systems, culture, practices and processes in particular.

Brief Statement of Academic Activities

The Department is offering the postgraduate programme in Tourism and Travel Management (MTTM) and the PhD degree in Tourism and Hotel Management.

Students' Profile

Enrolment Capacity: MTTM - 30, PhD - Variable

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MTTM	28	27		50		05	44	11	55
PhD	04	03	01	05		01	05	02	07

Research Fellowships: 6

CSIR-UGC-NET	UGC Non-Net	National Fellowship for Higher Education	Maulana Azad Minority Fellowship
04		01	01

Department of Tourism and Hotel Management

Fieldwork/Educational tour of Students

Twenty five students went for adventure-cum-field tour to Sikkim.

Teacher-in-Charge: Punit Gautam.

Places/Institutions Visited: Chemchey, Namchi, Gangtok and Nathula Pass.

Duration of Tour: 9 days (17-26 June 2017).

Purpose of Tour: To provide exposure of established tourist destination and train them in various adventure activities.

Courses Conducted

Postgraduate: MTTM (Master of Tourism and Travel Management)

Semester I

Principles and Practices of Tourism; Principles of Management and Organizational Behaviour; Hotel Operations and Management; Tourism Geography; Business Communication; Economics for Tourism; Tourism Products of India; Human Resource Management.

Semester II

Travel Agency and Tour Operations Management; Tourism Marketing; Transport Operations and Linkages; Accommodation Management; Accounting and Finance for Tourism and Hotel Business; Research Methodology; Event Management; Legal and Regulatory Framework of Tourism.

Semester III

Tour Guiding and Escorting; Food and Beverage Management; Society and Culture of North East India; Information Technology for Tourism and Hotel Business.

Specialization

Tourism Management: Aviation Management; Tour Packaging Management.

Hotel Management: Rooms Division Management; Revenue and Yield Management.

Tourism Marketing: Tourist Behaviour; Selling and Negotiation Skills.

Tourism Entrepreneurship: Tourism and Hotel entrepreneurship; Small Business Management.

Semester IV

Tourism Products of North East India; Destination Planning and Management; Internship.

Specialization

Tourism Management: MICE Management; Sustainable Tourism.

Hotel Management: Property Planning and Management; Quality Management.

Tourism Marketing: Destination Marketing and Branding; Customer Relationship Management.

Tourism Entrepreneurship: Business Plan Development; Social Entrepreneurship.

PhD Courses

Research Methodology; Contemporary Issues in Tourism and Hospitality Management; Literature Review and Presentation.

Seminars/Conferences/Symposia/Workshops

Organized

The Department organized an international conference on *Advancements in Tourism and Marketing (ATHMCON-2016)* at New Guest House Hall, NEHU (17-18 May 2016) with S. K. Kulshreshtha as organizing Secretary.

Attended

Dr. Punit Gautam

Invited as keynote speaker at the national conference on *Challenges and Remedies in*

Tourism Marketing and Tourist Destinations of Meghalaya at the Institute of Hotel Management, Shillong (28-30 April 2017).

Dr. S. K. Dixit

Invited and delivered keynote address at the national conference on *Challenges and Remedies in Tourism Marketing and Tourist Destinations of Meghalaya* at the Institute of Hotel Management, Shillong (28-30 April 2017).

Presented a paper entitled “Reflections on Indigenous Khasi Cuisine and Gastronomic Tourism in Meghalaya, India” at the 3rd Global Tourism and Hospitality Conference (GTHC-2017) at the School of Hotel and Tourism Management, The Hong Kong Polytechnic University, Kowloon, Hong Kong (5-7 June 2017).

Dr. B. F. Lyngdoh

Presented papers entitled: (i) “Economic Prospects of Tourism in Sohra” at the workshop on *Tourism, National Service Scheme*, Sohra Government College, Sohra (22 September 2016), (ii) “Tourism-related Entrepreneurship Centric Socio-Economic Development of Meghalaya, India” at the conference on *Trade and Industries in North-East India: Challenges and Strategies* organized by the North East India Commerce and Management Association and Gauhati Commerce College, Guwahati (23–24 September 2016), and (iii) “Workforce Analytics of Best Practices of Tourism-Related Microenterprise” at the international seminar on *Human Resource Management and Development in the Digital Age*, Department of Management, NEHU, Tura (23–24 June 2017)

Dr. S. K. Kulshreshtha

Presented a paper on “M-Tourism: A Customer-Centric Technology for Tourism Industry in India” with U.N. Shukla at the international conference on *Advancements in Tourism and Marketing* organised by the Department on 17-18 May 2016.

Delivered a lecture on: (i) “Promotional Material for Tourism” at the regional seminar on *Challenges and Remedies in Tourism Marketing for Tourist Destinations of Meghalaya* organised by the Institute of Hotel Management, Shillong, and (ii) “Exploring North East - Tourism Unbound Session of NE Travel Conclave” organized by the Indian Chamber of Commerce (2 June 2017).

Publications/Research Papers

Published in India

Gautam, P. (2016). Customer satisfaction with relation to attitude and skill level in hotel industries: With reference to hotels in Ranchi and Durgapur, Visual Soft Research Development. *International Journal of Business and Management Research*, 5:265-271.

Gautam, P. (2016). Role of marketing mix in hospitality industries: An empirical analysis of Indian hotels. *Mumukshu Journal of Humanities*, 6(1):229-244.

Kulshreshtha. S.K., Kumar, A. (2016). Rural tourism and sustainability: An explorative study in Garo hills of Meghalaya. *AVAHAN: A Journal on Hospitality and Tourism*, 4(1): 114-123.

Books

Dixit, S.K., editor. (2016). *Proceedings of International Conference on Advancements*

Department of Tourism and Hotel Management

- in Tourism and Hospitality Marketing (ATHMCON- 2016) 17-18 May, 2016*. Pohti. com, Bangalore, ISBN: 9789385186523.
- Dixit, S.K., editor. (2017). *The Routledge Handbook of Consumer Behaviour in Hospitality and Tourism*. Routledge Publications, UK, ISBN: 978-1-138-96167-8.
- Book Chapters/Proceedings**
- Dixit, S.K., Mawroh, H. (2017). Reflections on indigenous Khasi cuisine and gastronomic tourism in Meghalaya, India. In: *The e-Proceedings of HONG KONG 2017: 3rd Global Tourism and Hospitality Conference. School of Hotel and Tourism Management*. The Hong Kong Polytechnic University, Hong Kong (5-7 June 2017). p. 828-839.
- Gaitree (Vanessa) Gowreesunka, Dixit, S.K. (2017). Consumer information seeking behaviour. In: *Handbook of Consumer Behaviour in Hospitality and Tourism*. S. K. Dixit (Ed.). Routledge Publications, UK, Chapter 6, p. 55- 68.
- Gautam, P. (2016). A study to compare guest's expectation and perceptions in relation to professionals practice in Indian hotels: A comparative study in Ranchi and Durgapur region. In: *Tourism, Mercantilism and Human Happiness*. A.K. Misra and Dr. Anurag Agrawal (Eds.). Mumukshu Publication, Shahjahanpur, UP, p. 816-828.
- Kulshreshtha, S.K. (2017). Promoting indigenous sustainable tourism practices through community of Mawphlang village in East Khasi Hills District of Meghalaya. In: *Integrated Approach for Sustainable Tourism: Issues and Challenges*. Parikshat Singh Manhas and Anil Gupta Suvidha Khanna (Eds.). Black Print India Inc., ISBN: 978-93-84556-55-6.
- Lyngdoh, B.F. (2016). Socio-economic impact of tourism entrepreneurship. In: *Women Entrepreneurship in India*. J.U. Ahmed and K.D. Singh (Eds.). New Century Publications, New Delhi, p. 187-197.
- Lyngdoh, B.F. (2016). Tourism services as a crucial tourism logistic. In: *Agricultural Marketing System in India: A Comparative Exploration with Manufacturing and Services Sector*. D. Bharat and S.L.S. Akoijam (Eds.). Biotech Books, New Delhi, p. 125-130.
- Raj, A., Dixit S.K. (2017). Application of total quality management in tourism sector. In: *Handbook of Consumer Behaviour in Hospitality and Tourism*. S. K. Dixit (Ed.). Routledge Publications, UK, Chapter 13, p. 128-137.
- Shukla, Kulshreshtha, S.K. (2017). Trends of global tourism and hospitality industry: Contemporary issues. In: *Promoting Tourism and Hospitality: Trends and Opportunities*. A.K. Singh and R. A. Sharma (Eds.). New Century Publications, Delhi, ISBN: 978-93-85161-49-0.
- Funds Received from Agencies Including UGC**
- UGC: Rs 9,60,600

Research Projects

Ongoing: 1

Title of Project	PI/Co-PI	Funding Agency	Rupees in lakh
Study of Service Quality, Satisfaction and the Intent to Return among Tourists Visiting the Leading Hotels of Guwahati (Assam) and Shillong (Meghalaya)	Saurabh Kumar Dixit	UGC, New Delhi	9.70

Other Activities

Dr. Benjamin Lyngdoh

Delivered lectures at: (i) 37th Orientation Programme of UGC-HRDC, NEHU, on the topic “Education for Effective Tourism” (12 August 2016), (ii) Short Term Course of UGC-HRDC, NEHU, on the topics “Team Building” and “Time Management” on 17 & 19 October 2016, respectively, (iii) 38th Orientation Programme of UGC-HRDC, NEHU, on “Personality and Presentation Skills” (24 January 2017), (iv) 39th Orientation Programme of UGC-HRDC, NEHU, on “Tourism Impacts” (22 February 2017), and (v) Summer School of UGC-HRDC, NEHU, on the topics entitled “Conflict Management” and “Leadership” on 20 & 22 June 2017, respectively. He also participated as a panelist in the panel discussion on *Meghalaya Tourism*

– *An Unorganised Sector* at St. Anthony’s College, Shillong (29 September 2016).

Dr. S. K. Kulshreshtha

Career Counsellor for Career Guidance Programme, Jawahar Navodaya Vidyalaya, (Ministry of Human Resource Development, GoI, Department of Education) Mawsynram, East Khasi Hill, Meghalaya (10 September 2016).

Delivered a lecture on “Methodologies for Sustainable Heritage Tourism” organized by the Public Relation Office, Visva Bharati University, Santiniketan, West Bengal, and also acted as a judge in the inter-college debate competition at the 4th Rev J.J.M. Nichols Roy Memorial Inter-College Debate Competition Golden Jubilee Celebration of Shillong Commerce College, Shillong (24 September 2016).

II

SCHOOL OF EDUCATION

Dean: Prof. S. M. Sungoh
Telephone: 0364-2723590/2723591(O)
Email: deaneducation.nehu@gmail.com

The School of Education consists of three departments and two Centres, namely Department of Adult and Continuing Education, Department of Education (Shillong), Department of Education (Tura), Centre for Distance Education and Centre for Science Education.

The Department of Education conducts the MA (Education) and PhD programmes both on Shillong and Tura Campuses, while the MEd programme is being conducted only in Shillong. The thrust areas of the Department are: System of Education in North East, Test Construction, Teacher Education, Educational Psychology, Environmental Education, Special Education and Inclusive Education, Value and Peace Education, Early Childhood Education and Elementary Education and Higher Education.

The Department of Adult and Continuing Education, besides various kinds of training and extension activities, offers the MA and PhD programmes in Adult and Continuing Education. The major thrust areas of this Department are on Migrant Workers, Health and Education, Women Empowerment, Literacy, Post-Literacy and Continuing Education, Study of the Aged, Guidance and Counselling, HIV/AIDS, Mass Media, Vocational Training,

Skill Development, Family Life Education, Substance Abuse, Rural Tourism, Health, Challenged/Differently able, Environment, and Social Security.

The Centre for Distance Education offers various courses through distance mode, viz., BEd (Special Education) PG Diploma in Special Education and Foundation Course on Education of Children with Disabilities. The thrust area of the Centre is to offer General, Certificate, Diploma and Degree Courses through distance mode to all those who have been deprived of formal education and are seeking higher education, irrespective of age, sex, caste or region. The Centre also offers the Degree, Diploma and Certificate Courses through distance mode relevant to the region.

The Centre for Science mainly concentrates on research activities in the area of physical, mathematical, biological and environmental sciences. The Centre has developed a new type of board called “Bamboo Plastic Board” using waste plastic as adhesive.

The faculty members of the school have contributed extensively to the advancement of knowledge in various fields of Education through their rigorous involvement in teaching, research and extension activities.

DEPARTMENT OF ADULT AND CONTINUING EDUCATION

Head: Prof. E. Jyrwa
Telephone: 0364-2723328 (O)/2726028 (R)/9436302933 (M)
E-Mail: drejyrwa@rediffmail.com

Faculty: 7

Designation	Name and Qualification	Specialization
Professor (1)	E. Jyrwa, MPhil & PhD (NEHU)	National, Regional and International Perspective of Adult Education, Philosophy of Adult Education, Rural Development
Associate Professor (2)	B. P. Sahu, MSW & PhD (Kurukshetra)	Human Resource Development, PMIR Group Work in Adult Education, Disaster Management
	J. Mawthoh, MA & PhD (NEHU)	Environmental Education Disaster Management, Research Methodology, Entrepreneurship and Skill Development
Assistant Professor (4)	W. S. Myllemngap, MA & MPhil (NEHU)	Policies and Programmes of Adult Education in India, Material Development in Vernacular Language for Non-Formal Education Intervention
	E. Syngkon, MA & PhD (NEHU)	Population Education, Adult Psychology, Women Education, Research Methodology
	J. I. Rapthap, MSW (Mumbai)	Guidance and Counselling, Inclusive Education, Disaster Management, Community Organization and Development
	N. S. Devi, MSc (NEHU)	Rural Development, Extension Education, Communication Methods in Adult Education

Thrust Areas of Research

Migrant Workers, Health and Education, Women Empowerment, Literacy, Post-Literacy and Continuing Education, Study on the Aged, Guidance and Counselling, HIV/AIDS, Mass Media, Vocational Training, Skill Development, Family Life Education, Substance Abuse, Rural Tourism, Health, Challenged/Differently able, Environment, Social Security.

Brief Statement of Academic Activities

Lifelong Learning and Skill Development has emerged as a key component in the field of Adult and Continuing Education. Keeping this in view, the Department has widened its scope to cover multidisciplinary subjects. The students admitted to this Department are drawn from various academic disciplines. The teachers in the Department make effort to utilize new techniques of teaching by supplementing lectures with slides presentation,

Department of Adult and Continuing Education

group discussions and exposure trips. The Department offers Open Courses on Extension Education, Rural Development and Human Resource Development. The Department also introduced a core paper on Disaster Management which is a relevant subject in this contemporary world. In addition, the students are taught to develop literary materials such as posters

and booklets for the neo-literates on various components of Adult Education in local dialect. These materials can be used for the benefit of the neo-literates at the grass root level. The Department is also involved in Field Outreach and Extension programmes besides Teaching and Research.

Students' Profile

Enrolment Capacity: MA– 40, PhD -Variable

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MA	11	29		38		02	33	07	40
PhD	01	01		02				02	02

Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MA	09	24		33			33		33
PhD	02	07		07		02	09		09

Students Awarded PhD Degree

Name of Student	Title of Thesis	Name of Supervisor
Evanaki Tariang	A Study on Health, Education and Psycho-Social Needs of the Aged in Jaintia Hills District, Meghalaya	Dr. N. P. Goel
Lhilhing Mate	A Study of Total Literacy Campaign in Churachandpur District of Manipur	Dr. B. P. Sahu
Iaisan Mawthoh	A Study of Health Status of Illiterate Tribal Women of West Khasi Hills District in Meghalaya	Dr. B. P. Sahu
Esther J.E. Shongwan	Counseling of Open Learners in National Institute of Open Schooling in East Khasi District of Meghalaya	Prof. E. Jyrwa
Wandashisha Myllemngap	A Study on Literacy, Functionality and Awareness of the Neo-literates in East Khasi Hills District, Meghalaya	Dr. B. P. Sahu
Joseph Phullen	Level of Awareness of HIV/AIDS among School Dropouts Adolescent in West Garo Hills District of Meghalaya	Dr. (Mrs.) E. Syngkon

School of Economics, Management and Information Sciences

Mr. Md. Abdul Owahid	A Study of Adult Education Programme in Dhubri District of Assam	Prof. E. Jyrwa
Ms. Shanchuila Shangrei	Adult Education and Social Development: A Case Study of the Tangkhul Nagas in Manipur	Prof. E. Jyrwa
Ms. Pallavi Kushwaha	Impact of Mass Media – A Study of Neo Literate Rural Women in East Khasi Hills District, Meghalaya	Dr. E. Syngkon

Placement of Students: 2

1. Miss. Aidahun Thongni was appointed School Teacher, Meghalaya.
2. Mr. Phailan Kharshiing joined as Higher Secondary School Teacher at Bellefonte Community College (BCC), Lumshiyap, Shillong, Meghalaya.

Research Fellowships: 12

1. **UGC NET JRF** – Two Research Scholars Awarded
2. **UGC NET SRF**- Three Research Scholars Awarded
3. **ICSSR** – One Research Scholar Awarded
4. **UGC-Non-NET**: Three Research Scholars Awarded

Fieldwork/Educational Tour of Students

Teacher-in-Charge: Ms. J. I. Raptap.

Places/Institutions Visited: Jyoti Sroat Inclusive School and Mary Rice Centre.

Duration of Tour (Dates and number of days): One Day (10 March 2017).

Purpose of Tour: Educational-cum-Exposure Visit.

Courses Conducted

Postgraduate: MA

Semester I

Introduction to Adult and Continuing Education; Psychology of Adults; Methods and Communication in Adult Education; Policies and Programmes of Adult Education in India; Group Work in Adult and Continuing Education.

Semester II

National and International Perspective of Adult Education; Environmental Education; Research Methodology; Inclusive Education; Extension Education.

Semester III

Guidance and Counselling; Women Education; Management of Non-Governmental Organizations; Human Resource Development; Rural Development.

Semester IV

Population and Development; Community Organization and Community Development; Entrepreneurship and Skill Development; Material Development in Vernacular Language for Non-Formal Education Intervention; Disaster Management.

PhD Courses

Research Methodology; Adult and Continuing Education Practices; Literature Review and Seminar Presentation.

Seminars/Conferences/Symposia/Workshops

Attended

Dr. B. P. Sahu

Attended and presented papers on: (i) “Crime against women in Meghalaya” at the national seminar on *Crime against Women in the State of Meghalaya* at Nongstoin College, Nongstoin (27 September 2016), (ii) “Rehabilitation of Intellectually Disabled Children in North East India” at the national seminar on *Capacity Building for Rehabilitation Professionals for Persons with Disabilities in North-East* organized by Arunachal University of studies in collaboration with RCI, New Delhi (7-9 September 2016), (iii) “Psycho-social Intervention for Rehabilitation of Intellectually Disabled Children” at the Sixty-Second All India Adult Education Conference organized by the Indian Adult Education Association, New Delhi, in collaboration with the India Literacy Board, Lucknow (4-6 December 2016), (iv) “Perspectives of NGT Ban on Coal Mining” during the two-day national seminar on *The Impact of Interim National Green Tribunal ban on Coal Mining in Meghalaya* organized by Jaintia Eastern College, Khliehriat, in collaboration with the Office of the Deputy Commissioner, East Jaintia Hills District (28-29 November 2016), and chaired a session of the seminar, (v) “Research Methodology” at the seminar on *Research Methodology* organized by Jaintia Eastern College, Khliehriat (11 June 2016), and (vi) “Rights of the Aged and Violence Against Women and Children in the State of Meghalaya” as a resource person during the three-week

workshop on *Human Rights for NSS and NYK Volunteers in the State of Meghalaya* organized by Nongstoin College, Nongstoin (21 February, 2017), and (vii) “Gender Sensitization” at the workshop on *Gender Sensitization Programme for Police Officers of Meghalaya*, DGP Office, Shillong (22 February 2017).

Chaired a session of: (i) seminar entitled “Crime against women in the State of Meghalaya” at Nongstoin College, Nongstoin (28 September 2016), and (ii) national seminar on *Capacity Building for Rehabilitation Professionals for Persons with Disabilities in North-East* conducted by Arunachal University of studies in collaboration with RCI, New Delhi (7 September 2016).

Ms. N. S. Devi

Presented a paper entitled “Panchayati Raj and Political Empowerment of Rural Women in Manipur Valley” at the national seminar on *Sustainable Development Goals: Perspectives from the Indian Villages* organised by the State Institute of Panchayat and Rural Development, Assam, and the Department of Rural Development, University of Science and Technology, Meghalaya at Khanapara (30-31 January 2017).

Publications

Published in India

Sahu, B. P. (2016). Psycho social intervention for rehabilitation of intellectually disabled children. *Indian Journal of Adult Education*, 78 (1): 30-48.

Sahu, B. P. (2016). Inclusion or exclusion: A case study of primitive Jarawa tribe of Andaman Islands – The social justice issue. *Journal of*

School of Education

the Social Sciences and Humanities, USTM, 1(1): 1-15.

Book Chapters

Sahu, B. P. (2016). Psycho social intervention among intellectually disabled children in

Shillong. In: *Psychology and Society Today (Contemporary Researches)*. S. Upadhyay, A. Kumar Jaiswal and Rashmi, S. (Eds.). Manovaigyanik Parikshan Sangthan, Varanasi, p. 14-36.

Research Projects

Ongoing: 1

Title of Project	PI/Co-PI	Funding Agency	Rupees in lakh
Crimes against Women and Children in Meghalaya: A Psycho Social Study	Dr. B. P. Sahu	Ministry of Home Affairs, Government of Meghalaya	15.97

Academic Collaborations: The Department of Adult and Continuing Education for extension and field outreach programmes have networking role with colleges and collaborations with Governmental and Non-Governmental Agencies.

Other Activities

Dr. B. P. Sahu

Delivered two lectures on: (i) "Issues of Quality in Higher Education: Defining Quality, Quality Assurance," and (ii) "Globalization and Privatization - What Does This Mean for Higher Education" as a resource person at Indira Gandhi National Open University, Shillong Regional Center (May 12-13, 2016), and (ii) "Research Methodology" at *Faculty Development Programme* organised by Shillong Commerce College, Shillong (26 August 2016).

Dr. W. Myllemngap

Attended and acted as a resource person at the *Community Camp* organised by Women's

College at Thynroit Village and delivered a lecture on "Importance of Literacy" (20 April, 2017).

Ms. J. I. Raptap

Acted as a resource person during the 39th Orientation Programme (General) and delivered two lectures on "Role of Community Disaster Management Teams in Disaster Preparedness" and "Psychological Impact of Disasters and the Need for Counselling for College and University Teachers" at UGC-HRDC, NEHU, Shillong (17 March 2017).

Ms. N. S. Devi

Completed a special summer school organised by UGC-HRDC, NEHU, Shillong (27 June to 17 July 2016).

Completed a short-term course in *Environmental Sciences* organised by UGC-HRDC, NEHU, Shillong (26 September to 1 October 2016).

Department of Education

DEPARTMENT OF EDUCATION

Head: Prof. C. Nongbri (Till 10 August 2016)
Prof. P.K. Gupta (Since 10 August 2016)
Telephone: 0364-2723340 (O)/0364-2723346(O)/09436102123 (M)
E-mail: hodedu@nehu.ac.in

Faculty: 11

Designation	Name and Qualification	Specialization
Professor (3)	P. K. Gupta, MPhil & PhD (Merrut)	Experimental Education, Research Methods and Statistics, Science and Mathematics Teaching, Economics of Education and Philosophy of Education
	S. M. Sungoh, MPhil & PhD (NEHU)	Teacher Education, Teaching at Tertiary Level, Measurement and Evaluation, Educational Psychology, Guidance and Counseling, Research Methodology
	C. Nongbri, MEd & PhD (NEHU)	Educational Management and Change, Curriculum Development and Instruction, System of Teacher Education in India and Educational System in India
Associate Professor (2)	Ibadani Syiem MA & PhD (NEHU)	Psychology of Education, Early Childhood Education, Guidance and Counseling, Environmental Education, Mental Health Education
	B. Bazeley Kharbirymbai MA (Edn) & PhD (NEHU)	Educational Technology, Philosophy of Education, Research Methods, Curriculum Development, Educational Testing and Evaluation, Higher Education, Economics of Education
Assistant Professor (6)	Yodida Bhutia, MEd (Mangalore), PhD (NEHU)	Mental Health Education, Educational Technology, Educational Psychology, Educational Testing and Evaluation and Research Methodology in Education
	Ms. Rihunlang Rymbai MSc (Chy), MEd (NEHU)	Teacher Education, Science Education, Methods of Teaching, Environmental Education
	Ashok Kumar, MPhil (Edn) & PhD (Andhra Univ)	Educational Psychology, Sociology of Education, Educational Testing

School of Education

Vandana, MEd & PhD (BHU)	Research Method in Education, Sociology of Education, Teaching Pedagogy: Languages (English, Hindi)
Euodia B. Myrthong MA (Edn) & PhD (NEHU)	Educational Psychology, Guidance and Counselling, Educational Research
Naraginti Amareswaran MEd & PhD (Sri Venkateswara)	Value Education, Educational Philosophy, Educational Technology, ICT in Education

Thrust Areas of Research

1. System of Education in North East
2. Test Construction
3. Teacher Education
4. Educational Psychology
5. Environmental Education

Brief Statement of Academic Activities

The Department of Education is offering courses for the MA, MEd and PhD programmes. The Department admitted 48 students to the MA programme and 20 to the MEd programme. At present, the MEd programme is enhanced to two-year course comprising four semesters as per the NCTE Regulations, 2014. The current intake capacity for MA is 48 and for MEd 50.

Students' Profile

Enrolment Capacity: MA– 48, MEd – 22, PhD -Variable

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MA	03	45		48			46	02	48
MEd	03	19	01	18		03	17	05	22
PhD	02	06		07		01	06	02	08

Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MA	03	42		43		02	37	08	45
PhD	02	03		04		01*	03	02	05

*International student

Students Awarded PhD Degree

Name of Student	Title of Thesis	Name of Supervisor
Ms. Kimthianbiak Neihisial	A Study of Elementary Education in Senapati and Chandel Districts of Manipur	Dr. I. Syiem
Ms. Dasuk H.K. War	A Study of Slow Learners in Relation to Their Intelligence and Aspirations	Prof. P.K. Gupta

Department of Education

Mr. Abdirahman Ali Issack	A Study of the Relationship between Education and Economic Development in Kenya	Prof. P.K. Gupta
Mr. Edelbert B. Majaw	Progress and Problems of Higher Education in Meghalaya: A Case Study of North Eastern Hill University and Its Affiliated Colleges	Prof S.M. Sungoh
Ms. Alfa Mary Kurbah	A Study of the Educational and Occupational Aspirations of Higher Secondary School Students in Relation to the Learning Environment in East Khasi Hills District of Meghalaya	Dr. B.B. Kharbiryim-bai

Placement of Students: 19

- Rilang I Maya Suchiang, Assistant Teacher, Gehovah Jirih Secondary School, Raliang, Meghalaya.
- Sandaburom Pyrtuh, Assistant Teacher, Sohmynting Secondary School, Jowai, Meghalaya.
- Markynti Sajem, Assistant Teacher (Government), Shangpung Presbyterian Lower and Upper Primary School, Shangpung, Meghalaya.
- Babetlin Kharchandy, Lecturer, Anderson Higher Secondary School, Meghalaya.
- Larisa Mawrie, Assistant Teacher, Jamir Memorial Secondary School, Umbir, Meghalaya.
- Joseph Thantinlin Haokip, Assistant Teacher, Holy Child English High School, Chandel District, Manipur.
- Vanessa Bareh, Lecturer, Rymbai Presbyterian Higher Secondary School, Rymbai, Meghalaya.
- Wanrisha Syiem, Lecturer, Pliti Syiem Memorial Higher Secondary School, Meghalaya.
- Puja Chettri, Assistant Teacher, Little Blossom School, Shillong.
- Kibomi K Zhimo, Assistant Teacher, Carmel Higher Secondary School, Dimapur, Nagaland.
- Jenti Rangtong, Lecturer, Nongtalang College, Nongtalang, Meghalaya.
- Ibakordor Tiewsoh, Assistant Teacher, Tiewdohmam Secondary School, Mawiong.
- L. Mary Paveinai Lona, Lecturer, Mount Everest College, Manipur.
- Nisha Kumari, Lecturer, Laban Presbyterian School, Shillong.
- Salvation Rynjah, lecturer, Umsherpi College, Shillong.
- Deimaya Pakma, Lecturer, KJP Synod Mihngi Higher Secondary School, Jowai, Meghalaya.
- Cleverity Khyllait, Lecturer, Ferrando Higher Secondary School, Umroi, Meghalaya.
- Mevica Lawanbiang Marbianiang, Lecturer, St. Francis College, Nongstoin, Meghalaya.
- Lalnunchami, Lecturer, St. Joseph Higher Secondary School, Mizoram.

School of Education

Research Fellowships: 22

CSIR-UGC- NET	UGC Non-Net	National Fellowship for Higher Education	Maulana Azad Minority Fellowship	ICSSR	ICCR
03	05	05	01	04	04

Fieldwork/Educational Tour of Students

Fieldwork Teacher-in-Charge: Prof. C. Nongbri, Dr. R. Rymbai, Dr. E.B. Myrthong.

Places Visited: Study tour to Thimpu for MA and MEd IV Semester Students.

Duration of Tour: 2 Jan to 8 January 2017.

Purpose of Tour: Exposure Trip to visit the educational institutions of Thimpu.

Courses Conducted

Postgraduate: MA (Education)

Semester I

Philosophy of Education; Psychology of Education; Educational Management and Change; Research Methodology in Education (I&II).

Semester II

Curriculum Development and Instruction; Sociology of Education; Educational Testing and Evaluation; Environmental Education; Mental Health Education.

Semester III

Educational Technology; Comparative Education; Early Childhood Education; Teacher Education; Special Education.

Semester IV

Laboratory Practical; Higher Education in India; Guidance and Counseling; Methods of Teaching at Tertiary Level; Economics of Education.

MEd

Semester I

Introduction to Educational Studies; Teacher Education I - Teachers and Teaching; Psychology of Learning and Development; Research Method I; Research Method II; Skill Development.

Semester II

Theory and Practice of Teaching; Educational Testing; Teacher Education II - Professional Development of Teachers; Internship in DIET's/ CTE's for Four weeks; Academic Writing and Presentation; Mental Health.

Semester III

Education in Philosophical Perspective; Elective - Development of Elementary Education; Development of Secondary and Higher Secondary Education; Optional - ICT in Education; Inclusive Education; Educational Planning, Management and Finance; Early Childhood Education; Dissertation, Historical Development of Education in India; Curriculum Development.

Semester IV

Educational in Social Perspective; Elective - Management of Elementary Education; Management of Secondary and Higher Secondary Education; Optional – Experimental Education; Guidance and Counseling; Women Education; Environmental Education; Dissertation.

PhD Courses

Research Methodology; Data Analysis and Computer Applications; Review of Related Literature.

Department of Education

Seminars/Conferences/Symposia/ Workshops

Organized

The Department organized a panel discussion on the theme - *Dr. Abul Kalam Azad's Contribution towards Education on the National Education Day* on 10 November 2016 at the Old NEHU Guest House, Shillong, which was participated by all faculty members and students of the Department with Dr. Brinda Bazeley Kharbirymbai as Organising Secretary.

Attended

Prof. P. K. Gupta

Delivered a key note address on "Education, Ethics and Excellence in India" at the ICSSR-sponsored seminar organized by K.B. Verma Sanskrit and Ancient Studies University, Nalbari, Assam (19 May 2016), and a thematic address on "Psychology of Creative Writing" at the workshop on *Style of Writing Academic Papers in Education and Social Sciences* organized by the Department of Education, NEHU, Shillong (22-23 June 2016). He also delivered an invited lecture on "Education for Environmental Consciousness" at the workshop on *Swacchatha* organized by NSS, NEHU, Shilong (24 August 2016).

Prof. S. M. Sungoh

Delivered a lecture on "Writing of Research Proposal" during the workshop on *Style of Writing Academic Papers and Referencing in Education and Social Sciences* organized by the Department of Education, Shillong (22 June 2016).

Prof. C. Nongbri

Presented papers on: (i) "Performance of Elementary Education in Meghalaya: A Review" at the seminar on *North East India Since 1947: Society, Polity and Economy in the State of Meghalaya* organised by the Department of Political Science, NEHU, at ICSSR-NERC, Shillong (March 16-17, 2017), and (ii) "Functioning of North-Eastern Hill University-A Study on the Role of Academicians" at the international seminar on *Governance of Universities: Issues and Challenges* organized by the Department of Higher and Professional Education of the National University of Educational Planning and Administration (NUEPA), New Delhi (23-24 March 2017).

Dr. I. Syiem

Presented papers on: (i) "Emotional Intelligence: Why it Matters to Tourism" at the international conference on *Advancements in Tourism and Hospitality Marketing (ATHMCON- 2016)* organised by the Department of Tourism and Hotel Management, NEHU, Shillong (May 17-18, 2016), (ii) "Values in Khasi Society: Thoughts and Current Concerns" at the international seminar on *Understanding the Tribes of Asia* organised by Synod College, Shillong, in collaboration with P.A. Sangma Foundation (3-4 November 2016), (iii) "Linguistic and Emotional Intelligence: Relevance in Language Learning" at the *South and South-East Asian Conference on Austro-Asiatic Languages* organised by the Department of Linguistics, NEHU, Shillong (22 November 2016), and (iv) "Women Welfare Development in Meghalaya" at the national conference on *North East India since 1947: Society, Polity and Economy*

School of Education

with *Special Reference to Meghalaya* organized by the Department of Political Science, NEHU at ICSSR-NERC, NEHU (16-17 March 2017).

Dr. B. B. Kharbirymbai

Presented papers titled: (i) “Impact of Globalization among the Khasis - Threat or a Blessing” at the international seminar on *Understanding the Tribes of Asia* organized by Synod College in collaboration with P.A. Sangma Foundation (3 November 2016), (ii) “Cross Cultural Communications - Effects in Today’s Society” at the national seminar on the *South and South East Asian Conference on Austro-Asiatic Languages* organized by the Department of Linguistics, NEHU, in collaboration with NEC, and others at Old Guest House, NEHU (21 November 2016), (iii) “Problems and Prospects of Higher Education in Meghalaya” at a national seminar sponsored by OKDISCD, Guwahati, organized by the Department of Political Science, NEHU, at ICSSR-NERC, NEHU (16-17 March 2017), (iv) “Quality Assurance in Indian Higher Education” at the national seminar on *Teachers as Motivators and Counselors* organized by the University of Science and Technology, Shillong (18 February 2017), and (v) “Global Warming in North East India - Issues and Concerns” at the national seminar on *Interdisciplinary: Theory and Practice COIN-2016* organized by the Department of Humanities and Social sciences at the National Institute of Technology (NIT), Shillong (July 22-23, 2016).

Dr. Yodida Bhutia

Presented jointly with G. Liarakou a paper titled “Gender and Nature in the Matrilineal

Society of Meghalaya: Searching for Eco-feminist Perspectives” at the international seminar on *Tomorrow Making: Our Present to the Future* organised by the Australian Association for Environmental Education in Adelaide, Australia (5-7 October 2016).

Presented papers on: (i) “Environmental Worldview among the Teacher Trainees of DIET, Meghalaya” at the national seminar on *Environment and Society: The Context of North East India* organised by the Department of Sociology, NEHU (14-15 March 2016), (ii) “Inclusive Education in Teacher Education Programme” at the national seminar on *Re-Thinking New Education Policy: Contextualizing the Issues of India’s North-Eastern Region* organised by the Department of Education, Tura (20-21 March 2016), and (iii) “Secondary Education in Sikkim - An Academic Aspect” at the national seminar on *Quality Education in the Present Educational Scenario* organised by NERIE, Shillong (23 -24 February 2017).

Rihunlang Rymbai

Presented papers on: (i) “Character Strength of Hope: Intensity amongst NEHU Students and Values of Hope” during the two-day national seminar on *Issues in Contemporary Society: Rights, Duties and Sustainability in Search of Harmony* organized by the Department of Philosophy and the Internal Quality Assurance Cell, Shillong College (14-15 July 2016), (ii) “Values in Action: Hope amongst the Tribal Students of North-Eastern Hill University” at the international conference on *Understanding the Tribes of Asia* organised by the Departments of Education and History, Synod College, Shillong, in

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collaboration with P. A. Sangma Foundation (3-4 November 2016), and (iii) “Attitude of Student towards MIL-Khasi” during the two-day South and South-East Asian conference on *Austro-Asiatic Languages* organised by the Department of Linguistic, NEHU, Shillong, in collaboration with NEC, Shillong, and others (21-22 November 2016).

Dr. Ashok Kumar

Presented papers entitled: (i) “Social Constructivism Approach as an Innovative Strategy in Teacher Education” during the ICSSR-sponsored national seminar on *Quality Teacher Education: Issues and Challenges of Two Year BEd Programme* organised by the Department of Education and Teacher Education, Nagaland University, Kohima (7- 8 November 2016), (ii) “Social Exclusion and Inclusion among Tribes of India: Social and Economic Perspective” at the international conference on *Understanding the Tribes of Asia* organised by the Department of Education and History, Synod College, Shillong, in collaboration with P. A. Sangma Foundation (3-4 November 2016), and (iii) “Social and Educational Exclusion of Scheduled Tribes in India: Status, Attainments and Disparities” during the ICSSR-sponsored national seminar on *Trends and Educational Opportunities of Scheduled Tribes on India* organised by the University College of Education, Adikavi Nannaya University (12-13 April, 2017).

Dr. Euodia Bahun Myrthong

Presented papers on: (1) “Internship Programme for Quality Teachers” during the ICSSR-sponsored national seminar on *Quality Teacher Education: Issues and Challenges*

of Two Year BEd Programme organised by the Department of Education and Teacher Education, Nagaland University, Kohima (7-8 November 2016).

Chaired a session on “Assessment and Evaluation of Teacher Education” at the ICSSR-sponsored national seminar on *Quality Teacher Education: Issues and Challenges of Two Year BEd Programme* organised by the Department of Education and Teacher Education, Nagaland University, Kohima (7-8 November 2016).

Dr. N. Amareswaran

Presented papers on: (i) “A Success Story of e-Governance in Higher Education” at the national seminar on *E-governance Cyber Crime, Cyber Security and Cyber Laws: Contemporary Issues and Challenges* organized by the Department of Law, NEHU, Shillong (29 April 2016), (ii) “Employability Skills for Teacher Educators” at the national seminar on *Preparing Best Teachers: Road Map for Quality in Teacher Education* at Sarada College of Education Salem, Tamil Nadu (21 May 2016), and (iii) “Right Education and Human Integration” at the international conference on *Yoga For Mental Peace and Human Integration* organized by the Department of Philosophy, SVU, Tirupati (21 June 2016).

Presented two papers at the 3rd International Integrated Research Conference held at BIRD, Comilla, Bangladesh (27-28 December 2016): (i) “Past, Present and Future of Teacher Education,” and (ii) “A Critical Analysis of the Problems of North-East People with Special Reference to the Role of Education.”

Publications

Published in India

- Amareswaran, N., Kichu, T. (2016). ICT based higher education at North-Eastern Hill University. *Research Track: An International Journal in Education (Bi-Annual)*, Special Issue: 1-5.
- Amareswaran, N., Kikon, E. (2016). ICT in teacher education with special reference to Nagaland. *Research Track: An International Journal in Education (Bi-Annual)*, Special Issue: 175-178.
- Amareswaran, N., Sudhakar, K. (2016). Employability skills of teacher educators in 21st century. *Research Demagogue*, (Spl. Issue), 3(1): 175-178.
- Bhutia, Y. (2016). Cyber-crime literacy among teacher trainees of Sikkim and Meghalaya. *EDUTRACKS*, 16(4): 25-36.
- Bhutia, Y. (2016). Educational aspiration of senior secondary school students of West Sikkim. *Education and Society*, 5(1): 117-126.
- Bhutia, Y., Liarakou, G. (2017). Environmental worldview among teacher trainees of university of Aegean, Rhodes, Greece and DIETS, Meghalaya, India. *Journal of Environmental Research and Development*, 11(03): 617-625.
- Bhutia, Y., Subba, N. (2016). Continuous and comprehensive evaluation system at elementary level in Sikkim. *Education for All*, 5(1): 224-229.
- Bhutia, Y., Subba, N. (2016). Status of elementary education in the state of Sikkim, India. *International Journal of Elementary Education*, 5(2): 17-27.
- Bhutia, Y., Sungoh, B. (2016). Anxiety and depression among secondary school students of Jaintia Hills Meghalaya. *Research Demagogue*, 3(1): 16-19.
- Bhutia, Y., Tariang, A. (2016). Mobile phone addiction among college going students in Shillong. *International Journal of Education and Psychological Research*, 5(2): 29-35.
- Gupta, P.K., Kynta, R. (2017). Construction and standardization of scientific reasoning ability test (SRAT) for Class X Students. *Recent Educational and Psychological Researches*, 04(05): 1-11.
- Gupta, P.K., Mili, R. (2016). Academic achievement in relation to academic anxiety and academic motivation of secondary school students. *Recent Educational and Psychological Researches – An International Refereed Research Journal*, 03(05): 1-7.
- Gupta, P.K., Mili, R. (2016). Relationship between academic anxiety and academic achievement. *Praachi Journal of Psycho-Cultural Dimensions*, 32(02): 114-18.
- Kemboi, J., Nongbri, C. (2016). Choice and level of use of selected teaching methods: A case of national polytechnics in Kenya. *International Journal of Education, Technology and Social Science*, V(1): 1-8.
- Kharbiryumbai, B.B. (2016). Some concerns of teacher education in North East India. *International Journal of Education and Management*, 5(1): 182-187.
- Kharbiryumbai, B.B. (2016). Quality assurance of higher education In India. *International Journal of Education and Humanities*, 5(1) 217-226.

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Kharbiryumbai, B.B. (2017). Attitude of Jaintia Hills secondary school teachers towards teaching profession. *International Journal of Education and Psychological Research*, 6(1): 26-30.

Mendoz, A., Sungoh, S.M. (2016). Music in their ears: Popular genres among the secondary school students of Guwahati. *InterViews: An Interdisciplinary Journal in Social Sciences*, 3(1):55-67.

Rymbai, R. (2016). Gratitude in relation to happiness of postgraduate students. *International Journal for Research and Development*, 4(3): 67 - 69.

Rymbai, R., Sungoh, S. M. (2016). Hope and happiness of female postgraduate students. *International Education and Research Journal*, 2(10): 44-46.

Rymbai, R., Sungoh, S. M. (2016). Life satisfaction of university science students. *International Journal of Humanities and Social Science Invention*, 5(10): 1-5.

Rymbai, R., Sungoh, S.M. (2016). Hope and happiness of female postgraduate students. *International Education and Research Journal*, 2(10): 44-46.

Shullai F., Nongbri C. (2016). A study of the relationship between school organizational climate and academic anxiety of students. *Education Times - An International Journal of Education and Humanities*, V(1): 183-188.

Shullai F., Nongbri, C. (2016). A study on school organizational climate and defence mechanisms. *Education Times - An International Journal of Education and Humanities*, V(1): 175-182.

Published Abroad

Gupta, P.K., Mili, R. (2016). Impact of academic motivation on academic achievement: A study of high school students. *European Journal of Education Studies*, 2(10): 43-50.

Books

Amareswaran, N., Nongklaw, J. (2016). *Attitude towards Environment among Secondary School Students*. Germany, Lap-Lambert Academic Publishing.

Amareswaran, N., Nongsiej, C. (2016). *Life Skills Education of Secondary School Teachers*. Germany, Lap-Lambert Academic Publishing.

Amareswaran, N., Pannerselvam, S.K. (2016). *Academic Adjustment*. New Delhi, Radical Publication.

Bhutia, Y. (2017). *Development of Education System in India*. Lakshi Publishers, New Delhi, ISBN: 978-93-82120.

Bhutia, Y., editor. (2016). *Mental Health Education*. Oversees Publications, New Delhi, ISBN: 93-8383-23-1.

Kharbiryumbai, B. B., editor. (2016). *Education in North East India*. Publisher-Eastern Book House (EBH) Publishers, Guwahati, ISBN: 978-93-83-252-831.

Kharbiryumbai, B.B. (2017). *New Intervention of ICT in Education*. Publisher-Galaxy Book Centre Shillong, ISBN:978-81-931440-6-3.

Kharbiryumbai, B.B. (2017). *Women Empowerment-Contemporary Issues*. Publisher-Galaxy Book Centre, Shillong, ISBN: 978-81-931440-6-0.

Myrthong, E.B. (2016). *Academic Pressure and Its Impact on Mental Health and Academic*

Achievement (With Special Reference to Meghalaya). Lakshi Publishers, New Delhi, ISBN: 978-93-82120-95-7.

Book Chapters/Proceedings

Amareswaran, N., Nongbri, C. (2014). Teacher education in Nagaland. In: *National Education Policy in Context*. HPH Books, Heritage Publishing House, Kohima, Chapter 14, p. 136-145

Amareswaran, N., Sungoh, S.M. (2014). The importance of education and learning. In: *National Education Policy in Context*. HPH Books, Heritage Publishing House, Kohima, p. 255-262.

Ashok Kumar, E. (2016). Defensive mechanisms. In: *Mental Health Education*. Y. Bhutia (Ed.). Overseas Press, New Delhi, Chapter 6, p. 51-60.

Ashok Kumar, E. (2017). Social and educational exclusion of Scheduled Tribes in India: Status, attainments and disparities. In: *Trends and Educational Opportunities of Scheduled Tribes in India*. R.V.S. Dora (Ed.). Roshan Pub, Vishakapatnam, p. 370-382.

Bhutia, Y. (2016). Concept of mental health. In: *Mental Health Education*. Y. Bhutia (Ed.). Overseas Press India Pvt Ltd, New Delhi, Chapter 1, p. 1-11.

Bhutia, Y. (2016). Concept of mental hygiene. In: *Mental Health Education*. Y. Bhutia (Ed.). Overseas Press India Pvt Ltd, New Delhi, Chapter 2, p. 12-24.

Bhutia, Y. (2016). Laboratory method of teaching science - Is it existent in schools of Shillong? In: *Reasserting Basic Sciences*.

M.N. Bhattacharjee, E.N. Dkhar, D.L. Buam and I.S. Warjri (Eds.). EBH Publishers, Guwahati, Chapter 5, p. 100-107.

Kharbiryumbai, B. B. (2016). Emerging issues and challenges in Indian education system and its remedies. In: *Teacher Education and Its Challenges*, by Mrs. Rita Sarmah (Ed.), Department of Education, Nonoi College, Nonoi, p. 52-57.

Kharbiryumbai, B.B. (2016). Rural women empowered through ICT. In: *Contemporary Issues of Indian Education*. P. Das (Ed.). Shanti Prakashan Panbazar, Guwahati, Chapter 31, p. 1-15.

Kharbiryumbai, B.B. (2017). Climate changes in North East India - Some observations. In: *Environmental Education in India through the Ages*. Jayanta Mete and Subhankar Ghosh (Eds.). New Delhi Publishers, New Delhi, Chapter 1, p. 271-283.

Nongbri, C. (2016). Financing infrastructural facilities in science education at the secondary level in Meghalaya In: *Reasserting Basic Sciences*. M.N. Bhattacharjee, E.N. Dkhar, D.L. Buam and I.S. Warjri (Eds.). EBH Publishers, Guwahati, Chapter 4, p. 30-36.

Nongbri, C. (2016). Stress amongst teachers and their management in mental health education. In: *Mental Health Education*. Y. Bhutia (Ed.). Overseas Press India Pvt Ltd, New Delhi, Chapter 20, p.187-194.

Syiem, I. (2016). Teacher effectiveness for the 21st century classroom. In: *Contemporary issues of Indian Education*. P. Das (Ed.). Shanti Prakashan, Guwahati, Chapter 3, p. 44-48.

Department of Education

Research Projects

New: 3

Title of Project	PI/Co-PI	Funding Agency	Rupees in lakh
Development and Problem of Secondary Education in the State of Sikkim	Dr. Yodida Bhutia	ICSSR, New Delhi	6.00
Exclusion of Scheduled Tribes from Secondary Education in Meghalaya	Dr. Ashok Kumar Erigala	ICSSR, New Delhi	8.00
A Critical Analysis of Problems of North-East People with Special Reference to the Role of Education	Dr. Amareswaran	UGC, New Delhi.	22.00

Ongoing: 2

Title of Project	PI/Co-PI	Funding Agency	Rupees in lakh
Crime against Women and Children-Socio-Psychological Study	Prof S.M. Sungoh	Government of Meghalaya	15.97
Quality of Higher Education in India- a study of Internal and External Quality Assurance at the Institutional	Dr. B.B. Kharbiryumbai	NEUPA	4.40

Completed: 1

Title of Project	PI/Co-PI	Funding Agency	Rupees in lakh
Construction of Tool for ECE	Dr. I. Syiem	UNESCO	8.80

Academic Collaborations

Dr. I. Syiem collaborated with the Centre for Early Childhood Education and Development, Ambedkar University, New Delhi, for *Early Learning and Development Standards* (May - December 2016).

Rihunlang Rymbai collaborated with the Directorate of Educational Research and Training on: (i) *A Study on the Factors Leading to Low Achievement of Secondary School Students in Science and*

Mathematics, 2017, and (ii) *A Study on the Impact of State Talent Search Examination in Mathematics and Science for Tribal Students of Meghalaya at the Close of Upper Primary Stage, 2017*.

Dr. B. B. Kharbiryumbai collaborated with NESAC and NERIE-NCERT, Umiam, Meghalaya, for an exposure study tour programme on 7 October 2016 for the MA 3rd Semester students of the Department of Education, NEHU, Shillong for *Educational Technology*.

Honours/Awards/Recognitions

Prof. S. M. Sungoh

Member of NAAC Peer Team Visit to: (i) DAV College of Teacher Education, Amritsar, Punjab (3-4 October 2016), (ii) Moga College of Teacher Education for Girls, Ghalkalan, Moga, Punjab (22-23 October 2016), (iii) Mohan Lal Memorial Institute of Education, Mudhal, Amritsar, Punjab (11-12 November 2016), and (iv) Vardhaman College, Najibabad, Uttar Pradesh (27-8 November 2017).

Prof. C. Nongbri

Member of the Joint Review Mission (JRM) for the Centrally Sponsored Scheme for Teacher Education (CSSTE) for the State of Jharkhand under the Ministry of Human Resource Development (MHRD), Government of India, New Delhi (17-24 August 2016).

Dr. Ashok Kumar

Member of the State Monitoring Committee, Information and Public Relation Department, Government of Meghalaya, on 21 March 2017.

Other Activities

Prof. P. K. Gupta

Delivered invited lectures on: (i) "Research Methodology" to the faculty members of Saint Mary's College Shillong (8 June 2016), (ii) "Effective Parenting" organized by Army's Wife Welfare Association at Army Brigade, Umiam, Shillong (16 July 2016), and (iii) "Research Process and Proposal" during the *Faculty Development Programme* at Lady Keane's College Shillong (10 December 2016).

Delivered: (i) three lectures on: (a) "Methods of Inquiry-I & II," (b) "Why Do People Behave as They Do," and (c) "Mental Health" during the 36th Orientation Programme organized by UGC-HRDC, NEHU (7-14 June 2016); (ii) three lectures on: (a) "Introduction to Research and Statistics," (b) "Hypothesis Formulation and Testing," and (c) "Psychology of Creativity and Creative Writing" at a special summer school for the professional development of teachers organized by UGC-HRDC, NEHU (29 June - 12 July 2016); (iii) four lectures on: (a) "Logical Methods of Inquiry," (b) "Scientific and Experimental Methods of Inquiry," (c) "Why Do People Behave as They Do?" and (d) "Mental Health" during the 37th Orientation Programme (General) organized by UGC-HRDC, NEHU (8 August to 4 September 2016); (iv) two lectures on: (a) "Creativity" and (b) "Mental Health" during a short-term course on soft skill organized by UGC-HRDC, NEHU (21 October 2016); (v) four lectures on: (a) "Logical Method of Inquiry," (b) "Scientific and Experimental Method of Inquiry," (c) "Why Do People Behave as They Do?" and (d) "Mental Health" during the 3rd Orientation Programme for college and university teachers organized by UGC-HRDC, NEHU (9-17 February 2016); and (vi) four lectures on: (a) "Logical Method of Inquiry," (b) "Scientific Method of Inquiry," (c) "Why Do People Behave as They Do?" and (d) "Mental Health" during the 39th Orientation Programme for College and University teachers organized by UGC-HRDC, NEHU (3-9 March 2017).

Prof. S. M. Sungoh

Delivered lectures on: (i) "Teaching at Tertiary Level" at Shillong Commerce College,

Department of Education

Shillong (August 26, 2016) and (ii) “Skill Development” during the orientation programme organized by UGC-HRDC, NEHU (17 October 2016).

Delivered: (i) two lectures on: (a) “Teaching at Tertiary Level” and (b) “Quality Enhancement in Higher Education” during the *Faculty Development Programme* at Sngap Syiem College, Mawkyrwat (25 January 2017); (ii) six lectures on the topic “Micro Teaching” during the 36th Orientation Programme for college and university teachers organized by UGC-HRDC, NEHU (24-30 Jan 2017); (iii) two lectures on: (a) “Teaching at Tertiary Level” and (b) “Stress Management and Pedagogy” at the 37th Orientation Programme for college and university teachers organized by UGC-HRDC, NEHU (27 June to 2 July 2016); (iv) two lectures on: (a) “Research Methodology with Special Reference to SPSS, Hypotheses: Types and Formation” and (b) “Methods of Inquiry” during the UGC-HRDC Orientation Programme, Shillong (18-19 July 2016); (v) six lectures on the topic “Micro Teaching” during the 38th Orientation Programme for college and university teachers organized by UGC-HRDC, NEHU (24-30 Jan 2017); and one lecture at the orientation programme on “Skill Development” (17 October 2016).

Prof. C. Nongbri

Delivered eight lectures on “Curriculum Development at the Higher Education Level” during the 36th, 37th, 38th, and 39th Orientation Programme organized by UGC-HRDC, NEHU on 28 February 2016, 31 May 2016, 31 August 2016, and 14 March 2017, respectively.

Moderator in the brain storming session on “State Specific Roadmap to Address Challenges in Teacher Education and Find Out Solutions to Deal with Them” at the regional workshop on *Teacher Education for North Eastern States* organised by the Department of School Education and Literacy, MHRD, at Shillong (7 October 2016), and acted as a panelist in a panel discussion during the National Education Day Programme organised by the Department on 10 November 2016.

Delivered a lecture as resource person on “Teacher Education Management” at the orientation workshop on *Functioning of Local Authority and Autonomous Councils Sixth Schedule of the Constitution in Management of Elementary Education in North Eastern States* organized by the Department of Educational Policy, National University of Educational Planning and Administration (NUEPA) at ICSSR Guest House, Shillong (December 7, 2016).

Dr. I. Syiem

Panelist in a panel discussion during the National Education Day Programme organised by the Department on 10 November 2016.

Dr. B. B. Kharbirymbai

Resource person in the IGNOU Extension Programme for Postgraduate Diploma on the following topics: (i) “What is Professionalism? Teaching and Professionalism” (May 9, 2016), (ii) “RUSA - Its Implications on Higher Education” (12 May 2016), (iii) “Quality of Higher Education” at IGNOU, Shillong (20 May 2016), and (iv) “Understanding Education-MES-012-Blocks-1,2,3,4” (15-27 May 2015) and for “MES-12

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Blocks-1-4 and MES-16 Blocks 1-5” at MA Education Class-Counselling Programme, IGNOU, Shillong (5,12,19, 26 March and 2 April 2016). Also, she acted as a resource person on the following topics: (i) “Training of SCERT and DIET Faculty Members of North-East States on Action Research” at NERIE-NCERT (November 15-19, 2016), (ii) “Sampling Techniques” during the UGC-sponsored 34th Orientation Programme, HRDC, NEHU (3 February 2017), (iii) “Quality Education in the Present Scenario” at a national conference organized by NERIE-NCERT, Shillong, and acted as chairperson (23 February 2017), (iv) “Teacher Education and Its Challenges in North East India” at the national conference on *Emerging Issues and Challenges in Indian Education System and Its Remedies* at Nonoi College, Nagoan (28 October 2016), (v) “Higher Education at Crossroad” during a panel discussion organized by the University of Science and Technology, Shillong (18 February 2017), and (vi) “Using Technology in Qualitative Research” and “Sampling Techniques” during a research methodology workshop organized by the Department of Education, Vishwa Bharati University, Shantiniketan (14 April 2016).

Rihunlang Rymbai

Resource person in the panel discussion on “Contribution of Maulana Abul Kalam Azad to Education” during the National Education Day Programme organised the Department on 10 November 2016.

Completed an orientation programme organised by UGC HRDC, NEHU (23 January to 19 February 2017).

Dr. Ashok Kumar

Delivered a lecture on “Constructivism in Teaching and Learning” at a summer school organized by UGC-HRDC, NEHU (26 June 2016).

Resource person in the session on “Educational Status of Scheduled Tribes on India” at the national seminar on *Trends and Educational Opportunities of Scheduled Tribes on India* organised by University College of Education, Adikavi Nannaya University (12-13 April 2017), and acted as a panelist in a panel discussion during the National Education Day Programme organised by the Department on 10 November 2016.

Completed the UGC-sponsored refresher course in *Tribal Studies* at UGC-HRDC, NEHU (9 May to 29 May 2016).

Dr. Euodia Bahun Myrthong

Completed the refresher course in *Research Methodology* at Jawaharlal Nehru University, New Delhi (13 February - 10 March 2017).

N. Amareswaran

Chaired a session of the national seminar on *Preparing Best Teachers: Road Map for Quality in Teacher Education* at Sarada College of Education, Salem, Tamil Nadu (21 May 2016).

Completed a refresher course in *Social Sciences* at UGC-HRDC, SVU, Tirupati, from 30 May to 18 June 2016.

DEPARTMENT OF EDUCATION (TURA CAMPUS)

Head: Dr. (Mrs.) Nikme S. C. Momin

Telephone: 09436315571

Email Id.: edntcnehu@gmail.com

Faculty: 4

Designation	Name and Qualification	Specialization
Associate Professor (2)	Nikme S.C. Momin, MA & PhD (NEHU)	Educational Psychology, Teacher Education and Environmental Education
	B.C. Das, MPhil (DAV), PhD (BHU)	Educational Technology, Teacher Education, Research Methodology
Assistant Professor (2)	S.C. Subudhi, MPhil & PhD (Kurukshetra)	Research Methodology and Statistics, Special Education
	J.V. Madhusudan, MPhil & PhD (Gulbarga)	Sociology of Education, Early Childhood Education and Higher Education in India

Thrust Areas of Research

Educational Psychology, Educational Management and Change, Curriculum Development and Instruction, Value and Peace Education, Environmental Education, Teacher Education and Methods of Teaching, Special Education and Inclusive Education, Early Childhood Education and Elementary Education, Higher Education and Comparative Education.

Brief Statement of Academic Activities

The Department of Education, NEHU, Tura Campus, was established in August 2001. Since

then, it has been offering the two years MA and PhD Programmes in Education. Besides regular teaching and research work, the Department has conducted course seminars in which students present papers on various topics.

The Department is also engaged in research project works funded by UGC and ICSSR, New Delhi, and ICSSR, NEHU-Shillong. The Department has a well-established Psychological Laboratory with adequate number of psychological tests and equipment where students conduct tests and experiment as part of their course work.

School of Education

Students' Profile

Enrolment Capacity: MA-30, PhD -Variable

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MA	02	28		28		02	28	02	30
PhD	01	02		03			03		03

Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MA	07	21		25		03	27	01	28
PhD		01		01			01		01

Students Awarded PhD Degree

Name of Student	Title of Thesis	Name of Supervisor
Ms. Savitri Koch	Influence of Socio-Economic Status and Achievement Motivation on Concept Development in Science Subject of Hearing Impaired Children of Meghalaya	Dr. S.C. Subudhi

Educational Tour of Students

Places/institutions Visited: Hyderabad, Telengana and Vishakapatnam, Andhra Pradesh.

Duration of Tour: 14 days (9 January 2017 to 20 January 2017).

Purpose of Tour: To visit Educational Institutes and Universities, Museum, Places of Historical, Economical, Aesthetical, Cultural and Political as well as Literary importance and to observe and learn about the socio-economic cultural heritage and progression of the country in relation to Education, Modernization and Advancement in Hyderabad, Telengana and Vishakapatnam, Andhra Pradesh.

Courses Conducted

Postgraduate: MA

Semester I

Philosophy of Education; Psychology of

Education; Educational Management and Change, and Research Methodology in Education (I & II).

Semester II

Curriculum Development and Instruction; Sociology of Education; Educational Testing and Evaluation; Environmental Education and Mental Health Education.

Semester III

Educational Technology; Comparative Education, Early Childhood Education; Teacher Education; Education for the Gifted and the Creative and Special Education.

Semester IV

Laboratory Practical, Higher Education in India; Guidance and Counseling; Education for the Physically and the Cognitively Challenged; Methods of Teaching at Tertiary Level and Economics of Education.

Department of Education (Tura Campus)

PhD Courses

Research Methodology; Data Analysis and Computer Application; Review of Related Literature.

Seminars/Conferences/Symposia/Workshops

Attended

Dr. Nikme S. C. Momin

Presented papers entitled: (i) “Developing Thinking Strategy for University Students: An Imperative attempt for Higher Education” at the national seminar on *Quality Enhancement in Higher Education in North-East India: Challenges and Opportunities* organized by IQAC, Government Degree College, Dharmanagar, Tripura (25-26 February 2017), (ii) “Career Attitude and Competence of Female Science Students in Meghalaya” during the UGC-sponsored national seminar on *Women Education in India Through the Ages* organised by the Department of History, Mankachar College, in collaboration with the Women Cell, Mankachar College, Mankachar (17-18 May 2016), and (iii) “Possibilities of Quality Enhancement in Higher Education by Intensive Development of Reading Comprehension” at the national seminar on *Quality Enhancement in Higher Education in North-East India: Challenges and Opportunities* organized by IQAC, Government Degree College, Dharmanagar, Tripura (25-26 February 2017).

Dr. S. C. Subudhi

Presented a paper entitled “Digital India and Its Impact in Teacher Education”

at the national seminar on *Digital India Programme and Its Impact on Tribal Culture and Education with Special Reference to North-East India* by the Department of Education, Mizoram University, Mizoram (17-18 March 2017).

Publications

Published in India

- Momin, N.S.C., Chetry, G. (2016). Influence of gender and locale on the career maturity of students in degree colleges. *International Journal of Informative and Futuristic Research*, 3(10): 3910-3918.
- Momin, N.S.C., Chetry, G. (2016). Self-knowledge in relation to career choice of students in stand-alone institutions. *International Journal of Advanced Research*, 4(7):1279-1283.
- Momin, N.S.C., Marak, R. N. (2016). Problem behaviours of adolescents of secondary schools: A review. *International Journal of Informative and Futuristic Research*, 3(7): 2966-2975.
- Momin, N.S.C., Tirkey, A. S. (2016). Identification of environmental stress amongst the secondary school students of Garo Hills, Meghalaya. *International Journal of Informative and Futuristic Research*, 3(5):1607-1616.
- Subudhi, S. C. (2016). Accountability of the teachers to assess the students in secondary schools of Meghalaya. *Anweshan: Journal of Education*, VI (1):72-79.

School of Education

Research Projects

Ongoing: 3

Title of Project	PI/Co-PI	Funding Agency	Rupees in lakh
Study of Domestic Violence in Relation to Demographic Variables of Rural Women in Meghalaya	S.C. Subudhi (2017)	ICSSR, New Delhi	8.00
Socio-Cultural Significance of Customary Laws of Garos in Meghalaya	J. V. Madhusudan (2016)	NSC Secretariat, New Delhi	5.00
Effect of Teaching Strategies on Class Room Curriculum Transaction in Science Subject of Class V Students of North-Garo Hills Districts of Meghalaya	S.C. Subudhi (Consultant)	SSA State Govt	4.50

Completed: 2

Title of Project	PI/Co-PI	Funding Agency	Rupees in lakh
Field Interaction on Innovative Programmes for In-Service Teachers Training Programmes of DIET, Resubelpara	S.C. Subudhi (Consultant 2016)	SSA, Meghalaya	2.45
Study of Competencies in Organization of Co-Curricular Activities among Elementary School Teachers of West Garo Hills District of Meghalaya	S.C. Subudhi (2016)	ICSSR-NERC, Shillong	1.00

Other Activities

Dr. Nikme S. C. Momin

Delivered a keynote address at the national seminar on *Quality Enhancement in Higher Education in North-East India: Challenges and Opportunities* organized by IQAC, Government Degree College, Dharmanagar, Tripura (25-26 February 2017).

Dr. S. C. Subudhi

Delivered six lectures on “Research Methodology” as a resource person during

the three-week workshop on *Human Rights for NSS and NYK Volunteers* at Nongstoin College, West Khasi Hills, Meghalaya, organized by Rajiv Gandhi National Institute of Youth Development and Nongstoin College (13-14 February 2017).

Dr. J. V. Madhusudan

Delivered one lecture on “Qualitative Research” during the 36th Orientation Programme organized by UGC-HRDC, NEHU, Shillong (15 June 2016).

CENTRE FOR DISTANCE EDUCATION

Head: Prof. R. N. Rai
Telephone: 0364-2226822/2228705(O)/9436303111 (M)
E-mail: rnrai1957@yahoo.co.in

Faculty: 2

Designation	Name and Qualification	Specialization
Professor	R. N. Rai, MA, PhD	Psychological Testing and Social Psychology of Aging
Assistant Professor	R. C. Pandey, MA, PhD	Experimental Psychology and Statistics

Thrust Areas of Research

The thrust area of the Centre is to offer General, Certificate, Diploma and Degree Courses in distance mode to all those who have for some reasons, or other, been deprived of formal education and are seeking higher education irrespective of age or region. The Centre offers Degree, Diploma and Certificate Courses through distance mode relevant to the region.

Brief Statement of Academic Activities

The Centre for Distance Education (CDE) has been selected as the only nodal agency of the Rehabilitation Council of India (RCI), New Delhi, to spread the teaching and learning on

disability areas in the entire North-Eastern Region through the distance mode. In the disability areas, the Centre started the BEd Special Education (BEd-SEDE) in 2007 and the Foundation Course on Education of Children with Disability (FC-SEDE) in 2010. The programme coordinators and counselors have been exposed to new techniques of distance mode of education through orientation programmes.

The Centre is hosting the IGNOU Study Centre, which offers the Master's and Bachelor's Degrees, Diploma and Certificate Programmes to students of different categories. More than 1200 distance learners are enrolled under this Study Centre.

Students' Profile

Enrolment Capacity: BEd-SEDE- 120 PGPD-SEDE - 60, FC-SEDE - 240

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
FC-SEDE	75	108		175	03	05	71	112	183

Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
BEd-SEDE	35	64	06	40	16	37	61	38	99
FC-SEDE	26	41		65	01	01	41	16	67

Placement of Students

Successful students of Disability Programmes are placed under SSA and special schools of the North-East Region and all over the country. The students have also joined various NGOs to cater for the needs of the challenged population, which is a sizable number in the North-Eastern Region.

Courses Conducted

Foundation Course on Education of Children with Disabilities (FC-SEDE)

Developing Broad Positive Perception of Children with Disabilities and Intervention Measures; Understanding Education for the Children with Disabilities; Understanding of Early Childhood Development and Intervention of Children with Disabilities; Development of Adaptive Skills, Assistive Devices and Special Therapies for Children with Disabilities; Basic Training for Teaching Children with Special Needs.

BEd-Special Education (BEd-SEDE)

BEd-SEDE 1st Year

Theory: Education in Emerging Indian Society; Educational Psychology; Introduction to Disability; Teaching of English/Hindi/Regional Language; Introduction to Education of Visually Impaired Children/Identification and Assessment of Persons with Mental Retardation/Foundation of Education for the Hearing Impaired.

Practical: Core Training in Teaching Skill; Psychology Practical; Basic Computer Operation; Adaptive Skills, Aids and Appliances; Training in Visual Impairment, Mental Retardation and Hearing Impairment; Teaching Practice in English/Hindi/Regional Language; Teaching Practice in Inclusive School.

BEd-SEDE 2nd Year

Theory: Educational Planning and Management, Curriculum Designing and Research; Teaching

of Science/Teaching of Mathematics/Teaching of Social Studies; Educational Perspective of Visual Impairment; Instructional Methods; Mental Retardation: Its Multidisciplinary Aspects; Curriculum and Teaching Strategies; Aural and Oral Rehabilitation of the Hearing Impaired; Methodology of Teaching Language and other Subjects to Hearing Impaired.

Practical: Work Experience/Art Education; Co-Curricular and Extracurricular Activities; Project Work in Visual Impairment; Training on Equipment Related to Visual Impairment; Project Work in Mental Retardation; Training on Equipment Related to Mental Retardation; Project work in Hearing Impairment; Training on Equipment Related to Hearing Impairment.

Postgraduate Professional Diploma in Special Education: PGPD-SEDE

Introduction to Disabilities

Three Specialized Theory Courses in any one optional Disability Area: Visual Impairment; Mental Retardation; Hearing Impairment.

Practical Courses in any one opted Disability Area: Visual Impairment; Mental Retardation; Hearing Impairment.

Seminars/Conferences/Symposia/Workshops

Attended

Prof. R. N. Rai

Chaired a scientific session of: (i) International Conference of the Indian Academy of Applied Psychology (IAAP) on *Psychology for Achieving Human Excellence* organised by the Department of Psychology, Jhana Bharathi, Bangalore University, Bengaluru (6-8 May 2016), (ii) 3rd International Conference of Indian School of Psychology Association on *Promoting Mental*

Centre for Distance Education

Health among Teachers organised by the Department of Applied Psychology, Pondicherry University (13-15 October 2016), and (iii) International Conference of the Indian Academic of Applied Psychology on Psychology for Building Global Communities on *Social Support and Health Promotion: A Social Psychological Perspective* organized by the Department of Psychology, University of Rajasthan, Jaipur (23-25 February 2017).

Presented papers on: (i) “Proposed of School Psychology in the North-East India” during a one-day symposium organized by the Psychology Research Unit, Indian Statistical Institute, Kolkata (30 May 2016), and (ii) “Psychological Intervention among Intellectually Disabled Children in Shillong” during the ICSSR-sponsored national conference on *Psychology and Society Today: Contemporary Issues and Interventions* organized by the Department of Psychology, Mahatma Gandhi Kashi

Vidyapith, Varanasi (26-27 November 2016).

Publications

Book Chapters/Proceedings

Rai, R. N. (2016). Psycho-social intervention among intellectually disabled children in Shillong. In: *Psychology and Society Today Contemporary Researches*. Manovaigyanik Parikshan Sanstha, Varanasi, p.14-36.

Academic Collaborations

The Centre is conducting the BEd-SEDE, PGPD-SEDE, and FC-SEDE courses in collaboration with the Rehabilitation Council of India, New Delhi.

Other Activities

Prof. R. N. Rai

Delivered lectures at NEIGRIMS for BSC Nursing 1st year students (July 2016 to February 2017).

CENTRE FOR SCIENCE EDUCATION

Head: Prof. M. S. Bisht
Telephone: 0364-272-2953/0364-272 2951
E-mail:

Faculty: 3

Designation	Name and Qualification	Specialization
Professor (3)	Debashis Bhattacharjee, PhD (Warsaw)	Number Theory (Arithmetical Functions)
	P. K. Patra, PhD (NEHU)	High Energy Physics/Nanophysics
	M. S. Bisht, PhD (Delhi Univ)	Biological and Environmental Sciences

Thrust Areas of Research

To develop the scientific temper in the area of mathematics, physics, biology, environment and other science and technology areas among the students and community at large. Conduct of research and spread of knowledge in the field of science education, environmental education and sustainable use of natural resources for the socio-economic development of the North-Eastern region.

Brief Statement of Academic Activities

The Centre for Science Education is a Research Centre and involved in research activities in the area of physical, mathematical, biological and environmental sciences. Research is being conducted in the development of novel methods of teaching for the development of skills. Research is also being conducted in the area of sustainable use of natural resources like bamboo, which is a renewable natural resource and abundantly available in North-East India. The Centre is also developing various ways and means of reuse and recycling of waste. The Centre has developed a new

type of board called “Bamboo Plastic Board” using waste plastic as adhesive. This board is further being used for making lab furniture. As for research activities, faculty members have research projects from different funding agencies.

Seminars/Conferences/Symposia/Workshops

Attended

Prof. P. K. Patra

Delivered invited lectures on: (i) “Nonlocal Continuum Models for Nanotubes” at the CMDAYS-2016 National Conference held at the Department of Physics, Mizoram University (August 29-31, 2016), and (ii) “Nanoscale Effects in Carbon Nanotubes” at the national conference on *Recent Advances in Nanoscience and Nanotechnology (NCRANNT-2016)* held at the Department of Nanotechnology, School of Technology (September 8-9, 2016).

Chaired a technical session of CMDAYS-2016 national conference held at the Department

of Physics, Mizoram University (August 29-31, 2016).

Prof. M. S. Bisht

Delivered an invited talk on “Bamboo - A Source of Health Food and Nutrition” during the two-day state level workshop on *Business Opportunities in Food Processing, Packaging and Tourism* on March 27-28, 2017.

Publications

Published in India

Bajwa, H. K., Santosh O., Nirmala, C., Koul A., Bisht, M. S. (2016). Spectral analysis of fresh and processed shoots of an edible bamboo *Dendrocalamus hamiltonii* (Nees & Arn.). *Journal of Pharmacognosy and Phytochemistry*, 5(5): 342-350.

Saini, N., Rawat, K., Bisht M. S., Nirmala, C. (2017). Qualitative and quantitative mineral element variances in shoots of two bamboo species after processing and storage evaluated by wavelength dispersion X-ray fluorescence spectrometry. *International Journal of Innovative Research in Science, Engineering and Technology*, 6(5): 8262-8270.

Thounaojam, P., Bisht, M. S., Nirmala, C. (2017). Effect of processing on nutritional and phytochemical contents in shoots of an edible bamboo *Dendrocalamus latiflorus* Munro. *International Journal of Agricultural Science*, 8: 89-97.

Published Abroad

Patra, P. K. (2016). Bending analysis of carbon nanotubes using nonlocal continuum models. *Journal of Physics Conf. Series*, 765, 012006, <http://iopscience.iop.org/article/10.1088/1742-6596/765/1/012006/meta>.

Rai, D. P., Chhetri, S., Shankar, A., Abeer, E.A., Patra, P. K., Thapa, R.K. (2016). Electronic and piezoelectric properties of half-Heusler compound: A first principle study. *Journal of Physics: Conf. Series*, 765, 012006, <http://iopscience.iop.org/article/10.1088/1742-6596/765/1/012005>.

Rai, D. P., Chhetri, S., Shankar, A., Patra, P. K., Thapa, R.K. (2016). A comparative study of 1D monatomic Fe-chain and 3D Fe-bulk within the density functional theory (DFT). *Nanoscience and Nanoengineering*, 4 (3): 53-57.

Proceedings

Rawat, K., Nirmala, C., Bisht, M. S. (2016). Long-term preservation of edible shoots of *Dendrocalamus giganteus* Munro by lyophilisation and evaluation of its nutritive and phytochemical components. In: *Proceedings of International Conference on Development of Economics through Innovation and Sustainable Growth: Vision*. Pusa, New Delhi.

Santosh, O., Bajwa, H. K., Bisht, M. S., Nirmala, C. (2016). Bamboo shoots for food fortification: Analysis of nutrients and bioactive compounds in juvenile shoots of two bamboo species. In: *Proceedings of International Conference on Development of Economics through Innovation and Sustainable Growth: Vision*. Pusa, New Delhi.

Funds Received from Agencies including NEHU/UGC

NEHU/UGC	Rs. 75, 000
Projects	Rs. 2,10,000
Total	Rs. 2,85,000

School of Education

Research Projects

Ongoing: 1

Title of Project	PI/Co-PI	Funding Agency	Rupees in lakh
Bamboo Shoot as a Functional Food and Nutraceutical: Extraction of Bioactive Compounds from Juvenile Shoots for Commercial Exploitation and Socio-Economic Development of the Region	Prof. M. S. Bisht (Co-PI)	Department of Biotechnology (DBT)	14.38

Other Activities

Prof. M. S. Bisht

Delivered invited lectures on: (i) “Bamboo: From Ecology to Entrepreneur” at Shillong Polytechnic on August 22-29 and September 6, 2016, (ii) “Research on Our Natural Resources for the Socio-Economic Development of North-East India” on 23 May 2016 and “Higher Education in India: Aims and Reality” on July 12, 2016 at UGC-HRDC NEHU. He also chaired an

Inter-College Quiz Competition on June 5, 2016 as Chief Guest at Lady Keane College on the World Environment Day.

Prof. D. Bhattacharjee

Took the MSc 1st and 4th semester courses (Application of Mathematics in Environmental Studies and Operations Research) in the Department of Mathematics, NEHU, Shillong, as guest faculty during August-December 2016 and during February to July 2017.

III

SCHOOL OF HUMANITIES

Dean: Prof. B. K. Agarwala
Telephone Nos: 0364-2723551(O)/ 9436111478 (M)
E-mail ID: binodkagarwala@gmail.com

The School of Humanities has five departments on Shillong Campus, viz., English, Philosophy, Khasi, Linguistics and Hindi, and two Departments on Tura Campus, i.e., English and Garo. All departments conducted the MA and PhD programmes during 2016-17. Some departments like Khasi, Linguistics and Hindi also conducted the MPhil programme during the year. Faculty members of the School were actively involved in teaching, guiding research and other academic activities. Each department has its own identified thrust areas of research. Many faculty members of

the School have produced a large number of research papers in professional journals and contributed chapters to a number of books. They also have edited and written books and presented papers in seminars and conferences. A number of faculty members have been invited as resource persons as well as to chair sessions at seminar, conferences, workshops and refresher courses within and outside NEHU. Some departments also organized study tours for students taking them to various places in the country and organized seminars. The School has made progress in diverse research fields.

DEPARTMENT OF ENGLISH

Head: Prof. Sukalpa Bhattacharjee
Telephone: 0364-2723503(O)/9436703957 (M)
E-mail: bsukalpa@hotmail.com

Faculty: 10

Designation	Name and Qualification	Specialization
Professor (6)	Esther Syiem, MPhil, PhD	American Literature, Modern Fiction, Oral/Folk Literature, Writings in English from North East India
	Moon Moon Mazumdar, PhD, DDE	Shakespeare Studies, Modern British Literature, Colonial and Postcolonial Literature and Tagore Studies
	Sukalpa Bhattacharjee, MPhil, PhD	Critical Theory, Postcolonial Literatures and Women's Studies
	Mala Renganathan, MPhil, PhD	Drama/Theatre (American & Indian), Terror Literature, Indian Fiction
	Utpala G. Sewa, MPhil, PhD	British Literature, Diaspora, North-East Writings in English
	Jyotirmoy Prodhani, PhD	Theatre, Ethnic Studies, Translations, North East
Associate Professor (4)	Nobonita Ganguly, MA	Modernist Fiction, Women's Studies, Dalit Studies
	Nola Syiem, MPhil	British Drama 16 th -17 th Century
	Kynpham Sing Nongkynrih, PhD	Poetry - Northeast Poetry - World Poetry in English Translation
	Ngangom Rabindra Singh, MA	Indian Literature in English, Modern Poetry, North East Poetry, Translations, World Literature in Translation
Assistant Professor (4)	Lang Kupa K. War, MA	American Literature, Post-Colonial Literature, Visual Cultural and Visual Representation
	Suranjana Choudhury, MPhil, PhD	Women Studies, Partition Writings, Popular Culture Studies, South Asian Literatures
	Rimi Nath, PhD	Indian Writing in English and South Asian Literature, Migration and Diaspora Studies
	Somjyoti Mridha, MPhil	Indian English Literature (Literature from Kashmir)

Department of English

Thrust Areas of Research

The thrust areas of research are New Literatures in English particularly South Asian Diasporic Fiction in English; Literature in English and in Translation from North-East India; Comparative Literature constituting various Literatures in Translation; Theories of Gender and Culture Studies, Ethnic and Cultural Studies and Theatre with special focus on the Theatre Traditions of Europe, America and India in general and North East India in particular.

Brief Statement of Academic Activities

The Department offers the MA and PhD programmes. Faculty members of the Department are actively engaged in teaching and research relating to the thrust areas. Faculty members of the Department have contributed 24 publications including 3 books and those published in journals and edited volumes. Forty-two students got their MA degree, and three students completed their PhD degree. Dr. Binayak Dutta visited the Department and gave a lecture to the PhD students on *Colonial History and Literature Interface* on May 17, 2016. Prof.

Subir Dhar, Visiting Fellow in the Department, delivered a special lecture on 5 November 2016 in the Cluster Classroom.

The students of the Department published a Department magazine titled *Dimensions* in July 2016. The Department organised a film screening on 3 June 2016 in the Lecture Room of the UGC-HRDC. The Department, in collaboration with the National School of Drama Theatre Initiative, organised an interactive play/staged on a theatre performance of the play “The Gift” directed by Manish Saini and Prof. Tripurari Sharma as Writer at the Old NEHU Guest House (4 October 2016). The Department also organised a meeting and interaction between the Royal Princess of Thailand and the faculty of the School of Humanities at the Old Guest House on 25 November 2016. In addition, the Department organised a two-day workshop on *Translating the Oral Resources of Some Oral Communities in North-East India* on 24 & 25 February 2017 and a national seminar on *Re-Interpretation of the Past: Discourse of Cultural Identity in South Asia* on 17 & 18 March 2016.

Students’ Profile

Enrolment Capacity: MA – 53, PhD -Variable

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MA	11	42		49		04	32	21	53
PhD	11	22		22		11	18	15	33
Post-Doctoral	01			01				01	01

Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MA	10	32		38		04	26	16	42
PhD		03		02		01	02	01	03

School of Humanities

Students Awarded PhD Degree

Name of Student	Title of Thesis	Name of Supervisor
Sunanda Bhattacharya	Articulating Conflict: A Study of Four Novels and Two Short Fiction (The English Patient 1992, Snow 2005, To Kill a Mocking Bird 1960, The Famished Road 1991, The Shadow of Kamakhya 2001, These Hills Called Home 2006	Prof. E. Syiem
Risahun War Thangkhiew	Locating Conflict: A Study of the Poetry of Sylvia Plath and Margaret Walker	Prof. E. Syiem
Daphinda Fancon War	A Space of One's Own: A Select Study of Sandra Cisneros's Fiction, Short Fiction and Poetry	Dr. K. S. Nongkynrih

Research Fellowships: 13

CSIR-UGC-NET	UGC Non-Net	National fellowship for Higher Education	UGC-post doctoral fellowship for SC/ST
04	07	01	01

Fieldwork/Educational Tour of Students

Teacher-in-Charge: Ms. N. Ganguly.

Places/Institutions Visited: Gauhati-Kolkata-Goa-Mumbai.

Duration of Tour: 14 days (4 January 2017 to 17 January 2017).

Purpose of Tour: The Department undertook a Study Tour to Mumbai to expose the students to life and experiences outside their University.

Courses Conducted

Postgraduate: MA

Semester I

Poetry I; Fiction I; Drama I; Literary Theory and Criticism I; American Literature I.

Semester II

Poetry II; Fiction II, Drama II; Literary Theory and Criticism II; Commonwealth Literature

(Option A); World Literature in Translation (Option B).

Semester III

Poetry III; Shakespeare I; Literary Theory and Criticism III; American Literature II (Option A); Modern Indian Drama (Option B); Indian Fiction in Translation (Option A); Women's Writing (Option B).

Semester IV

Fiction III; Drama III; Shakespeare II; Literary Theory and Criticism IV; Environment and Indian Writing in English.

MPhil/PhD Courses

Research Methodology (4 Credits); Research Writing and Presentation (4 Credits); Option D - The Literature of North-East India (4 Credits); Option G - India in Twentieth Century Narratives: English Writings and Translations (4 Credits).

Seminars/Conferences/Symposia/ Workshops

Organized

Prof. Esther Syiem

Organised a two-day workshop on *Translating the Oral Resources of Some Oral Communities in North-East India* on 24 & 25 February 2017 in collaboration with SHABDANA, Centre for Translation, Sahitya Akademi, Bangalore, ICSSR-NERC, and the Khasi Department NEHU, Shillong.

Prof. Moon Moon Mazumdar

Organised a talk on *Literature and Identity Construction* delivered by Ms. Bijoya Sawian on 8 June 2016 at ICSSR Lecture Hall, NEHU, and a special lecture on *Shakespeare and Magic* delivered by Prof. Subir Dhar at the Department on 5 November 2016.

Prof. Jyotirmoy Prodhani

Convener of the national seminar on *Re-Interpretation of the Past: Discourse of Cultural Identity in South Asia* at the Department on 17 & 18 March 2016.

Attended

Prof. Esther Syiem

Delivered a lecture on “Recovering the Oral Histories of North East India” at a plenary session of the two-day national seminar on *Exploring the Theory and Praxis of Cultural Poetics* organised on 23 August 2016 by Kiang Nangbah Government College, Jowai.

Prof. Moon Moon Mazumdar

Presented invited papers entitled: (i) “Social Diversities and Challenges to Hierarchies

in Adaptations of Macbeth from India’s Northeast” at the national seminar on *Shakespeare in Indian Literature and Languages* organised by the Sahitya Akademi in Kolkata (18-19 January 2017), and (ii) “The Politics of Representation in Select Works of Fiction From India’s Northeast” at the national seminar on *Indian Literature and Social Development* jointly organised by IAS and the Sahitya Akademi in Shimla (5-7 April 2017).

Prof. Sukalpa Bhattacharjee

Presented the following as plenary lectures on: (i) “Gender, Nation and Narration in Postcolonial Literatures” at the international conference on *Re-thinking Colonialism and Globalization: The Historical Saga of India from the 19th Century Onwards* organised by the Department of History in collaboration with ICSSR at Dakshin Kamrup College on 21 April 2016 (ii) “Interdisciplinarity and Contemporary Literary Studies” at the national conference on *Bhattacharjee, S. Interdisciplinarity* organized on 22 July 2016 by the Department of Humanities and Social Sciences at NIT, Meghalaya, (iii) “Non-Human Humans and the Gendered Price of Food” at the national seminar on *Food Cultures of India* organized by the Department of Cultural Studies, Tezpur University, in collaboration with the Indira Gandhi Rashtriya Manav Sangrahalaya in Tezpur on 2 December 2016, (iv) “An/ Other Story of Partition: Spacing Place, Gender and Agency” at the national seminar on *Revisiting Partition: Concepts, Dynamics and Manifestations with Special Focus on North East India* organized by the Department of Humanities and Social Sciences, IIT, Guwahati, in association with the Institute of Social Change and

Regional Development, Assam (10 February 2017).

Chaired a session at: (i) International conference on *Re-thinking Colonialism and Globalization: The Historical Saga of India from the 19th Century Onwards* organised by the Department of History in collaboration with ICSSR at Dakshin Kamrup College (21 April 2016), (ii) Conference on *Interdisciplinarity* at NIT, Meghalaya, organized by the Department of Humanities and Social Sciences (22 July 2016), and (iii) national seminar on *Revisiting Partition: Concepts, Dynamics and Manifestations with Special Focus on North East India* organized by the Department of Humanities and Social Sciences, IIT, Guwahati, in association with the Institute of Social Change and Regional Development, Assam (10 February 2017).

Prof. Jyotirmoy Prodhani

Presented papers on: (i) “Orality and Identity: Pratima Barua and her Landscape” at the international seminar on *Orality: The Quest for Meaning* organised by the Department of English, Bodoland University, Kokrajhar, on 26 & 27 May 2016, (ii) “Eat, Drink and Be Merry: Food and the Question of Morality” at the national seminar on *Food Cultures of India* held on 1-2 December 2016 at Tezpur University, (iii) “Cosmopolitanism in the Literature of North East” at the national seminar on *English Literature of North East India*, GUINES, Gauhati University, Guwahati (25 February 2017), and (iv) “Inter-linkages and the Cosmopolitan Spaces in the Narratives in India’s North East” at the national seminar on *Cosmopolitan Spaces: Indian Literature and Counterpoints of Modernity*

organised by the Sahitya Akademi at Christ University, Bangalore (3-4 November 2016).

Dr. Kynpham Sing Nongkynrih

Presented a paper on “Tribal Literature in Northeast India” and read self-composed poems in the *Literary Commons! Writing Australia India in the Asian Century* organised by Monash University, Melbourne (1-5 April 2016).

Dr. Suranjana Choudhury

Presented papers on: (i) “Perpetuity and Multiplicity of ‘Displacement’ in Amitabha Dev Choudhury’s novels” at the two-day international conference on *(Re)envisaging India’s Northeast: Ethnicity, Identity, Culture, Literature* organized by the Department of English, Assam University, on 8-9 September 2016, (ii) “Women on the Road: Mapping ‘Road Narratives’ in Some Popular Indian Cinema” at the 15th National Conference on *Women’s Studies* at the University of Madras, Chennai (22-25 January 2017), and (iii) “Of ‘Displacement’ and Its ‘Returns’: Partition Writings from Barak Valley” at the national seminar on *Revisiting Partition: Concepts, Dynamics and Manifestations with Special Focus on North East India* organized by the Department of Humanities and Social Sciences, IIT, Guwahati, in association with the Institute of Social Change and Regional Development (9-11 February 2017).

Dr. Rimi Nath

Presented a paper entitled “Assessing Cultural Citizenship in Context: Reading Mohsin Hamid’s *The Reluctant Fundamentalist* and Bapsi Sidhwa’s *An American Brat*” at the international seminar on *Thinking*

Literature Across Continents, Department of English, University of North Bengal (25-27 March 2017).

Publications

Published in India

Bhattacharjee, S. (2017). Netaji in our times: Weaving fragments of a great life. *Re-Markings*, 16 (Spl.1):195-205.

Choudhury, S. (2017). The partition fiction very few people read: The literature of displacement from Assam's Barak Valley. *Scroll.in*, March 25, 2017.

Choudhury, S. (2017). Silchar-Shillong Road: Tales between the valley and the hills. *Coldnoon: International Journal of Travel Writing and Travelling Culture*, March 18, 2017, <http://coldnoon.com/silchar-shillong-road- Tales-between-the-valley-and-the-hills>.

Choudhury, S. (2017). Marginal men in a marginal place: Quiltmakers in Silchar. *Café Dissensus Everyday*: January 31, 2017, <https://cafedissensusblog.com/tag/suranjana-choudhury>.

Nath, R. (2016). The crisis of a migrant: A Reading of Nirmal Kanti Bhattacharjee and Dipendu Das's (ed.) *Barbed Wire Fence: Stories of Displacement from the Barak Valley of Assam*. *Muse India*, Issue 68: Jul-Aug 2016.

Nath, R. (2016). Words, the Limbo, the hallowed Moon (poems). *Muse India*. Issue 67: May-June 2016.

Ngangom, R.S. (2016). From the 'Book of Grievances,' 'Understanding,' 'At the End of Autumn Sitting Near the Window.' *Indian Literature*, 297: January-February 2017.

Nongkynrih, K. S. (2017). A head of white hair. *Indian Literature*, 297:100.

Nongkynrih, K. S. (2017). Elegy for mother. *Indian Literature*, 297:97-99.

Nongkynrih, K. S. (2017). Īing Sad: A tour guide. *Indian Literature*, 297:95-96.

Nongkynrih, K. S. (2017). Waiting for the militants. *Indian Literature*, 297:101.

Renganathan, M. (2016). Theorizing stage, staging theory: Understanding the poetics of Indian drama through a directorial exploration of Girish Karnad's Nagamandala. *Roots: International Journal of Multidisciplinary Researches, Special Issue*, 5(2): 127-31.

Sewa, U.G. (2016). Search for identity and space: A re-reading of Brahmaputra Cheuchau. *Keanean Journal of Arts*, III:73-86.

Syiem, E. (2016). Negotiating the loss in the indigenous communities of North East India. *IIC Quarterly*, 43(1):80-89.

Published Abroad

Nongkynrih, K. S. (2016). Blasphemous lines for mother. *Cordite Poetry Review* (Australia), 55 (1): 1-2.

Nongkynrih, K. S. (2016). Blasphemous lines for mother. *Sentinel Literary Quarterly: The Magazine of World Literature* (London), April-June 2016, p. 84-86.

Syiem, E. (2016). The Khasi indigenous faith in the shadow of the larger faiths: The minor faiths of South Asia. *Café Dissensus*, Issue 27, <https://cafedissensus.com/2016/07/19/the-khasi-indigenous-faith>.

Books

Syiem, E. (2016). *Memoir in Water Speaks the Wah Umkhrach*. Regency Publishers, New Delhi, ISBN: 9352220144.

Syiem, E. (2017). *Many Sides of Many Stories*. Writer's Workshop, Kolkata, ISBN: 978-93-5045-147-2.

Jyotirmoy, P. (2016). *Madhupur Bahudur Translation of Assamese Short Stories by Sheelabhadra*. Sahitya Akademi, New Delhi, ISBN: 978-81-260-4065-0.

Book Chapters

Bhattacharjee, S. (2016). Theorizing Indian writing in English: Identities, politics and representation. In: *Living the Postcolonial: Indian Literature in Perspective*. Sridip Mukherjee (Ed.). Gangchil, Kolkata, p. 51-77.

Prodhani, J. (2016). Negotiating the fatalities of existence: Rajbanshi poetry and the contours of memory. In: *Living the Postcolonial: Indian Literature in Perspective*. Srideep Mukherjee (Ed.). Netaji Subhash Open University and Gangchil Publications, Kolkata, Essay 11, p. 264-285.

Prodhani, J. (2016). Politics of performance: The changing ethos of sites and obsessions for enactments. In: *Perspectives in Cultural Studies*. D.P. Nath and P. Dutta (Eds.). Purbanchal Prakash, Guwahati, Chapter 6. p. 96-105.

Sewa, U.G. (2016). Between two worlds: A re-reading of Brahmaputrika Cheuchau. In: *Nepali Diaspora in a Globalised Era*. T.B. Subba and A.C. Sinha (Eds.). Routledge, Oxon, Chapter 12, p.188-202.

Research Projects

Ongoing: 1

Title of Project	PI/Co-PI	Funding Agency	Rupees in lakh
Gendering Terrorism in South Asian Narratives in the post 9/11 Era: A Select Study of Indian-Pakistani-Afghan and Srilankan Writings in English	Prof. Mala Renganathan	UGC, New Delhi	12.80

Honours/Awards/Recognitions

Prof. Sukalpa Bhattacharjee is Copy Editor of *Man and Society: A Journal of North-East Studies*, ICSSR-NERC Shillong.

Dr. Rimi Nath was awarded the PhD degree in June 2016.

at Sankar Dev College, Shillong, on 15 November 2016, and (ii) four lectures and read out self-composed poems on "Poetry in English from North East India" at UGC-sponsored refresher course at the Department of English, North Bengal University, Siliguri District (10 and 11 March 2017).

Other Activities

Prof. Esther Syiem

Delivered the following invited lectures: (i) "Death of a Salesman: An Overview"

Participated in a panel discussion on: (i) "Narichetna Writing by and on Women" at the Kolkata Literary Festival 2017 on 17 January 2017, and (ii) "Whither Northeast

Department of English

Points of View” at the Kolkata Literary Festival 2017 on 18 January 2017.

Prof. Moon Moon Mazumdar

Delivered an invited lecture at Sankardev College on *Tagore and Shillong* on 15 December 2016.

Prof. Sukalpa Bhattacharjee

Delivered the following lectures: (i) “Understanding Gender Ethnography” during the UGC-HRDC-sponsored refresher course in *Folkloristics and Semiotics* organized by the Department of Cultural and Creative Studies NEHU, Shillong (27 April 2016), (ii) “Post-Coloniality and Tribal Culture: Language, Identity and Representations” at the UGC-HRDC-sponsored refresher course in *Tribal Studies* on 13 May 2016, (iii) “Gender, Society and Identity” at the 36th Orientation Programme organised on 15 June 2016 by UGC-HRDC, NEHU, (iv) “Teaching Skills in an Indian Classroom” during the UGC-HRDC Special Summer School, UGC-HRDC, NEHU (12 July 2016), (v) “Contemporary Perspectives in Gender Studies” during the 37th Orientation Programme (General) held at UGC-HRDC, NEHU (6 September 2016), (vi) “Research Report Writing” during the Orientation Programme on *Research Methodology for the World Vision Staff* held at ICSSR-NERC, Shillong (26 September 2016), (vii) “Literary Theory and Criticism: Texts and Contexts” at an orientation programme for undergraduate students, St. Mary’s College, Shillong (19 October 2016), (viii) “Soft Skills for Unequal Encounter” on 20 October 2016 at the short-term course on *Soft Skills* organised by UGC-HRDC, NEHU, and (ix) “Gendering of Social Discourse” on

15 February 2017 at the UGC-HRDC 38th Orientation Programme, NEHU.

Prof. Mala Renganathan

Content Editor for the Course ‘Folk Performances of the North East’ for the Certificate Course on *North East Folk Performance of IGNOU*, New Delhi.

Content writer for the Module “Women’s Theatre of India” - Course on performance studies under Comparative Literature for the E-PG Pathshala Project of the UGC under MHRD’s National Mission for Education.

Delivered a lecture on “Performativity in Folklore: Some Issue” during a refresher course, Department of Cultural and Creative Studies, NEHU (5 May 2016), and “Creative Writing” as a resource person at a creative writing workshop organized by BBS College, Shillong (23 July 2016).

Prof. Jyotirmoy Prodhani

Delivered lectures on “Phonetics and Research in Humanities with Reference to the Literature from North East” during the orientation course on *Phonetics and Research in Humanities* at ASC, Manipur University, Imphal (30 and 31 March 2017).

Visited Tripura University as a member of Research Advisory Committee of the Department of English (23-25 July 2016).

Dr. Rabindra Singh Ngangom

Panelist in the discussion on “Voices from the East - A Poetic Sojourn” and read self-composed poems at the Bengaluru Poetry Festival organized by Atta Galatta Bookstore (6 August 2016), (ii) “English Poetry in India in Our Times” and read self-composed poems at the Brahmaputra

School of Humanities

Literary Festival, Guwahati, organized by the National Book Trust (29 January 2017), and (iii) “Northeast Literature – Form and Its Evolution” at Sahitya Sammelan-2017 organized by the Information and Cultural Affairs Department, Government of Tripura, Agartala (27 February 2017).

Delivered an inaugural lecture titled “Northeast Poetry: An Overview” at Purvottari (North-East and Northern Writers’ Meet), New Delhi, organized by the Sahitya Akademi, on 24 February 2017.

Dr. Suranjana Choudhury

Coordinated the following special lectures: (i) “Colonial History and Literature Interface” delivered by Dr. Binayak Dutta to PhD students, organized by the Research Forum of the Department (ii) “Literature and the Construction of Identity” delivered by Ms Bijoya Sawain, organized by the Research Forum of the Department in collaboration with ICSSR-NERC, Shillong (8 June 2016), and (iii) “Magic and Literature” delivered by Prof Subir Dhar, organized by the Research Forum of the Department in collaboration with the Shillong Forum for English Studies (5 November 2016). She also coordinated a film screening organized by the Research Forum of the Department

in collaboration with the Shillong Forum for English Studies by eminent filmmaker Mr. Tarun Bhartiya at HRDC, NEHU (3 June 2016).

Member of the Technical Sub-Committee of the two-day national conference on *Interdisciplinarity: Theory and Practice* organized by the Department of Humanities and Social Sciences, National Institute of Technology, Meghalaya (22-23 July 2016).

Dr. Rimi Nath

Participated in the 9th Refresher Course in *English* with grade A and presented a paper entitled “Ethnic identity and Self-Perception” at UGC-HRDC, Banaras Hindu University (6-26 December 2016).

Dr. S. Bhattacharjee

Peer reviewer for the *Indian Journal of Gender Studies*, (SAGE Journals), and a book reviewer for the *Economic and Political Weekly* (Sameeksha Trust).

Advisory Board Member, Women’s Studies Centre, Dibrugarh University, Assam, and Research Advisory Committee Member, English and Foreign Language University, Shillong.

DEPARTMENT OF ENGLISH (TURA CAMPUS)

Head: Dr. Dwijen Sharma
Telephone: 8414075571
E-mail: englishtura.nehu@gmail.com

Faculty: 7

Designation	Name and Qualification	Specialization
Professor (1)	Sujata Gurudev, MPhil & PhD (NEHU)	American Literature, Modern British Fiction, Modern Poetry
	Angela R. W. Ingty, MPhil (Madras Ch. College), PhD (NEHU)	Language and Linguistics, British Poetry, Renaissance Drama
Associate Professor (3)	Dwijen Sharma, MPhil & PhD (Dibrugarh)	Indian English Literature, Literary and Cultural Theory
	Ramona M. Sangma, MA & PhD (NEHU)	Postcolonial Literature, Literary Theory and Criticism, Ethno-Literature
Assistant Professor (3)	Jova C. Marak, MA & PhD (NEHU)	Indian Writing in English, Women Writings, Ethno-Literature
	Namrata Pathak, MPhil & PhD (EFLU)	British and Continental Drama, Literary Theory and Criticism, Indian Writing in English
	L. K. Gracy, MA & PhD (NEHU)	British Fiction, British Poetry

Thrust Areas of Research

Ecology and Literature, Cultural Studies and Ethnic Literature, Translation Studies, Dalit and Marginal Literature, Indian English Writings, Postcolonial Literature, Women and Gender Studies, Theatre Studies, Western Literary Theory and Indian Poetics.

Brief Statement of Academic Activities

The Department offers the MA and PhD programmes in English Literature with an emphasis on the thrust areas. The Department began publishing a peer reviewed research

journal *Protocol: Journal of Translation, Creative and Critical Writings* in 2007 with funds from the ICSSR, New Delhi. The Journal caters to researchers and authors from the region and the country with emphasis on translation from regional languages to English, creative writings and critical studies.

Student seminar has been introduced in the Department to orient the Master's level students towards advanced research. Regular seminars on progress of PhD scholars are held in the Department. Scholars and professionals from areas of mass media, graphic design,

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anthropology, and film studies are invited to the Department to present their talks and interact with the students. The Department also has a

students' Wall Magazine, a Film Club and a Drama Society.

Students' Profile

Enrolment Capacity: MA – 33, PhD –Variable

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MA	08	25	01	25	02	05	27	06	33

Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MA	02	28	01	26	02	01	27	03	30
PhD		03		02		01		03	03

Students Awarded PhD Degree

Name of Student	Title of Thesis	Name of Supervisor
Firdusa Begum	Identifying Problems of Learning English at the Secondary Level with Special Reference to the Dhubri District of Assam	Dr. Angela R. W. Ingty
Endy Smera	A Mystical Journey: Quest, Ritual and Rebirth in the Select Poems and Plays of T. S. Eliot	Prof. Sujata Gurudev
Cherik Donish D Sangma	The Quest for Cross-Cultural Identity in the Select Novels of Bharati Mukherjee	Dr. Ramona Sangma

Research Fellowships

UGC JRF: 01

NEHU Non NET Fellowship: 09

(Option A); World Literature in Translation (Option B).

Semester III

Poetry III; Shakespeare I; Literary Theory and Criticism III; American Literature II (Option A); Modern Indian Drama (Option B); Indian Fiction in Translation (Option A); Women's Writing (Option B).

Courses Conducted

Postgraduate: MA

Semester I

Poetry I; Fiction I; Drama I; Literary Theory and Criticism I; American Literature I.

Semester II

Poetry II; Fiction II, Drama II; Literary Theory and Criticism II; Commonwealth Literature

Semester IV

Fiction III; Drama III; Shakespeare II; Literary Theory and Criticism IV; Environment and Indian Writing in English.

Department of English (Tura Campus)

MPhil/PhD Courses

Research Methodology (4 Credits); Research Writing and Presentation (4 Credits); Option B - Theory and Text (4 Credits).

Educational Tour of Students

Teacher-in-Charge: Prof. C. P. Suresh.

Places/Institutions Visited: Chennai and Trivandrum.

Duration of Tour: 15 Days.

Purpose of Tour: The main objective of such excursions is to provide the students with exposure to the diversity and vastness of our country; it helps in promoting inter-cultural dialogue and harmony.

Seminars/Conferences/Symposia/Workshops

Organized

The Department organised: (i) two-day national seminar on *Recent Trends in Tribal Literature of North East India* in collaboration with the Department of Garo and Sahitya Akademi on 28 February and 1 March 2017, (ii) Twelve-day theatre workshop by NSD was held in collaboration with the Department of Garo from 14 to 26 March 2017, (iii) One-day outreach programme of professional development workshop for lecturers of Loyola College at Williamnagar on 7 April 2017, and (iv) One-day film screening-cum-lecture by eminent Director Mr. Tarun Bhartiya on film making on 16 May 2017.

Attended

Prof. Sujata Gurudev

Presented a plenary lecture during the Sahitya Akademi-sponsored national seminar

on *Recent Trends in Tribal Literature of North-East India* organised by the Departments of English and Garo (28 February to 1 March 2017), and one lecture as a resource person during the ICSSR-sponsored capacity building workshop for *Researchers in Social Sciences* organized by the Department of Management, NEHU, Tura (5-18 May 2017).

Dr. Dwijen Sharma

Presented papers entitled: (i) "Plagiarism and Ethics of Research Publications" at the national workshop on *Research Methodology in Social Sciences* at M. K. College, Subha (Chenga), Assam (9-10 August 2016), and (ii) "Identity or Humanity? Examining Three Contemporary Assamese Women's Texts" at the seminar on *Contemporary Women's Writings in Eastern Regional Languages* organized by the Sahitya Akademi at Bhatler College, Dantan, West Bengal (26-27 September 2016).

Delivered a plenary lecture at the Sahitya Akademi-sponsored national seminar on *Recent Trends in Tribal Literature of North East India* organised by the Departments of English and Garo on 28 February and 1 March 2017.

Dr. Ramona M Sangma

Presented a paper entitled "Nationalism, Ethnicity, Indigeneity in A. Chik Poetry" at the Sahitya Akademi-sponsored national seminar on *Recent Trends in Tribal Literature of North East India* organised by the Department jointly with the Department of Garo on 28 February and 1 March 2017.

Dr. Namrata Pathak

Presented paper titled: (i) "Transgressive Performance: Mapping the Terrain of

Resistance in Shakespeare's Plays" at the national conference on *Reading, Teaching and Performing Shakespeare in Contemporary Times* organized by the ELTAI and Sonapur College, Assam, on 26 and 27 September 2016, and (ii) "Of Spaces and Bodies: Constructing a Discourse of Materiality in the Performances of Manipuri Playwrights - Ratan Thiyam and H. Kanhailal" at the 19th International Conference of FCT on *Materialities: Objects, Matter, Things* held on 18-21 December 2016 at Doon University, Dehradun.

Dr. L K Gracy

Presented a paper entitled "Minimaa Kiri Rokkime: The Nurturer and the Power of Icon as Portrayed in A.Chik Literature" at the Sahitya Akademi-sponsored national seminar on *Recent Trends in Tribal Literature of North East India* organised by the Departments of English and Garo on 28 February and 1 March 2017.

Publications

Published in India

- Pathak, N. (2016). The tribes of North East India: Commodification of culture and globalization. *Negotiations*, Summer 2016, p.157-66.
- Pathak, N. (2016). The "Place" and "Non-place": Visions of utopia in Mahasweta Devi's Rudali and Mamang Dai's Legends of Pensam. *Muse India*, Issue 67: May-June, 2016.
- Sharma, D. (2016). The problematic relationship between culture and ethnicity. *Social Change and Development*, XIII (I): 90-92.

Sharma, D., Jamir, I. (2017). Memory mechanics in Temsula Ao's These Hills Called Home: Stories from a War Zone. *Reflections*, XV–XVIII (1- 4): 73-80.

Sharma, D., Marak, P.C. (2016). Celebration of deep ecology in Mahasweta Devi's The Book of Hunter. *DIJARS*, II(I):11-18.

Sharma, D., Marak, P.C. (2016). The pastoral modes in Ruskin Bond's The Book of Nature. *Muse India*, Issue 70: November-December 2016.

Books/Book Chapters/Proceedings

- Gracy, L. K., editor. (2016). *Women's Writing from North- East India*. MRB Publishers, Guwahati, ISBN: 978-93-83403-11-0.
- Ingty, Angela W. (2016). *Remembering Phoebe W. Momin: Founder of Mothers Union, Tura on its Seventy Fifth Anniversary (1941 - 2016)*. Mothers Union, Tura.
- Pathak, N. (2016). Performance and identity: A reading of Arun Sharma's Sri Nibaran Bhattacharya. In: *Identity: Critical Perspectives*. Nizara Hazarika (Ed.). Olympia Prakashan, Guwahati, 45-50.
- Pathak, N., editor. (2016). *Women's Writing from North-East India*. MRB Publishers, Guwahati, ISBN: 978-93-83403-11-0.
- Sangma, Ramona M. (2016). Myths of creation among the Garo: The beginning of garments and tools. In: *Threads of Change: Textile Cultures of North East India*. Symposium Papers of IGNCA, NID, Ministry of Textiles, Government of India.
- Sharma, D. (2016). The politics of suicide in Indira Goswami's novels: A reading of Nilakanthi Braja and Datal Hatir Une Khowa Howda. In: *Women's Writing from*

Department of English (Tura Campus)

North-East India. N. Pathak and L. K. Gracy (Eds.). MRB Publishers, Guwahati, p. 47-59.

Sharma, D. (2017). Identity in Divakaruni's *The Mistress of Spices*. In: *Chitra Banerjee Divakaruni: A Critical Spectrum*. Dr. Manoj Kumar (Ed.). Yking Books, Jaipur, p. 43-49.

Funds Received from Agencies including NEHU/UGC

Rupees One Lakh from ICSSR, New Delhi, for the publication of *Protocol: Journal of Translation, Creative and Critical Writings* published by the Department.

Other Activities

Prof. Sujata Gurudev

Delivered one lecture as a resource person at the ICSSR-sponsored capacity building workshop for *Researchers in Social Sciences* organized by the Department of Management, NEHU, Tura (5 to 18 May 2017).

Coordinator of a one-day professional development workshop for the lecturers of Loyola College, Williamnagar, on 7 April 2017.

Co-Editor of the biannual peer reviewed research journal *Protocol: Journal of Translation, Creative and Critical Writings*.

Dr. Angela W. Ingtu

Member of the Lok Adalat in Tura, West Garo Hills, Meghalaya, since November, 2104. Co-Editor of the biannual peer reviewed research journal - *Protocol: Journal of Translation, Creative and Critical Writings* - and Editor of *Nokdangi Ripeng* a bilingual literary magazine published by the Mothers Union, Tura.

Chaired the 3rd technical session at the Sahitya Akademi-sponsored national seminar on *Recent Trends in Tribal Literature of North East India* organised by the Departments of English and Garo on 28 February and 1 March 2017.

Dr. Dwijen Sharma

Chaired the 3rd technical session of the national seminar on *Reading Shakespeare in the 21st Century* at B. H. College, Howly, Assam, on 6 August 2016, and delivered one lecture on "Literature Review and APA Referencing" at the ICSSR-sponsored research methodology workshop for *PhD Students in Social Sciences* organized by the Department of Management, NEHU, Tura (17-26 April 2017).

Co-Editor of the biannual peer reviewed research journal *Protocol: Journal of Translation, Creative and Critical Writings*.

Dr. Ramona M. Sangma

Editor of the biannual peer reviewed research journal *Protocol: Journal of Translation, Creative and Critical Writings*, and Correspondent of the NEHU News Bulletin.

Dr. Namrata Pathak

Resource person at the workshop on *Translation* organised by the Department of English, Dibrugarh University, in collaboration with the Sahitya Akademi (28 September to 4 October 2016). Acted as a panelist in the national seminar on *English Literature from NE India* organized by the GUINEIS, Gauhati University on 25 March 2017.

Chaired the 2nd technical session of the Sahitya Akademi-sponsored national seminar on *Recent Trends in Tribal Literature of North East India* organised by the Departments of

School of Humanities

English and Garo, Tura (28 February and 1 March 2017).

Coordinator of the twelve-day workshop on *Theatre* by NSD organized by the Departments of English and Garo, NEHU, Tura (14-26 March 2017).

Co-Editor of the biannual peer reviewed research journal *Protocol: Journal of Translation, Creative and Critical Writings*, and Editor of a Special Issue (June, 2017) of *Café Dissensus* (ISSN 2378 177X), an alternative magazine based in New York, USA.

Dr. L. K. Gracy

Co-Coordinator of the twelve-day workshop on *Theatre* by NSD organized by the Departments of English and Garo, NEHU, Tura (14-26 March, 2017).

Co-Editor of *Protocol: Journal of Translation, Creative and Critical Writings*, and Editor of *Duramong*, Campus Magazine of NEHU, Tura Campus.

Dr. Jova C. Marak

Co-Editor of the biannual peer reviewed research journal *Protocol: Journal of Translation, Creative and Critical Writings*.

Department of Garo (Tura Campus)

DEPARTMENT OF GARO (TURA CAMPUS)

Head: Dr. Fameline K. Marak
Telephone: 03651- 223107
Fax: 03651-223953
Email: fkmarak@gmail.com, garodeptnehu@gmail.com

Faculty: 4

Designation	Name and Qualification	Specialization
Associate Professor (1)	Fameline K. Marak, MA & PhD (NEHU)	Traditional and Modern Poetry, Folk Literature and A·chik Folklore
Assistant Professor (3)	Jacqueline R. Marak, MEd (Utkal) PhD (NEHU)	Traditional and Modern Poetry, Folk Literature and A·chik Folklore
	Dokatchi Ch. Marak, MA & PhD (NEHU)	Linguistics
	Crystal Cornelious D. Marak, MA (NEHU)	Fictional Linguistics

Thrust Areas of Research

The thrust areas of the Department include A·chik Literature, Language, Folklore, Literature in Translation, Environmental Studies and World Literature including Indian Writings in English.

Brief Statement of Academic Activities

The Department offers the MA and PhD programmes. Seminars and workshops are conducted regularly in the Department. Visiting Professors/Fellows and Scholars are invited from other universities for special lectures on selected topics, such as Oral Narrative, Literary

Theory and Criticism, Research Methodology, and Theory of Translation. The Department also organizes remedial classes annually on relevant topics, such as English Grammar, Translation, Letter Drafting, Rhetoric and Prosody, English pronunciation and Phonetic transcription, etc. At present, the Department is running with one Associate Professor, three Assistant Professors, and three Guest Lecturers. During the year under report, thirty-three students were admitted to the MA programme, and twenty students completed their MA degree. Faculty members of the Department published several articles in journals, magazines and souvenirs.

Students' Profile

Enrolment capacity: MA - 33, PhD -Variable

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MA	6	27		33		33			33

School of Humanities

Degree Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MA	6	20		26			26		26

Research Fellowships

UGC-Non Net: 4

Fieldwork/Educational Tour of Students

Fieldwork of the 2nd Semester students

Teacher-in-Charge: Crystal Cornelious D. Marak.

Places/Institutions Visited: Alokpong, South Garo Hills in Meghalaya.

Duration of the Tour/Trip: 4 days (22-25 March 2017).

Purpose of Tour: The purpose of the fieldwork was to study the dying post funeral festival of the Atong sub-tribe called *Chugan* and their oral narratives reflected in rituals and ceremonies.

Educational Tour of the 3rd Semester Students

Teacher-in-Charge: Jacqueline R. Marak.

Places/Institutions Visited: Jaipur and Delhi. Visited important places like Gandhi Museum, Albert Hall Museum, Raj Ghat, Lal Bahadur, Shastri Museum, Amber Fort, Qutub Minar, Lotus Temple, Red Fort, India Gate, Jantar Mantar, Lodhi Garden, National Zoological Park, Purana Killa, Old Delhi, International Book Fair, Delhi.

Duration of the Tour/Trip: 12 days (7-18 January 2017).

Purpose of Tour: The purpose of the academic tour was to expose the students to life and world outside their university and to make them aware about the life and culture of the people outside their own.

Courses Conducted

Postgraduate: MA

Semester I

History of Garo Language and Literature; Poetry I-Sacrificial Rites and Invocations; Drama I; Linguistics I; Environmental Studies.

Semester II

Fiction I; Literature in Translation; Prose I; Linguistics II; Linguistics III.

Semester III

Literary Theory and Criticism; Epic as a Literary Genre; Drama II; Linguistics IV; Folklore I.

Semester IV

Poetry II; Folklore II; Tragedy as a Literary Genre; Indian Literature in English; Modern Poetry.

PhD Courses

Research Methodology; Seminar Paper: Literature Review and Research Paper and Presentation; Literary Themes; Literary Theory and Criticism; Language and Folklore.

Seminars/Conferences/Symposia/Workshops

Organised

The Department organised: (i) *Writers' Meet* in collaboration with the A'chik Literature Society, NEHU, Tura Campus (21-22 October 2016), (ii) National seminar on *Recent Trends in the Tribal Literature in North East India* organised by the Sahitya Akademi in collaboration with the A'chik Literature Society and the Departments of

Department of Garo (Tura Campus)

English and Garo, NEHU, Tura Campus (28 February and 1 March 2017), and (iii) Theatre Workshop by the National School of Drama (NSD) in collaboration with the Departments of English and Garo, NEHU, Tura Campus (14-26 March 2017).

C. C. D. Marak was organizing Secretary of the A·chik Literature Society Workshop on *Chigring, Flutes, Dotdrong, Dimchrang and Dama* in Tura (1- 10 December 2016).

Attended

Prof. Fameline K. Marak

Presented a poem (own creation) at the *Writers' Meet* organised by the Department in collaboration with the A·chik Literature Society on 21 and 22 October 2016 at NEHU, Tura Campus; and two poems in the *Tribal Language Poets' Meet* at Ravindra Bhavan Lawns, New Delhi, organised by the Sahitya Akademi on 25 February 2017.

Chaired a session and presented (i) paper on “The Themes in Balgaogimin Bibalrang” at a national seminar organised by the Sahitya Akademi in collaboration with the A·chik Literature Society and the Departments of English and Garo, NEHU, Tura Campus (28 February and 1 March 2017), and (ii) Two poems at the *Northeast and Eastern Writers' Meet* at Burdwan, West Bengal, organised by the Sahitya Akademi, New Delhi (1-2 May 2016). She also chaired the 3rd Session of the *Two-Day Programme of North-East and Eastern Writers' Meet* at Burdwan, West Bengal, organised by the Sahitya Akademi, New Delhi (30 April to 1 May 2016).

Dr. Jacqueline R. Marak

Presented a paper titled “Recent Trends of Literature in Translation with Special

Reference to Garo Literature” at a national seminar organised by the Sahitya Akademi in collaboration with the A·chik Literature Society and the Departments of English and Garo, NEHU, Tura Campus (28 February and 1 March 2017).

Chaired one session of the All India Poetess Conference and took part in a panel discussion as a resource person held at Shillong (25 February 2017).

Presented a poetry titled (i) *Manden Gisik* at the Writers' Meet organized by the Department in collaboration with the A·chik Literature Society at NEHU Tura Campus (21-22 October 2016), and (ii) *A·dok Meghalaya* at the All India Poetess Conference held in Shillong (24-25 February 2017).

Dr. Dokatchi Ch. Marak

Chaired a session and presented a poem entitled *Gisik Ra-a* at the *Writers' Meet* organized by the Department in collaboration with the A·chik Literature Society at NEHU, Tura Campus (21-22 October 2016).

Chaired a session and presented a paper on (i) “A Sociolinguistic Perspective on the Kinship Terms used by Me·gam Speakers of Kyllon Mathei” at the South and South-East Asian Conference on *Austro Asiatic Languages* (21-26 November 2016), and (ii) “Recent Trends in the study of A·chik (Garo) Language” during a national seminar organised by the Sahitya Akademi in collaboration with the A·chik Literature Society and the Departments of English and Garo, NEHU, Tura Campus (28 February and 1 March 2017). She also chaired one session and took part in a panel discussion as a resource person at the All India Poetess Conference held in Shillong on 25 February 2017.

Crystal Cornelious D. Marak

Presented a fiction on *Jakkalto* at the *Writers' Meet* organized by the Department in collaboration with the A·chik Literature Society at NEHU, Tura Campus (21-22 October 2016).

Presented papers on: (i) *Indigenous Wood Carving* at a workshop organized by the Departments of English and Garo, Tura Government College, Tura (21 September 2016), and (ii) *Recent Trends in Fictional Writing in A·chik Literature* at the national seminar on the *Recent Trends in the Tribal Literature in North East India* organised by the Sahitya Akademi in collaboration with the A·chik Literature Society and the Departments of English and Garo, NEHU, Tura Campus (28 February and 1 March 2017).

Publications

Published in India

Marak, C. C. D. (2016). A·chik pottery. *Jachri - A Souvenir* (100th Years Death Anniversary Celebration of Pa Sonaram Rongrokgre Sangma), Bakrapur, Assam, p. 62-65.

Marak, C. C. D. (2016). Balpakram. *Duramong* (Annual Magazine of NEHU, Tura Campus), p. 55.

Marak, C. C. D. (2016). Kristian chasongko man·na skang A·chikrangni ro·ong konge sol·anirangko am·sandie Goalpara District, Assamo nikanirang. *A·chik Kurang*, 1(1): 18-19.

Marak, C. C. D. (2016). Skigipani gun. *Jarongpang* (Bi-monthly Literary, Magazine), 1(1): 16-17.

Marak, D. Ch. (2016). Ang' katnapram. *Nokdangni Ripeng* (A Bi-lingual Annual Magazine of the Mothers Union), Tura, p. 30.

Marak, D. Ch. (2016). Jatni sing·kam. *Jachri - A Souvenir* (100th Years Death Anniversary Celebration of Pa Sonaram Rongrokgre Sangma), Bakrapur, Assam, p.48.

Marak, D. Ch. (2016). Simsakbo. *Souvenir of All India Poetess Conference, Meghalaya*, p. 84-85.

Marak, F. K. (2017). Grandchild scratch my hand (Translated from *A·chik Golporang I*, 50-51). *Dong (Kokborok Kokrwabai Bwlai)*. Tripura Chubalai Buthu, Central Committee Agartala, West Tripura, India, p. 41-42.

Marak, J. R. (2016). Aski. *Jachri - A Souvenir* (100th Years Death Anniversary Celebration of Pa Sonaram Rongrokgre Sangma), Bakrapur, Assam, p. 44.

Marak, J. R. (2016). David Hartmanni ong·na am·pilgijagipa jumang. *Duramong*, p. 47-50.

Marak, J. R. (2016). Janggin sagalo. *Souvenir of All India Poetess Conference*, p. 82-83.

Marak, J. R. (2016). Mikkangchina tarisoani nokdangonin a·bachenga. *Nokdangni Ripeng* (A Bi-lingual Annual Magazine of the Mothers Union), Tura. p. 36-38.

Marak, J. R. (2016). Some principal mites or deities and beliefs of the Garos. *SOURCE: A Journal of Humanities and Social Sciences* (Tura), 5-6:79-83.

Marak, J. R. (2016). Wangala: A traditional dance of the Garos. *Souvenir of All India Poetess Conference, Meghalaya*, p. 49-52.

Department of Garo (Tura Campus)

Research Project

Title of Project	PI/Co-PI	Funding Agency	Amount
Text Books Translation for Adult Education from Hindi to Garo Language (2 books) under a Project SRC, NEHU, Shillong Project	F. K. Marak	SRC, NEHU, Shillong	NA

Other Activities

Prof. Fameline K. Marak

PVC/Campus In-charge & additional charge of Joint Registrar, NEHU, Tura Campus, Tura (23 July to 30 July 2016).

Member, Academic Committee, MBOSE, Tura (2016).

Served as a judge of the Meghalaya Poetry Competition (Poetry on Garo section) organised by the All India Poetess Conference, Meghalaya Chapter (2013-2016); and different events/competitions during the Varsity Week programmes, NEHU, Tura Campus in 2016.

Dr. Jacqueline R. Marak

Served as a judge of the Meghalaya Poetry Competition (Poetry on Garo section) organised by the All India Poetess Conference, Meghalaya Chapter (2013-2016).

Member, Governing Body, Mason Phillips Academy, Tura, Affiliated to MLCU, Shillong (2015-16).

Dr. Dokatchi Ch. Marak

Convener, the Board of Scrutiny, A·chik Literature Society, Tura (2015-17).

Member, Editorial Board, *Nokdangni Ripeng*, Tura, Meghalaya (2015-17).

Member, Protocol, *Journal of Translation, Creative and Critical writings*, Department of English, NEHU, Tura Campus, Tura (2015-17).

Member, Editorial Board, *Nokdangni Ripeng*, Tura, Meghalaya (2015-17).

Crystal Cornelious D. Marak

Served as a judge in different events/competitions during the Varsity Week programmes, NEHU, Tura Campus in 2016.

Delivered a lecture on “Establishment of A·chik Literature Society, Its Functioning, Publication and How It Is Making Change in the Development of Society and Economy of the Region” to students and research scholars of BHU at the Department of History and Archaeology, NEHU, Tura Campus (13 April 2016).

DEPARTMENT OF HINDI

Head: Prof. D. K. Choubey (Till August 3, 2016)
 Prof. M. P. Pandey (Since August 4, 2016)
Telephone: 0364-2723514/2723515 (O)/9436163149 (M)
E-mail ID: hodhin@nehu.ac.in, mppnehu@yahoo.co.in

Faculty: 4

Designation	Name and Qualification	Specialization
Professor (2)	M. P. Pandey, MA & PhD (Kashi Vidyapeeth)	Criticism and Poetics
	D. K. Choubey, MA (Gauhati), PhD (Manipur)	Medieval Literature and Comparative Study
Associate Professor (2)	B. P. Tripathi, MPhil & PhD (JNU)	Modern Poetry
	H. K. Mishra, MA & PhD (BHU)	Hindi Journalism & Modern Literature

Thrust Areas of Research

Modern Hindi Literature and Comparative Study

Brief Statement of Academic activities

The Department offers the MA, MPhil and PhD programmes. Twenty-six students completed their MA degree. Five PhD and nine MPhil students presented their pre-submission seminars. One PhD and ten MPhil students were awarded their PhD and MPhil degrees. Five PhD and nine MPhil students submitted their theses and dissertations and their results were awaited. The Department organised two national seminars and four lectures delivered by eminent Hindi scholars. A three-day *Rasrtiya Adhiveshan* was organized for the first time in Shillong from 19 March to 21 March 2017 at NEHU Multi-Use-Convention Hall in which more than 400 participants from all over India took part in the *Adhiveshan*, and more than 80 papers were presented. Eleven *Sammelan Sammans* were presented to the scholars from the North-Eastern

region of Hindi by the Hindi Sahitya Sammelan. The most prestigious *Sahitya-Vachaspati* degree was also conferred to three eminent literary personalities of Hindi literature, namely Prof. Govind Mishra, Prof. Shyam Singh Shashi, and Prof. Nand Kishor Pandey.

The learned scholars of Hindi literature including Shri Naresh Saxena (Lucknow), Prof. Surya Prasad Dixit (Lucknow), Prof. Veer Bharat Talwar (New Delhi), and Dr. Amish Verma (Mizoram University) visited and delivered lectures to the students of the Department.

During the academic session, the Department engaged one Guest Lecturer for teaching in MA courses. The Wall Magazine “KHUBLEI” for students and scholars has been published by the Department since 2015. More than fifty students of the Hindi Department of ADP College of Nowgong in Assam visited the Department as part of their study tour along with three teachers; and there was an interactive session between teachers and students of the

Department of Hindi

two Departments in the month of September 2016. Faculty members of the Department have

published fifteen articles, four books, and seven book chapters.

Students' Profile

Enrolment Capacity: MA – 55, MPhil – 10, PhD – Variable

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MA	13	19		04		28	03	29	32
MPhil	04	06		02		08	04	06	10
PhD	02			01		01		02	02

Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MA	06	20	02	09		15	07	19	26
MPhil	08	02	01	01		08		10	10
PhD		01		01			01		01

Student Awarded PhD Degree

Name of Student	Title of Thesis	Name of Supervisor
Evalarie Kordor Doonai	Shailesh Matiyani ke Katha-Sahitya mein Vanchit-Samudaya: Ek Aalochanatamak Adhyayan	Prof. M. P. Pandey

Placement of students

- | | |
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| <ol style="list-style-type: none"> 1. Pritima Tayeng, Teacher, Sango English School, Mebo, East Siang, Arunachal Pradesh. 2. Rajshree Devi, Graduate Teacher, Hindi Central Daramtol H.S.School, Morigaon, Assam. 3. Majammil Haque, Graduate Teacher, Badhyabory H.S.School, Morigaon, Assam. 4. Tolumoni Das, Graduate Teacher, Jorhat H.S.School, Jorhat, Assam. 5. Abdul Baten, Graduate Teacher, RNC H.S.School, Nalbari, Assam. | <ol style="list-style-type: none"> 6. Bajlul Basid, Graduate Teacher, Baladmari H.S.School, Goalpara, Assam. 7. Muktar Hussain, Graduate Teacher, Goalpara H.S.School, Goalpara, Assam. 8. Moksed Ali Ahmed, Graduate Teacher, Goalpara H.S.School, Goalpara, Assam. 9. Bibha Das, Graduate Teacher, H.S. School, Darrang District, Assam. 10. Chayanika Das, Graduate Teacher, Chenga Adarsha Vidyalaya, Barpeta, Assam. |
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Research Fellowships

CSIR-UGC-NET: 2

UGC Non-Net: 25

Courses Conducted

Postgraduate: MA

Semester I

Hindi Bhasha evam Uska Vikash; Bhartiya Kavyashastra I; Aadhunik Kavya (Chhayavad tak) evam Paryavaran Parak Kavya; Hindi Gadya Sahitya I (Natak evam Nibandh); Aadikalin Hindi Sahitya ka Itihas.

Semester II

Bhaktikalin Kavya; Bhartiya Kavyashastra II; Hindi Gadya Sahitya II (Upanyas evam Kahani); Aadikalin Kavya; Prayojanmoolak Hindi.

Semester III

Hindi Sahitya ka Madhayakal; Ritikaleen Kavya; Hindi Natak; Anuvad-Sidhant evam Vyawhar; Lok Sahitya.

Semester IV

Hindi Sahitya ka Aadhunikkal; Chhayavadottar Kavya; Paschatya Sahityalochana evam Hindi Aalochana; Bhasha Vigyan; Hindi Nibandh.

MPhil/PhDCourses

Anusandhan ki Pravidhi aur Prakriya; Hindi Sahitya ki Vaicharik Pristhbbhoomi; Sangosthi evam Samiksha.

Seminars/Conferences/Symposia/Workshops

Organised

The Department organised (i) Two-day national seminar on *Purvottar Bharat ki Bhash, Sahitya evam Sanskriti ke Badalte Paridrishty* in collaboration with the Mahatma Gandhi Antarrashtriya Hindi Vishwavidyalaya, Vardha and NE-ICSSR, Shillong, on 18-19 November 2016 at NEHU Old Guest House, with Prof. D.K. Choubey as Coordinator, and (ii) Three-day

national conference in collaboration with the Hindi Sahitya Sammelan, Prayag from 19 March 2017 to 21 March 2017 at NEHU Multi-Use-Convention Hall in which more than 400 participants from all over India took part in the event.

Attended

Prof. D. K. Choubey

Paper presented on (i) "Writings of Bhupen Hajarika - Poetry" at a national seminar organized by the Department of Hindi and Alumuni Association Gauhati University, Gauhati (24 December 2016), and chaired an academic session on songs and dramas of Bhupen Hajarika, and (ii) "Lok Gathaon ke Pariprekshya mein Asamyā Malita" at the national seminar on *Purvottar ka Loksahitya* organized by the Department of Hindi and Central Hindi Institute, Agra, at Tripura University, Agartala (17 March 2017), and chaired an academic session on *Folk Songs of the North-East*.

Prof. M. P. Pandey

Presented papers on (i) "Purvottar ki Adiwasi Sanskriti evam Unki Samsyayein" at a national seminar organized by the Department of Hindi, Mizoram University, Aizawl (14-15 April 2016), and (ii) "Hindi ki Boliyan: Badhate Antaral" during a three-day national conference organized by the Hindi Sahitya Sammelan, Prayag, and the Department on 19-21 March 2017.

Delivered a lecture on "Increasing Effort to Develop Logic Capability among School Children" as Guest of Honour at the North-East Region level conference on 22 July 2016 organised by the Air Force Eastern Command, Shillong.

Dr. H. K. Mishra

Presented a paper on “Pathalochan: Prakriti evam pravridhi” at a national seminar on 10-11 September 2017 organized by J. L. Nehru College, Banda (UP).

Publications

Published in India

Choubey, D.K. (2016). Asamiya Katha Sahitya: Ek Mulyankan. *Pustak-Varta*, Issue 61: 46-49.

Choubey, D.K. (2016). Hindi Aur Vigyapan ka Antarsambandh: Badalte Paridrishya. *Samanvay Purvottar*, I: 56-60.

Choubey, D.K. (2016). Rahiman Pani Rakhie: Jiwanta Vicharon ka Dastavej. *Gaveshana*, Issue 108:163-164.

Mishra, H. K. (2016). Hindi Patrakarita evam Janvishwas. *Madhurakshar*, p. 32-36.

Mishra, H.K. (2016). Hindi Natak : Parampara evam Pravriti. *Chintan Srijan*, p. 96-110.

Pandey, M. P. (2016). Aatmeeya Sandarbhon ka Mahakavy. *Gaveshana*, Issue 80:131-136.

Tripathi, B. P. (2016). Aitihāsik Maulikta ki Bhavya Durbalta. *Anhad*, p. 278-283.

Tripathi, B. P. (2016). Hindi Kavita ki Nai Subah ka Intjar. *Lahak*, p. 51-56.

Tripathi, B. P. (2016). Laha Lohe ko Katta Hai. *Chintan Disha*, p. 23-26.

Tripathi, B. P. (2016). Manushya ki Vkritiyon ke Bhavishyadrasta. *Samyik Saraswati*, p. 75-78.

Tripathi, B. P. (2016). Poorvottar ki Bhashayi Mansikta. *Sablog*, p. 41-43.

Tripathi, B. P. (2016). Prakriti ka Poovi Kshatij. *Hans*, p. 76-78.

Tripathi, B. P. (2016). Saatvin Indri ka AAughar Sadhak. *Janpath*, p. 25-28.

Tripathi, B. P. (2016). Samay ka Kavi aur Kavi ka Samay. *Lokodaya*, p. 40-47.

Tripathi, B. P. (2016). Samay se Kalam ki Kadamtal. *Banasjan*, p. 241-244.

Books

Tripathi, B. P. (2016). *Boond Boond Roti Nadi* (Kavya Sangrah). National Publishing House, New Delhi, ISBN: 978-81-214-0783-0.

Tripathi, B. P. (2016). *Beehad Chetna ka Pathik* (Alochna). Anamika Prakashan, Allahabad, ISBN: 978-81-87770-90-9.

Tripathi, B. P. (2016). *Kahna Jaroori Hai* (Ideas). Pratishruti Prakashan, Kolkata, ISBN: 978-93-83772-43-8.

Mishra, H.K. (2016). *Mudran Patrakarita: Vividh Prasang*. Swakshar Prakashan, New Delhi, ISBN: 978-93-86007-28-5.

Book Chapters

Choubey, D.K. (2017). Hindi Bhasha aur Vigyapan ka Anarsambandh. In: *Bhasha Samay evam Samvad*. Today and Tomorrow Printers and Publishers, New Delhi.

Pandey, M. P. (2016). Arunachal ki Monpa Janjati ka Sanskritik Pparidrishya. In: *Lok Sahitya aur Vashveekaran*. Dr. Saroj Gupya and Dr. Sangita Suhane (Eds.). Anamika Prakashan, Allahabad, p. 20-34.

Tripathi, B. P. (2016). Gadya kavita ka Vyaktitva. In: *Sahitya se Samvad*. Shashank Mishra (Ed.). Shree Sahitya Prakashan, Delhi, p.105-122.

School of Humanities

Tripathi, B. P. (2016). Hindi Sahitya ka Bazarkal. In: *Samay-Samaj & Sahitya (Ek Pansheelan)*. Ghanshyam Bharti (Ed.). J.T.S. Publications, Delhi, p. 86-97.

Tripathi, B. P. (2016). Manushya ki Vkriti ke Bhavishyadrashta. In: *Muktibodh: Ek Mulyakan*. Dinesh Kumar (Ed.). Samyik Books, New Delhi, p. 234-243.

Tripathi, B. P. (2016). Prakriti ka Poorvi Chhiti. In: *Lok Sahitya aur Vaishvikaran*. Saroj Gupta (Ed.). Anubhuti Publishers, Allahabad.

Tripathi, B. P. (2016). Prashnon ke Chaurah par Khadi Kavita. In: *Vikalp hai Kavita*. Arun Sheethansh and Jyoti Prakashan (Eds.). Sonipat, Haryana, p.121-129.

Any other activities

Prof. D. K. Choubey

Attended: (i) Workshop as resource person for *Preparation of Text Books and Dictionary for School of Meghalaya* by the Central Hindi Institute, Shillong Centre, from 29 November to 8 December 2016, (ii) Workshop as a resource person in Evaluation in Higher Education by SET Andhra at Andhra University Vishakhapatnam (2-4 March 2017), and (iii) Grant-in-Aid Committee meeting to finalize the proposal of Hindi Voluntary organizations of the Central Hindi Directorate Regional Office in Guwahati on 26 May 2016.

Delivered lecture on: (i) “Creative Writing” at BBS College, Shillong, on 23 July 2016,

(ii) “Madhyamic Vidyalayon Mein Hindi Shikshan ke Kaushal” for teachers of Garo region during a refresher course organized by the Central Hindi Institute at Tura on 16 September 2016, (iii) “Uchattar Madhyamic ke Uchcharan evam Vartani ki Samasyayen evam Samadhan” during a refresher course for teachers of Arunachal Pradesh at Tamang organized by the Central Hindi Institute, Guwahati Centre, on 20 September 2016, (iv) “Tools of Debate” at BBS College, Shillong, on 26 November 2016, (v) “The History of Hindi Literature and Creative Writing” at Women’s College Shillong, on 30 November 2016, and (vi) “The Scope of Employment in Hindi Language Courses” at SAA P.G. Government College, Kalka (Harayna), on 8 February 2017.

Delivered a keynote address on *Skills of Teaching Language* for teachers of languages at DPS, Guwahati, on 5 August 2016, and a lecture on *Implementation of Official Language in C Region* at NIC Office, Shillong (14 September 2016). Visited the Hindi organizations of Meghalaya on 2 April 2016 as a member of the Inspection Team constituted by the Central Hindi Directorate, Delhi.

Dr. H. K. Mishra

Chaired the inaugural function of the Social Science exhibition held on 28 September 2016 at Kendriya Vidyalaya, NEHU, Shillong.

Delivered a lecture on “Official Letter Writing” at AG Office, Shillong, on 22 March 2017.

Department of Khasi

DEPARTMENT OF KHASI

Head: Prof. Streamlet Dkhar
Telephone: 2723301 (O)/ 9436117479 (M)
E-mail: s.dkhar@rediffmail.com

Faculty: 6

Designation	Name and Qualification	Specialization
Professor (3)	B. War, MPhil (Delhi), PhD (London)	Linguistics
	S. Dkhar, MPhil & PhD (NEHU)	Khasi Drama
	A. Kharmalki, MPhil & PhD (NEHU)	Linguistics
Associate Professor (1)	D. R. L. Nonglait, MPhil & PhD (NEHU)	Literary Criticism on Khasi Fiction
Assistant Professor (2)	B. Bairo, MA & PhD (NEHU)	Fiction
	M. M. Khymdeit, MPhil (GU), PhD (NEHU)	Poetry

Thrust Areas of Research

The thrust areas of the Department include Khasi Literature, Literature in Translation, Environmental Awareness in Khasi Literature, Khasi Literary Theory and Criticism and Folklore in Khasi Literature.

engaged in teaching and research on the above thrust areas. Fifty-two students completed their MA degree, six students MPhil degree, and six students PhD degree. Faculty members of the Department have published seven books and seven book chapters. The Department organised several seminars, lectures and other events relating to the Khasi language and culture.

Brief Statement of Academic Activities

The Department offers the MA, MPhil and PhD programmes. Faculty members are actively

Students' Profile

Enrolment Capacity: MA – 52, MPhil/PhD – Variable

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MA	09	43		52			52		52
MPhil	02	04		06			06		06
PhD	01	05		06			06		06

School of Humanities

Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MA	12	33		45			45		45
MPhil	02	07		09			09		09
PhD	02			02			02		02

Students Awarded MPhil Degree

Name of Student	Title of Thesis	Name of Supervisor
Ms. Dorismelincy Byrsat Regd.No.474 of 03.02.2014.	Ka Jingiapher Ktien (Variation) hapdeng ka Ktien pdeng (Standard Khasi) bad ka Ktien tnad Nongstoin (Nongstoin Dialect)	Prof. B. War
Mr. Mike Frankie Regd.No.481 of 03.02.2014	Ka Sur kren (Voice) ha ka Nongrim jong ka Kren ka Khana (Discourse) ha ka Shi Kti Na Thwei Mutdur: Ka Bishar Bniah	Prof. A. Kharmalki
Ms. Gracynora Shabong Regd.No.478 of 07.02.2014	Ki Jingkylla ha ka Jingim ki Shella kumba ka paw ha <i>Ka Mamla</i> u E.Weston Dkhar: Ka Bishar Bniah	Dr. M. M. Khymdeit
Ms. Ibanylla Thongni Regd.No.479 of 06.02.2014	Ka Kolshor kumba ka paw ha <i>Ki Syrwet Umjer</i> ka Sweetymon Rynjah: Ka Bishar Bniah	Dr. M. M. Khymdeit
Ms. Roiparbha Khongkliam Regd.No.477 of 06.02.2014	Ka Mynsiem Ieit Ri ha ki Sawangka <i>Ka Ri Umsnam</i> bad <i>Ka Khet</i> jong u J.S.Shangpliang: Ka Bishar Bniah	Prof. S. Dkhar
Ms. Glorious Diengdoh Regd.No.482 of 06.02.2014	Ka Jingpynjot ia ka Meirisawkun: Ka Bishar Bniah ia ki Poitri Khasi (2000-2012)	Prof. B. War
Ms. Iateiskhem Kharsahnoh Regd.No.475 of 19.02.2014	Ka Wadbniah halor ka Jingiar ha ka Rukom Pyndonkam ia ka Ktien Khasi ha ki Ophis Sorkar Jong ka Jylla Meghalaya	Prof. A. Kharmalki
Ms. Celeste Berachah Syiemlieh Regn. No.476 of 07.02.2014	Ka Hyndai, ka Mynta bad ka Lawei ka Ri Khasi ha ki Poim u D.S.Khongdup: Ka Bishar Bniah	Dr. D.R.L. Nonglait

Department of Khasi

Mr. Slendar Dkhar Regn. No.480 of 06.02.2014	Ka Thohhalorlade (Autobiography) bad ka Buhnathi (Memoir): Ka Bishar Bniah halor ki Phang Bakongsan ha Ka Jingiaid Lynti Bajwat, Ka Jingiaid Lynti ba Sohsat ka Kmie bad Ki Sienjam Ban sah Kynmaw	Dr. D.R.L. Nonglait
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Students Awarded PhD Degree

Name of Student	Title of Thesis	Name of Supervisor
Mr. Marbhador M. Khyndeit	Exploring the Language of Poetry: A Selective Study on the Poetic Style of Bevan L. Swer and Kynpham Sing Nongkynrih	Prof. A. Kharmalki
Mr. Davidson Diengdoh	Ka Dur-Thoh Poitri (Style) u Soso Tham: Ka Bishar Bniah	Prof. A. Kharmalki

Educational Tour of Students

Teacher-in-Charge: Dr. M. M. Khyndeit.

Places/Institutions Visited: Mysore and Thiruvananthapuram.

Duration of Tour: 14 days (16 to 29 January, 2017).

Purpose of Tour: Visit to important libraries, language and literature departments in Mysore and Thiruvananthapuram and historical places, seashores, beaches as part of environmental studies.

Courses Conducted

Postgraduate: MA

Semester I

Khasi Linguistics I; Khasi Poetry I; Khasi Drama I; Khasi Fiction I; Literary Theory and Criticism I.

Semester II

Khasi Linguistics II; Literary Theory and Criticism II; Khasi Drama II; Literature in Translation I; Khasi Poetry II.

Semester III

Khasi Linguistics III; Literary Theory and Criticism III; Culture in Khasi Literature I; Khasi Fiction II; Literature in Translation II.

Semester IV

Khasi Linguistics IV; Khasi Fiction III; Environmental Awareness in Khasi Literature and Poetry-III; Culture in Khasi Literature-II; Literary Theory and Criticism IV.

MPhil/PhD Courses

Research Methodology; Seminar Papers; Literary Theory and Criticism/Emerging Trends in Khasi Literature/Translation and Khasi Literature.

Seminars/Conferences/Symposia/Workshops

Organised

The Department organised the following: (i) Special lecture on *Impact of the Welsh Calvinistic Methodist Mission on Khasi Language and Literature* jointly with the Society for Khasi Studies on 2 May 2016

at NEHU, (ii) Book launch for Prof. B. War, Dr. Rolling S. Wankhar, Dr. Rosa M. Mawlong and Cassandra Syiemlieh at the Cluster Class Room of the Department, Shillong, on 7 September 2016, (iii) Sixth Meghalaya Poetry Competition-cum-Poetry Festival in collaboration with the AIPC, Meghalaya Chapter and the Planning Department, Government of Meghalaya, held at Dinam Hall, Jaiaw, Shillong (24-25 February 2017), and (iv) Symposium on the *Beginning of Written Khasi Language and Literature* in collaboration with the North-Eastern Council (NEC) on 28 February 2017.

Prof. B. War was Co-coordinator of the workshop on *Translating the Oral Resources of Some Oral Communities in North-East India* organised by the Departments of English and Khasi, NEHU, ICSSR-NERC, Shillong and SHABDANA, Sahitya Akademi, Bangalore, on 24-25 February 2017.

Attended

Prof. B. War

Chaired: (i) Plenary session and delivered a valedictory address at the national seminar on *Exploring the Theory & Praxis of Cultural Poetics* organised by the Department of English, Kiang Nongbah Government College, Jowai (23 August 2016), (ii) Inaugural function and presented a theme paper on “Revisiting Austro-Asiatic Linguistics” at the international conference on *South and South-East Asian Austro-Asiatic Languages* organised by the Department of Linguistics, NEHU, in collaboration with CIIL, Mysore and ICSSR-NER, Shillong (21 November 2016), (iii) Inaugural function and presented a paper on “The Beginning of Khasi

Language Study” at the symposium on *The Beginning of Written Khasi Language and Literature* organised by the Department in collaboration with NEC, Shillong (28 February 2017), (iv) Session at the seminar *Ka Jingsynshar Nongwei bad ka Jingktah jong ka ia ki Riti Dustur Khasi kumba ka paw ha ka Litereshor Khasi (Colonial Rule and its Impact on Khasi Customs and Traditions as Reflected in Khasi Literature)* organised by the Khasi Authors’ Society in collaboration with KHADC and the Office of DC, East Khasi Hills, Shillong, on 24 April 2017.

Prof. S. Dkhar

Resource person at the international seminar on *Orality: A Quest for Meaning* and presented a paper entitled “Khasi Megalithic Culture: A Study from Gender perspectives” organised by the Department of English, Bodoland University, Kokrajhar, Assam, on May 26-27, 2016.

Presented papers on: (i) “Ki Nongthoh Kot bad Kot Khubor Khasi ha ka Spah Snem ba Khatkhyndai bad ia ki lai Tylli ki Skul ba la Seng Nyngkong da U Thomas Jones” at the inauguration of the 175th Year Celebration of Khasi Language-cum-Seminar on the Theme *The Role of Phawar in Khasi Culture (Ka Bynta jong ka Phawar ha ka Kolshor Khasi)* organised by the Khasi Author’s Society at Don Bosco Youth Centre, Shillong (10 September 2016), and (ii) “Recent Trends in Creative Works with Special Reference to Khasi Literature” at the national seminar on *Recent Trends in Creative Works in the Literature of the Northeast* organised by the Sahitya Akademi in collaboration with the Achik Literary Society and the Departments of

Department of Khasi

Garo and English, NEHU (February 8 to March 1, 2017).

Prof. A. Kharmalki

Chaired a technical session at: (i) International seminar on *Understanding the Tribes of India* held at Synod College, Shillong, on 3-4 November 2016, (ii) South and South-East Asian Conference on *Austro-Asiatic Languages* organised by the Department of Linguistics, NEHU, in collaboration with NEC, Shillong, CIIL, Mysore and ICSSR-NERC, held at NEHU 2016, and (iii) Symposium on *The Beginning of Written Khasi Language and Literature* organised by the Department in collaboration with NEC held on 28 November 2017.

Dr. D. R. L. Nonglait

Chaired a session at the *South and South-East Asian Conference on Austro-Asiatic Languages* organised by the Department of Linguistics, NEHU, in collaboration with NEC, CIIL, Mysore, ICSSR-NERC, Shillong, etc., on 22 November 2016.

Dr. B. Bairo

Presented a paper entitled “Standardization and Khasi Literature” at the *South and South-East Asian Conference on Austro-Asiatic Languages* organised by the Department of Linguistics, NEHU, in collaboration with CIIL, Mysore and ICSSR-NERC, Shillong, held on 21-26 November 2016.

Dr. M. M. Khyndeit

Presented paper entitled: (i) “Folklore and Literature: A Study on the Khasi Folk Narrative - *Ka Nam*” at the international seminar on *Orality: The Quest for Meaning* organised on 26-27 May 2016 by the Department of English, Bodoland

University, Kokrajhar, Assam, and (ii) “Analysing the Function of Linguistic Deviation in the Poems of Bevan L. Swer” at the South and South-East Asian Conference on *Austro-Asiatic Languages* organised by the Department of Linguistics, NEHU, in collaboration with NEC, Shillong (21-22 November 2016).

Publications

Books

Dkhar, S. (2016). *Ka Latympang* (A Poetic Drama), Revised Edition, Eses Plus Publications, Shillong, ISBN: 978-81-927797-0-6.

Dkhar, S. (2016). *Na Ki Sawkun Ka Mariang*, Revised and Enlarged Edition, Eses Plus Publications, ISBN: 978-81-927797-1-3.

Dkhar, S., editor. (2016). *Ban Sngewthuh ia ki Nongrim Thoh bad Ka Bishar-bniah*. Department of Arts and Culture, Shillong.

Dkhar, S., editor. (2016). *Ki Khana-parom na Ri India Ha Ka Ktien Khasi*. Department of Arts and Culture, Shillong.

Dkhar, S., editor. (2016). *Mother Earth/Mei Ramew A·An Ama/Dharti Maa*. AIPC, Shillong.

War, B. (2016). *Ka Kylla-ktien Bad Ka Litereshor Khasi (Translation and Khasi Literature)*. Published by Ri-ia-dor, Shillong, ISBN: 978-81-927796-1-4.

Book Chapters/Proceedings

Dkhar, S. (2016). Ka Mahadei Kamala Konwari, Ka Jayamala, U Lat Ba Proh Jabieng, Ki Paro Khlaw, and Ka Latuthiñ. In: *Ki Khana-parom na Ri India ha ka Khasi*. S. Dkhar (Ed.). Department of Arts and Culture, Shillong, p. 20-24, 31-35, 53-60 and 65-71.

- Dkhar, S. (2016). Impact of globalisation on regional languages with special reference to Khasi language and literature. In: Proceeding of UGC-Sponsored Seminar on *Globalisation and Its Impact on Regional Languages*. Department of Languages Sankardev College, Shillong, p. 5-12.
- Dkhar, S. (2016). Translation of the Literary Theory on “Deconstruction” by Alex Thomson Chapter V - *Ka Deconstruction*. In: *Ban Sngewthuh Īa Ki Nongrim Thoh Bad ka Literashor*. S. Dkhar (Ed.). Department of Arts and Culture, Shillong, p. 106-124.
- Dkhar, S. (2016). U Phadar Elias kum u nongthoh thiori bad u kritik ha ka Khasi Poitri. Souvenir: *Ka Syrwet Pyrto 50 Snem ka Jingkhlad noh U Ph Hopewell Elias Khariong SDB, 1966-2016*. p. 55-58.
- Dkhar, S. (2017). Kinship terminology in the Khasi society as practiced by the clans. In: *Fabric of Indian Linguistics*. S. K. Singh *et al* (Eds.). Lakshi Publishers & Distributors, New Delhi, ISBN: 978-93-82120-84-1.
- Kharmalki, A. (2016). Halor ka Nongrim Pateng bad ka Sapthaw Shimet (Tradition and the Individual Talent) U T.S. Eliot. In: *Ka Syngkhong Jingtip (Thup-6)*. Khasi Author's Society, Shillong, ISSN: 2278-6791.
- Khyndeit, M. M. (2016). Infiltration and crisis of ethnic identity: A study of Kynpham Sing Nongkynrih's select poems. In: *Literature from Northeast India: Critical Response*. Rustam Brahma and Ronchi Basumatary (Eds.). N. L. Publications, Guwahati, p.16-24.
- War, B. (2017). Independent pronouns, pronominal clitics and agreement markers in Khasi. In: *Syntactic Typology: Language Contact and Convergence*. S.K. Singh *et al* (Eds.). EBH Publishers, Guwahati, ISBN 978-93-86302-00-7.
- Book Forewords**
- Dkhar, S. (2016). Foreword. In: *Ki Mat Pashat Jingmut ia Ki Mawnam Ka Mied Kynjah* authored by Andreas Sun.
- Dkhar, S. (2016). Foreword. In: *Emotions Unleashed (a collection of poems)* authored by Philomena Warjri (np).
- Dkhar, S. (2016). Foreword. In: *Mother Earth/ Mei Ramew/A'an Ama/Dharti Maa (a collection of poems)* edited by Streamlet Dkhar, published by AIPC, Shillong.
- Dkhar, S. (2016). Foreword: Ka Lamkhmat na ka Editor. In: *Ban Sngewthuh Īa Ki Nongrim Thoh Bad ka Literashor*. S. Dkhar (Ed.). Department of Arts and Culture, Shillong, p. 5-7.
- Dkhar, S. (2017). Foreword: Ka lamkhmat. In: *Ka Doh Kyndang* by Dr. Natalie Jo-Anne Diengdoh (np).
- Dkhar, S. (2017). Foreword: Ka maitphang. In: *Ka Mariang Ha Ka Duitara Ksiar U Soso Tham: Ka Bishar Bniah* by Kolanjones Diengdoh, p. v-vii.
- Dkhar, S. (2017). Foreword: Shi kyntien ar kyntien tang ban iatei. In: *Ka Lyngwiar Dongpaw* by H.Witting Mawsor, p. 8-10.
- Other Activities**
- Prof. B. War**
- Delivered a special lecture on “Impact of the Welsh Calvinistic Methodist Mission on Khasi Language and Literature” organised by the Department in collaboration with the Society for Khasi Studies on 2 May 2016.

Department of Khasi

She also delivered two lectures on “Aspects of Sociolinguistics” during the refresher course in *Folkloristics and Semiotics* organised by UGC-HRDC, NEHU, on 5 May 2016.

Chaired the inaugural function of the *Orientation Programme for ST Teachers of Meghalaya* organised by the Department of Linguistics, NEHU, in collaboration with the Central Institute of Indian Languages, Mysore, held on 25 July 2016.

Prof. S. Dkhar

Chaired the following programmes and sessions:

(i) celebration of U Tirot Sing Day with a book launch of (L) Heman Roy Bareh, entitled *Ka Bishar-bniah Īa ka Jingieit Samla ha ki Poitri Khasi (1925-70) bad kiwei de ki Jingtrei* organised by the Department of Khasi, St. Edmund's College, Shillong (16 July 2016), and was Special Guest at the inaugural function held to celebrate the Tirot Sing Day at Mairang Krem Tirot by the Syiem of Dorbar, Hima Nongkhlaw, Mairang, on 18 July 2016, (ii) *All India Poets' Meet* held at EFLU and also read out self-composed poems organised by the Sahitya Akademi, Regional Centre, Kolkata (30-31 July 2016), (iii) Launch of books of Prof. B. War, Dr. Rolling Stone Wankhar, Dr. Rosa M. Mawlong and Casandra Syiemlieh organised by the Department on 7 September 2016, (iv) *Hindi Week* organised by the Kendriya Hindi Sansthan, Regional Centre, Shillong, on 20 September 2016, (v) Inaugural function and a technical session of the Sixth Meghalaya Poetry Competition-cum-Poetry Festival organised by AIPC, Meghalaya Chapter in collaboration with the Planning Department, Government of

Meghalaya, and the Department on 24-25 February 2017, and (vi) Symposium on the *Celebration of the 175th Year of Khasi Language and Literature* held at NEHU Convention Hall organised by the Department on 28 February 2017.

Resource person at: (i) Workshop on *Creative Writing* held at BBS College, Shillong, on 23 July 2016, (ii) *All India Tribal Poets' Meet* and read out self-composed and translated poems at HPDC, Ranchi, organised by the Sahitya Akademi in collaboration with the Ramnika Foundation and All India Tribal Writers' Forum (27-28 August 2016), (iii) Workshop on *Draft New Education Policy, 2016* organised by DERT, Government of Meghalaya, Shillong, on 30 August 2016, (iv) Hindi Sammelan on the occasion of the 70th India's Independence and read out self-composed poems organised by the Kendriya Hindi Sansthan, Shillong, on 14 September 2016, (v) Workshop for preparing *Multilingual Dictionary* organised by the Kendriya Hindi Sansthan, Regional Centre, Shillong, on 3 December 2016, and (vi) *International Women's Day* organised by the Women's Studies Centre, St. Edmund's College, Shillong, on 8 March 2017.

Attended a four-day meeting to review the manuscripts of a *Supplementary Reader* on NE India for school children organised by DESS, NCERT, New Delhi (18-21 October 2016). She also acted as (i) Observer at “A Mock Exercise” organised by the State Disaster Management Authority, Government of Meghalaya, Shillong, on 9 July 2016, and (ii) Panelist at the poetry festival on *The Voice of the Heart* organised by AIPC, Meghalaya Chapter in collaboration with the Planning

School of Humanities

Department, Government of Meghalaya,
and the Department on 25 February 2017.

Delivered a special lecture on “Gender
Sensitization for Youth”organised by
the Synod College Alumni Association

in collaboration with the Women’s Cell,
NEHU, Shillong, on 6 December 2016, and
(ii) “Status of the Khasi Language” as part
of celebration of the *Mother Tongue Day*
organised by the Hindi Cell, NEHU, on 21
February 2017.

DEPARTMENT OF LINGUISTICS

Head: Prof. Shailendra Kumar Singh
Telephone: 0364-272 -3310 (O)/91-09863279254(M)
Email: toksingh@rediffmail.com, toksinghnehu@gmail.com

Faculty: 5

Designation	Name and Qualification	Specialization
Professor (1)	Shailendra Kumar Singh, MPhil & PhD (Hyderabad)	New Linguistics World Order, Alternative-Sociolinguistics Translation, Deep Multilingualism, North-East India Linguistics and Linguistic Landscaping
Associate Professor (1)	Umarani Pappuswamy, MPhil (Bharathiar), PhD (Mysore)	Computational Linguistics, Typology, Semantics, Intelligent Tutoring Systems, Artificial Intelligence in Education, Cognitive Linguistics, Dialogue Systems and Discourse Analysis
Assistant Professor (3)	Saralin A. Lyngdoh, MPhil & PhD (Delhi)	Syntax, Typology, Linguistic Structures of South Asian Languages, Language Ideology, Eco-Linguistics, Austro-Asiatic Linguistics, Language Conflicts and Resolution Studies
	Barika Khyriem, MA (NEHU); MPhil (Delhi)	Phonetics and Phonology, Dialectology, Sociolinguistics, Austro-Asiatic Linguistics
	Bijoy L. Dhanwar, MA (NEHU), MPhil (Hyderabad)	Tibeto-Burman Linguistics, Typology, Syntax, Lexicography, Historical Linguistics

Thrust Areas of Research

The Department has facilitated research in Tibeto-Burman and Austro-Asiatic languages/ dialects of North-East India and to provide expertise in the areas of field work, data analysis, and descriptive linguistics by training students through the MA, MPhil and PhD programmes. The Department has given more emphasis on Phonetics and Phonology, Morphology, Syntax, Semantics and Pragmatics, Lexicography, Computational Linguistics, Translation, Field Methods, Language Education, Ethnolinguistics, Sociolinguistics, Languages of North-East India,

and Language Ideology to provide the students with a wide option for areas of Linguistics.

Brief Statement of Academic Activities

The Department admitted 45 students to its MA programme and 8 students to its MPhil programme and 4 PhD students during the current year. Thirty-one students successfully completed their MA programme and some have passed the UGC Net examination. The Department organized a series of programmes including an international conference and a workshop.

School of Humanities

Students Profile

Enrolment Capacity: MA- 45, PhD – Variable

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MA	08	37		45			37	08	45
MPhil	01	07		04	01	03	04	04	08
PhD	01	03		04			04		04

Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MA	05	26		31			26	05	31
MPhil	04	09		13			10	03	13

Research Fellowships

Qualified NET: 3

UGC Fellowship: 17

Educational Tour of Students

Field Trip of Students: 3rd Semester students.

Teacher –In- Charge: Dr. S. A. Lyngdoh.

Places Visited: Amsotai village at West Jaintia Hills District, Meghalaya.

Duration of the Trip: 2 days (20 to 21 October 2016).

Purpose: Fieldwork Training as a compulsory part of the curriculum of the MA programme.

Study Tour of 3rd Semester Students

Teacher –In- Charge: Prof S. K. Singh.

Places Visited: Okha Industrial Area, Gujarat, and Centre for Development of Advanced Computing (CDAC), Pune.

Duration of the Trip: 18-31 Jan 2016 (14 Days).

Purpose: To expose the students to technological equipment, artificial intelligence, machine translation and corpus development.

Courses Conducted

Postgraduate: MA

Semester I

General Linguistics; Morphology; Syntax I; Phonetics and Phonology and Socio -Linguistics.

Semester II

Semantics and Pragmatics; Ethnolinguistics; Advanced Syntax; Lexicology and Lexicography; Advanced Sociolinguistics.

Semester III

Structure of Austro-Asiatic Languages; Field Methods; Linguistic Structure of South Asian Languages; Language Planning and Policy; Language of N.E. India and Language Ideology.

Semester IV

Generative Phonology; Historical and Comparative Linguistics; Psycholinguistics; Translation Theory and Practice; Language Conflict and Resolution Studies.

MPhil/PhD Courses

Research Methodology; Current Trends in Linguistics; Current Trends in North East Linguistics and Advances in Natural Language Processing (Optional 1,2 & 3); Seminar Paper.

Seminars/Conferences/Symposia/ Workshops

Organized

South and South East Asia Conference on *Austro-Asiatic Languages* organized by the Department in collaboration with CIIL, Mysore, and ICSSR-NER, from 21 to 26 November 2016.

Workshop on South and South East Asia Conference on *Austro Asiatic Languages* organized by the Department in collaboration with NE and ICSSR-NER, from 23 to 26 November 2016.

Orientation programme for *ST Teachers of Meghalaya* organized by the Department in collaboration with CIIL, Mysore from 25 to 29 July 2016.

Attended

Prof. S. K. Singh

Presented papers entitled: (i) “Agenda and Road-map for Linguistic Diversity and Vitalization: Who bothers for Language Endangerment” at the national conference on *Language Diversity, Endangerment and Vitalization: Agenda and Roadmap*, National Law University (21 January 2017), and (ii) “Language Revitalization: Past, Present and Future” at the national seminar on *Indigenous and Endangered Languages-Concerns for Documentation and Revitalization*, Department of Linguistics, Berhampur University (18-19 March 2017).

Dr. S. A. Lyngdoh

Presented the following papers during the *South and South East Asia Conferences of Austro Asiatic Languages* organized by the Department in collaboration with NEC

and ICSSR-NER (21-22 November 2016): (i) “Phonological Correspondence between Standard Khasi and Pnar,” (ii) “Pohchnong and Pohskur: The Linguistic Distinctions in Pnar (A Preliminary Study)” jointly with Gamidalah War and Gordon D. Dkhar, and (iii) “The Syntax of Verb Phrase in Amsotai” jointly with Rymphang Rynjah and Marina Laltlinzo Infimate.

Barika Khyriem

Presented the following papers during the *South and South East Asia Conferences of Austro Asiatic Languages* organized by the Department in collaboration with NEC and ICSSR-NER (21-22 November 2016): (i) “Phonological Correspondence between Standard Khasi and Pnar” and (ii) “Phonological Structure of Pnar” jointly with Ruth Rymbai.

Presented a joint paper with Ruth Rymbai entitled “An Ethnolinguistic Study of Forms of Address in Khasi” at the international conference on *Understanding the Tribes of Asia* organized by the Department of History, Synod College, Shillong, in collaboration with P.A. Sangma Foundation.

Publications

Published in India

Lyngdoh, S. A. (2016). Katto katne shaphang ki kyntien. *Ka Dak Sah Kynmaw* (Unforgettable Impression) Quest for Knowledge. *Journal of the Society for Khasi Studies*, Shillong, p. 175-185.

Books

Singh, S.K., Lyngdoh, S. A. *et al*, editors. (2017). *Syntactic Typology: Language Contact and Convergence*. Eastern Book House, Guwahati, ISBN: 978-93-86-302-00-2.

- Singh, S.K. *et al*, editors. (2017). *Sphere of Indian Sociolinguistics*. Lakshi Book Publisher, New Delhi, ISBN: 978-93-82120-88-9.
- Singh, S.K., Kashyap, A.K., War, B., Lyngdoh, S.A., Khyriem, B., editors. (2017). *Fabric of Indian Linguistics*. Lakshi Book Publisher, New Delhi, ISBN: 938212017-3.
- Singh, S.K. *et al*, editors. (2017). *Translation: Try Thy Metaphor*. Lakshi Book Publisher, New Delhi, ISBN: 978-93-82120-90-2.
- Singh, S.K. *et al*, editors. (2017). *Ways with Language*. Lakshi Book Publisher, New Delhi.
- Singh, S.K. *et al*, editors. (2017). *Linguistic Ecology: Mizoram*. Eastern Book House, Guwahati, ISBN: 978-93-86302-19-9.
- Singh, S.K. *et al*, editors. (2017). *Bhasha, Samay aur Samvad*. Today and Tomorrow Publisher and Printers, New Delhi, ISBN: 81-7019-568 (India), ISBN: 1-55528-422-1 (USA).
- Book Chapters**
- Khyriem, B. (2017). Syllable structure in Khasi. In: *Fabric of Indian Linguistics*. S.K. Singh *et al* (Eds.). Lakshi Book Publisher, New Delhi. p. 117-131.
- Lyngdoh, S. A. (2016). Agreement in standard Khasi and its variety, Pnar. In: *Syntactic Typology: Language Contact and Convergence*. S.K. Singh *et al* (Eds.). Eastern Book House, Guwahati, p. 144-162.
- Lyngdoh, S. A. (2017). DP Movement in Khasi. In: *Fabric of Indian Linguistics*. S.K. Singh, S.A. Lyngdoh, A. K. Kashyap, B. War and B. Khyriem (Eds.). Lakshi Publishers and Distributors, New Delhi, p. 256-264.
- Singh, S.K. (2017). Bhasha, samay evam samvad ka sach. In: *Bhasha, Samay evam Samvad*. S.K. Singh, A. K. Tripathi and A. N. Singh (Eds.). Today & Tomorrows Printers and Publishers, New Delhi, p.1-20.
- Singh, S.K. (2017). Editorial. Translation. In: *Try Thy Metaphor*. S.K. Singh and Aparupa Dasgupta (Eds.). Lakshi Publishers, New Delhi, p. v-xiii.
- Singh, S.K. (2017). Enabling linguistic idiosyncrasy in anuvadaksh. In: *Try Thy Metaphor*. S.K. Singh and Aparupa Dasgupta (Eds.). Lakshi Publishers, New Delhi, p. 257-335.
- Singh, S.K. (2017). Language in the public space: A look into the linguistic landscape of Aizwal city. In: *Linguistic Ecology: Mizoram*. S.K. Singh *et al* (Eds.). Eastern Book House, Guwahati, p.126-137.
- Singh, S.K. (2017). Linguistic landscaping in North-east India: Trends and turns. In: *Spheres of Indian Linguistics*. S.K. Singh *et al* (Eds.). Lakshi Publishers, New Delhi, p.317-354.
- Singh, S.K. (2017). Sociolinguistics and alternative sociolinguistics under the new sun: Who needs what, where, how, whom, when, how and why. In: *Spheres of Indian Linguistics*. S.K. Singh *et al* (Eds.). Lakshi Publishers, New Delhi, p.355-369.
- Singh, S.K. Computational analysis of syntactic structure – SVO on L-TAG Parser: Towards morpho-syntactic performance (SVO to SOV). In: *Syntactic Typology: Language Contact and Convergence*. S.K. Singh *et al* (Eds.). EBHP, Guwahati, p. 62-73.
- Singh, S.K. (2017). Language maintenance and language shift in Sumi speech community in Nagaland. In: *Spheres of Indian Linguistics*.

Department of Linguistics

S.K. Singh *et al* (Eds.). Lakhsi Publishers, New Delhi, p. 547-570.

Singh, S.K. (2017). Bharat ka bhashai bhu-paridrishya: Saamayik evam sapekshik

sach. In: *Bhasha, Samay avam Samvad*. S.K. Singh, A. K. Tripathi and A. N. Singh (Eds.). Today & Tomorrow's Printers and Publishers, New Delhi, p. 21-43.

Research Projects

Ongoing: 1

Title of Project	PI/Co-PI	Funding agency	Rupees in lakh
LDRRTBLNEI	Dr Umarani Pappuswamy	UGC	12.49

Completed: 1

Title of Project	PI/Co-PI	Funding agency	Rupees in lakh
EILMT	Prof. S. K. Singh	MIT	78

Other Activities

Prof. S. K. Singh

Presented papers entitled: (i) "Preservation, Promotion and Technological Development of Indian Languages," Department of Linguistics, Lucknow University, UP, held on 25 May 2016, and (ii) "The Languages Spoken by the Underprivileged Communities and Mother Tongue Education" CIIL, Mysore (July16 -17, 2016).

Delivered a key note address as Chief Guest on development of Hindi, NERTS, on "Multilingualism as a Resource: The Need for Preservation of Linguistic Resources in India" held on 12-13 January 2017.

Resource person at: (i) Orientation programme for *ST Teachers of Meghalaya* organized by the Department in collaboration with CIIL, Mysore, from 25 to 29 July 2016, and (ii) Workshop on *South and South East Asia Conferences of Austro-Asiatic Languages* organized by the Department in

collaboration with NEC and ICSSR-NER (23-26 November 2016).

Dr. S. A. Lyngdoh

Resource person during the orientation programme for *ST Teachers of Meghalaya* organized by the Department in collaboration with CIIL, Mysore, from 25 to 29 July 2016.

Resource person at the workshop on *South and South East Asia Conferences of Austro Asiatic Languages* organized by the Department in collaboration with NEC and ICSSR-NER (23-26 November 2016).

Barika Khyriem

Resource person during the orientation programme for *ST Teachers of Meghalaya* organized by the Department in collaboration with CIIL, Mysore, from 25 to 29 July 2016.

Resource person at the Workshop on *South and South East Asia Conferences of Austro Asiatic Languages* organized by the Department in collaboration with NEC and ICSSR-NER (23-26 November 2016).

DEPARTMENT OF PHILOSOPHY

Head: Prof. X. P. Mao
Telephone: 0364-272 -3552
E-mail: hodphi@nehu.ac.in

Faculty: 8

Designation	Name and Qualification	Specialization
Professor (3)	Binod Kumar Agarwala, MPhil (Delhi), PhD (Lucknow)	Social and Political Philosophy, Ethics, Hermeneutics, Kant, Gadamer
	Vanlalnghak, MA (NEHU), PhD (IIT Kanpur)	Philosophy of Culture, Moral Philosophy, Analytic Philosophy
	Xavier P. Mao, MPhil (Delhi), MLet (Sydney), PhD, (NEHU)	Existentialism, Ethics Phenomenology, Philosophy of Post-Modernism, Philosophy of Religion
Associate Professor (2)	Prasenjit Biswas, MA & PhD (NEHU)	Phenomenology and Continental Philosophy, Philosophy of Mind, Philosophy of Tribes of NE India
	Laxminanrayan Lenka, MPhil & PhD (Hyderabad)	Analytic Philosophy, Philosophical Anthropology, Philosophy of Wittgenstein, Speech Acts, Western Epistemology
Assistant Professor (3)	E. Richard Tongper, MPhil & PhD (NEHU)	Philosophy of Religion, Philosophical Theology, Applied Ethics, Gandhian Philosophy
	Basil Pohlong, MA & PhD (NEHU)	Philosophy of Religion, Philosophical Anthropology, Philosophy of Culture, Ethics
	Uttam A. Sharma, MA (Manipur)	Logic and Epistemology

Thrust Areas of Research

Philosophy of Culture with special reference to the tribal thought of the North-Eastern region.

Brief Statement of Academic Activities

The Department offers the MA and PhD programmes. Forty-six students completed

their MA degree, and four students got the PhD degree. Faculty members of the Department are actively engaged in teaching and research programmes. They contributed a number of publications published in journals and book volumes, and participated in many seminars, conferences by chairing or presenting papers.

Department of Philosophy

Students' Profile

Enrolment Capacity: MA-56, PhD – Variable

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MA	16	40		53		03	33	23	56
PhD	02	03		04		01	02	03	05

Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MA	13	33		42		04	28	18	46
PhD		04		04			02	02	04

Students Awarded PhD Degree

Name of Student	Title of Thesis	Name of Supervisor
Ms. I. Sashirenla	Jurgen Habermas Discourse Ethics: An Analytical Study	Dr. P. Biswas
Rimeka Kurbah	Representationalism and Qualia: A Study of Percipient Consciousness	Dr. P. Biswas
Ms. Nilpadmini	Rabha Religion: A Critical Study	Prof. X. P. Mao
Mrs. Idahun Bareh	Traditional Religion and Culture of the Pnar: A Philosophical Analysis	Dr. B. Pohlong

Research Fellowships: 28

CSIR-UGC-NET	UGC Non-Net	National Fellowship for Higher Education	ICPR Fellowship
02	17	04	05

Courses Conducted

Postgraduate: MA

Semester I

Indian Metaphysics; Western Metaphysics; Symbolic Logic; Philosophy of Religion; Indian Philosophy of Language I.

Semester II

Ethics and Environment; Indian Epistemology; Western Epistemology; Indian Moral Philosophy; Indian Philosophy of Language II.

Semester III

Philosophy of Social Sciences; Phenomenology and Existentialism; Philosophy of Post Modernism I; Analytic Philosophy; Contemporary Philosophy of Religion; Tribal Thought and Culture.

Semester IV

Modernism and Responses; Philosophy of Culture; Philosophy of Post-Modernism II; Western Moral Philosophy; Applied Ethics; Philosophy of Wittgenstein.

PhD Courses

Research Methodology; Seminar Paper; Philosophy of Culture and Religion.

Seminars/Conferences/Symposia/Workshops

Attended

Prof. B. K. Agarwala

Presented papers on: (i) “Reflections on Possibility of Peace on the Basis of Dharma in the Bhagavadgītā” at the national seminar on *Conflict Transformation and Dharma of Peace Building: Contemporary Relevance in North East India* organized by the Department of Philosophy, Lady Keane’s College, Shillong (16-18 May 2017), (ii) “War and Peace: An Educational Approach of the Bhagavadgītā” at the international seminar on *Reconciliation, Conflict Transformation and Peace Initiatives: Contemporary Challenges in South Asia* organized by the Department of Philosophy, Lady Keane’s College, Shillong (28-29 November 2016), (iii) “Why Modern Mind Finds It Difficult to Understand Classical Indian Thinking” at the national seminar on *Teaching of Indian Philosophy in North-East India* sponsored by ICPR, New Delhi, organized by the Department on 15-17 June 2016, and (iv) “Gaps in Ramachandra Dattatraya Ranade’s Understanding of Connection of Bhagavadgītā with Vedic Upaniṣads and Saṃhitās: An Attempt to Fill Them Up” at the national seminar on *Prof. Ranade’s Contribution to Indian Philosophy: An Appraisal* organised by the Department of Philosophy, University of Allahabad (1-3 May 2016).

Delivered a keynote address and paper on “Values in Chapter XVI of the Bhagavadgītā” at

the UGC-sponsored national seminar on *Philosophy of Values: Its Relevance in Humanism* organized by the Department of Philosophy, Karmashree Hiteswar Saikia College, Guwahati (1-2 September 2016).

Prof. Vanlalngthak

Presented papers on: (i) “Akrasia or Weakness of Will: A Philosophical Reflection on Contemporary Moral Failure” organized by Shillong College, sponsored by ICPR, New Delhi, 14-15 July 2016, and (ii) “Tribal Religion, Ethics and Morality: With Special Reference to North-East India” during the ICPR-sponsored seminar on *Towards a Better Understanding of Indian Ethics and Religion: Some Contemporary Perspectives* organized by the Department of Philosophy, Assam University, Silchar, 27-29 March 2017.

Chaired an academic session of the *Round Table Conference on Tribal Worldviews: Concepts, Issues, Ideas and Concerns* organized by ICPR, New Delhi, in collaboration with NERC-ICSSR, Shillong, during 30 March 2016 to 1 April 2016. He also chaired an academic session at the international seminar on *Re-Learning to be Human for Global Times: Humanities and the Modern Predicament* organized by the Department of Philosophy and Religion, Visva Bharati University, Santiniketan, in collaboration with CRVP, Washington, USA (6-7 January 2017).

Prof. X. P. Mao

Presented papers on: (i) “Applied Ethics: Theatrical or Practical” at the Indian Philosophical Congress at Sanchi University, 12-14 February 2017, (ii) “Applied Ethics” at a national seminar held at Tripura University, Agartala, 20-22

Department of Philosophy

February 2017, (iii) “Religion, Morality and Human Society” at a national seminar held at Patkai Christian College, 24-25 February 2017, and (iv) “Dharma, Jnana and Karma in Indian Context” at a national seminar at Manipur University, 30-31 March 2017, (v) “Co-operation and not Confrontation in Peace Building” at an international seminar at Lady Keane’s College, Shillong (28-29 November 2016), and (vi) “The Teaching of Indian Philosophy in North-East India” at a national seminar organised by the Department on June 15-17, 2017.

Chaired a session at the *Asian Philosophy Conference* held at Sachi University, Madhya Pradesh (11 February 2017).

Dr. Prasenjit Biswas

Presented a paper entitled “Derrida Concept Metahors and Davidson’s Metapropic Metahors” at *30 years after a Nice Derangement Conference* held at the Department of Philosophy, University of South Florida, USA, 18-19 November 2016.

Dr. B. Pohlong

Presented papers entitled: (i) “Ecological Crisis and Ethical Sustainability” at the national seminar on *Issues in Contemporary Society: Rights, Duties and Sustainability in Search of Harmony* organised by the Department of Philosophy, Shillong College, 14-15 July 2016, and (ii) “The Concept of Tribe and Tribal Identity: A Story on Khasi” at the ICPR-sponsored seminar on *Philosophy of Sustainability: Revisiting the Tribal Life and Culture in the North East India* organized by the Shantigiri Foundation, Kerala, in collaboration with the Department during 28-29 September 2016.

Chaired a session of the *South and South-East Asian Conference on Austro-Asiatic*

Languages organized by the Department on 21 November 2016.

Mr. A. U. Sharma

Presented papers entitled: (i) “God’s Escape: A Conjecture of Spiritual Dissolution of Religious Conflicts” at the international seminar on *Reconciliation, Conflict Transformation and Peace Initiatives: Contemporary Challenge in South Asia* (28-29 November 2016), and (ii) “Mountains are Just Mountains - Yet, the Finger is not the Moon” at the ICPR-sponsored-national seminar on *Teaching of Indian Philosophy in North East India* held on 15-17 June 2017 at NEHU, Shillong.

Publications

Published in India

Agarwala, B. K. (2016). Systems of thoughts of hill tribes of North East India: Have they achieved the status of philosophy? *NEHU Journal*, XIV(2):1-16.

Agarwala, B. K. (2016). The Anugītā as a gloss on the Bhagavadgītā – Part 1: The origin of erroneous exegetical tradition of the Bhagavadgītā. *Journal of Indian Council of Philosophical Research*, 33(3):407-431.

Agarwala, B. K. (2016). Thought of *Bhagavadgītā* and *Savarnā* in contemporary Dalit discourse: An alternative understanding of the legacy of Ambedkar Part 1: Understanding contemporary Dalit discourse. *Madhya Bharati*, 70: 229-271.

Agarwala, B. K. (2016). Thought of *Bhagavadgītā* and *Savarnā* in contemporary Dalit discourse - An alternative understanding of the legacy of Ambedkar Part 2: What is the strength of *Savarnas*, which is derived

from the Bhagavadgātā. *Madhya Bharati*, 71: 218-233.

Agarwala, B. K. (2017). The Anugātā as a gloss on the Bhagavadgātā-Part II: Comparison of a few themes in the two texts. *Journal of Indian Council of Philosophical Research*, 34 (1):51-73.

Biswas, P. (2016). Mizo selves: Alienated or grounded? *Journal of Northeast Indian Cultures*, 3(1):128-38.

Biswas, P. (2016). Arguing for an open world of phenomenology. *Gauhati University Journal of Philosophy*, 1(1):151-55.

Lenka, L. (2015). If belief closure fails then knowledge closure fails. *Philosophical Papers: Journal of the Department of Philosophy, University of North Bengal*, XI:1-6.

Lenka, L. (2016). Śabda as linguistic analysis: an exposition of Ganeswar Misra's analysis of *Sat Chit Ananda Ravenshaw*. *Journal of Philosophy*, II: 74-79.

Published Abroad

Biswas, P. (2016). A Cauldron of ethocracies in India. *The Dawn*, Karachi, <https://www.dawn.com/news/1285100>.

Gogoi, S., Biswas, P. (2016). Vililante patriots in Assam. *Faculty of Arts and Social Sciences Newsletter*, National University of Singapore, Singapore, <https://blog.nusedu.sg/fassnews/2016/page/2>.

Books/Book Chapters

Agarwala, B. K. (2016). Politics of ethnicity, indigenization and the public sphere: A theory of the praxis of politics in Northeast India. In: *Globalization and Cultural Pluralism: Challenges and Possibilities*, S.

Varghese (Ed.). Akansha Publishing House, Delhi, p.79-123.

Biswas, P. (2016). Unveiling the transhuman: Dialetheia in cultural studies. In: *Perspectives in Cultural Studies*. D. P.Nath and P. Dutta (Eds.) Purbanchal Prakash, Guwahati, Chapter 4, p.55-78.

Biswas, P. (2017). *Between Philosophy and Anthropology: Aporias of Thought, Language and Consciousness*. Notion Press, Chennai, ISBN-10-1946641979; 13:1946641977.

Mao, X. P. (2017). Human right and morality. In: *Human Rights in Nagaland*. Heritage Publishing House, Dimapur.

Honours/Awards/Recognitions

Dr. Prasenjit Biswas

Editor of a special issue of the *Journal Asian Ethnicity* on "Framing North East India Studies: A Transdisciplinary Discipline in the Making."

Other Activities

Prof. Vanlalnghak

Delivered an invited lecture on *Philosophy, Ethics and Applied Ethics* at St. Mary's College, Shillong (11 July 2016).

Prof. X. P. Mao

Delivered (i) *Usha Battacharji Memorial lecture* at Lady Keane's College, Shillong, on 8 September 2016, (ii) two lectures on "Human Ecology" at the college of the Atlantic, USA (15 -16 September 2016), and a lecture on "The Significance of Philosophy" at Women's College, Shillong (30 June 2016).

Department of Philosophy

Dr. Prasenjit Biswas

Visiting Fellow in spells at North East Indian Studies Programme, Jawaharlal Nehru University, from 1 November to 31 March 2017.

Attended the Faraday Institute of Science and Religion Cambridge University summer courses on “Science and Religion” (3-8 July 2016), and a short-term course on “Reality, Robots and Religion” (16-18 September 2016) at Cambridge University, Cambridge, UK. He also attended: (i) Centre for Advanced Research in Humanities, Cambridge University Conference

on ‘Biopolitics and Psychosomatics: Participating Bodies’ held on 8 July 2016, and (ii) Conference on “Idealism and Metaphilosophy of Mind,” University College, London (15-16 September 2016).

Dr. L. N. Lenka

Delivered two lectures on “Peace and Practical Vedānta” during the refresher course in *Studies in Peace and Conflict* organized by UGC-HRDC, University of North Bengal, Silliguri (17 January 2017).

Delivered an invited talk on “Speech Acts” at the Department of Philosophy, University of North Bengal, Silliguri (17 January 2017).

IV

SCHOOL OF HUMAN AND ENVIRONMENTAL SCIENCES

Dean: Prof. Debendra Kumar Nayak
Telephone: 0364-2723221 (O)
Fax: 0364-2550040
Email: dknak@rediffmail.com

The School of Human and Environmental Sciences comprises five departments, namely Anthropology, Environmental Studies, Geography, Horticulture and Rural Development and Agricultural Production. The following report listing academic activities undertaken by each of these departments provides a graphic account of diverse academic activities undertaken by these departments.

As many as 26 research scholars were awarded the PhD degree while 17 more received their MPhil degree. The research profile looks bright with most faculty members from across the departments publishing research papers in well-known journals published from India and abroad. Faculty members of the school published 61 research papers in journals published from

India and 10 papers in journals published abroad. They contributed some 33 papers as book chapters and published two books. Several collaborative research programmes have been undertaken across the departments during the year under report. Academic collaborations have been initiated with the University of Alaska, Syracuse; NTU, Singapore; RFBR, Moscow, CAIAG, Kyrgyzstan; universities and academia in Poland and Japan.

Three of the five departments have conducted field work and study tours for the post-graduate students. Dr. Martin J. Ossewaarde, Language and Culture Trainer at Komensky Consultancy, Pune delivered a talk at a school level extra-mural lecture on “Sustainability for Change Makers: The Time is Now” on 28 February 2017.

Department of Anthropology

DEPARTMENT OF ANTHROPOLOGY

Head: Prof. Lucy Zehol
Telephone: 0364-2723105 (O)/9436118429 (M)
E-mail: lzehol@yahoo.com

Faculty: 11

Designation	Name and Qualification	Specialization
Professor (4)	T. B. Subba, MPhil & PhD (N.Bengal) - On lien as Vice-Chancellor of Sikkim University	Cultural Anthropology (Migration, Development, Diaspora)
	H. Lamin, MPhil & PhD (NEHU)	Cultural Anthropology (Medical Anthropology and Economic Anthropology)
	R. Khongsdier, MPhil & PhD (NEHU)	Biological Anthropology (Health and Nutrition, Demography and Population Genetics)
	L. T. V. Zehol, MPhil & PhD (NEHU)	Cultural Anthropology (Ethnicity, Development, Anthropology of Women and Gender)
Associate Professor (4)	D. K. Limbu, MPhil & PhD (NEHU)	Biological Anthropology (Population Genetics, Dental Anthropology, Demography)
	V. Pakyntein, MA (NEHU), MPhil (Delhi Univ)	Cultural Anthropology (Matrilineality, Gender Issues and Socio-Cultural Change)
	B. Langstieh, MSc (NEHU), PhD (ISI, Calcutta)	Biological Anthropology (Anthropo-genetics, Molecular Anthropology, Demography, Human Ecology, Aging, RCH)
	G. Ranjan, MA & PhD (Lucknow Univ)	Cultural Anthropology (Tribal Development, Ethnography, Literary Anthropology, Anthropology of Politics)
Assistant Professor (3)	J. W. Dkhar, MPhil & PhD (NEHU)	Biological Anthropology (Growth and Nutrition)
	Q. Marak, MA (Gauhati), PhD (NEHU)	Archaeological Anthropology (Food Studies, Material Culture, Archaeology of Northeast India)
	S. Ghosh, MSc & PhD (Delhi)	Biological Anthropology (Human Adaptation and Physiology)

Thrust Areas of Research

The Department trains and creates expertise in Cultural and Biological Anthropology. It is the only department in North-East India with equal strength of faculty in these two major fields of anthropology. Its mission is to contribute to the betterment and well-being of society, particularly in North-East India, by carrying out researches on biological aspects (such as population genetics, human growth and nutrition, nutritional anthropometry, demography, reproductive and child health) and socio-cultural aspects (like identity and ethnicity, development, women and gender issues, ethno medicine, food, and socio-cultural change).

Brief Statement of Academic Activities

The Department offers specialization in Cultural and Biological Anthropology with broad orientation to Archeology and Linguistic Anthropology. It enrolled thirty students for the MA/MSc programmes and five students for the PhD programme during the current year. Twenty-seven students completed their MA/MSc and eleven students were awarded the PhD degree. The Department completed two national projects: (1) “The Garo House: Traditional Craftsmanship and Cultural Expressions” and (2) “The Art of Pottery Making in Garo Hills, Meghalaya” both sponsored by the the Sangeet

Natak Akademy, New Delhi. The Department also coordinated the project “An Exploratory Study on the Socio-Economic Status and Problems of Single Mothers in Meghalaya” with the Meghalaya State Commission for Women, Government of Meghalaya, from June 2016 to May 2017.

The Department is collaborating one international project on “A Dental Morphometric Examination of the Distinctiveness and Affinities of Austro-Asiatic- and Tibeto-Burman-speaking Ethnic Groups of South Asia” with Dr. Brian E. Hemphill of the Department of Anthropology, University of Alaska, USA. The Department is also undertaking two projects titled “Pattern of Hearing Loss and Inheritance among Rural Population of Pynursla Block, Meghalaya” sponsored by NEIGRIHMS/ICMR, and “Documentation of Endangered Material Culture of the Garos of Meghalaya” in collaboration with the Anthropological Survey of India, Ministry of Culture and Tourism, Government of India, North-East Regional Centre, Shillong.

The Department organized a one-day interactive session with the faculty and students of the Department of Anthropology, Cotton College State University, Guwahati, on 15 February 2017. The faculty of the Department published twenty-two publications including two books during the year under report.

Students’ Profile

Enrolment Capacity: MA/MSc – 30, PhD -Variable

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MA/MSc	08	22		28		02	06	24	30
PhD		05		05				05	05

Department of Anthropology

Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MA/MSc	08	19		26	01		07	20	27
PhD	07	04		09	01	01	03	08	11

Students Awarded PhD Degree

Name of Student	Title of Thesis	Name of Supervisor
Mr. Gideon Jajo	An Anthropological Study on HIV/AIDS Related Stigma and Discrimination among the Tangkhuls of Manipur	Prof. H. Lamin
Mr. James V. Haokip	Growth of Body Dimensions and Nutritional Status among the Thadou Kukis of Chandel District, Manipur	Prof. R. Khongsdier
Mr. Chintu S. B. Marak	Dental Morphology among the Garo of Meghalaya	Dr. D. K. Limbu
Ms. Mornrina J. Nongkynrih	Body Composition, Health and Nutritional Status among the Khasi Adults of Meghalaya	Dr. J.W. Dkhar
Ms. Humyra Anjum	Body Composition and Health Status among the Muslim Adults of Shillong	Prof. R. Khongsdier
Ms. Asui Nsarangbe	Biosocial Proximates of Fertility and Child Mortality among the Khasis of Shillong	Dr. D. K. Limbu
Mr. Raphael Toppo	Traditional Institutes of Governance and Development: A Study among the Oraons of Jharkhand	Prof. H. Lamin
Mr. Aaron Lungleng	Ethnomedical Practices among the Tangkhul Naga of Manipur	Prof. H. Lamin
Ms. Teresa L. Khawzawl	Decision Making at Household Level: A Study of Hmars in Dima Hasao District, Assam	Prof. L. Zehol
Mr. Robert Angkang Shimray	Tobacco Consumption among the Tangkhul Youths of Ukhrul District: An Anthropological Study	Prof. L. Zehol
Mr. Charaibou Daimai	Folk Music and Dance of the Liangmai Tribe of Manipur and Nagaland: An Anthropological Study	Dr. G. Ranjan

Placement of Students

Three PhD Students were appointed Assistant Professors, namely Dr. Teresa Khawzawl in

the Department of Anthropology, Cotton State University, Gauhati, Assam; Dr. Samson Singh and Dr. Charishma Lepcha in the Department of Anthropology, Sikkim University, Sikkim.

Research Fellowships: 23

CSIR-UGC-NET	UGC Non-Net	National Fellowship for Higher Education (NHFE)
04	10	09

Fieldwork/Educational Tour of Students

Fieldwork Teacher-in-Charge: Dr. D. K. Limbu.

Places Visited: Nongkohlew and Mawsiatkhniam Villages, East Khasi Hills.

Duration of Tour: 21 Days (20 January 2017 to 9 February 2017).

Purpose of Tour: Ethnographic field work for students' dissertation.

Educational Teachers-in-Charge: Dr. Q. Marak and Dr. J. W. Dkhar.

Places Visited: Thiruvananthapuram and Goa.

Duration of Tour: 14 days (28 December 2016 to 10 January 2017).

Courses Conducted

Postgraduate: MA/MSc

Semester I

Introduction to Anthropology; Archaeological Anthropology; Biological Anthropology; Social and Cultural Anthropology; Linguistic Anthropology.

Semester II

Palaeo-anthropology; Prehistoric Cultures; Material Culture and Museum Method; Human Ecology and Adaptation (Open); Anthropology of North East India (Open).

Semester III

Anthropology of India; Medical Anthropology; Field Work Methods and Techniques; Demography; Anthropology of Gender (Open);

Human Genetics; Practical in Biological Anthropology I; Human Growth and Body Composition (Open).

Semester IV

Theories in Anthropology; Development Anthropology; Economic Anthropology; Biostatistics; Dissertation and *Viva-Voce*; Biocultural Anthropology; Dental Anthropology; Practical in Biological Anthropology II.

PhD Courses

Research Methodology in Anthropology; Recent Developments in Social and Cultural Anthropology; Advanced Studies in Biological Anthropology; Review of Literature and Seminar.

Seminars/Conferences/Symposia/Workshops

Attended

Dr. R. Ranjan

Presented a paper on: (i) "Child Labour in Coal Mines: Practice, Intervention and Outcome" at the national seminar on *Child Rights and Child Protection* organized by the All India Rights Organization, Lucknow (11 November 2016), (ii) "Of Open Border and its Ramifications: The Case of India-Nepal Border" at the international conference on *Politics, Society and Culture in South Asia* organized by the Department of Sociology, University of Lucknow (3-5 March 2017), (iii) "Being a Team Member: An Anthropologist in a Developmental Network" at the national seminar on

Department of Anthropology

Anthropology and Public Development Policy: Issues and Challenges organized by the Department of Anthropology, Rajiv Gandhi University, and IGRMS, Bhopal (17-18 March 2017), and (iv) “Giving Meaning to Evidence: The Role of Different Stakeholders in Criminal Justice System” at the national conference on *Forensic Science in the Service of Mankind* organized by the Department of Anthropology, University of Lucknow, Lucknow (23-24 March 2017).

Ms. V. Pakyntein

Presented a paper on “Pamiawmusiang: Rituals and Environment” at the seminar on *Environmental Anthropology Today: Challenges and Road Ahead* organized in honour of Prof. Subhadra Channa by the Department of Anthropology, University of Delhi, Delhi (27 October 2017).

Dr. B. T. Langstieh

Delivered an invited talk on “Molecular Anthropological Insight into the “Khasi”” at the international conference on *Austro-Asiatic Languages in South and South-East Asia*, Shillong (22-23 November 2016).

Dr. J. W. Dkhar

Presented a paper on “The Impact of Interim National Green Tribunal Ban on Coal Mining in Meghalaya” at the national seminar on *Social and Economic Impact of NGT Ban on Coal Mining with Special Reference to East Jaintia Meghalaya* organized by Jaintia Eastern College, East Jaintia Hills, Khliehriat (28-29 November 2016).

Dr. Q. Marak

Presented the following papers: (i) “Megaliths of Jaintia Hills: A Living Tradition” at the national seminar on *Recent Trends in*

Archaeology of Assam: From Prehistoric Period Onwards organized by the Directorate of Archaeology, Assam, in collaboration with Haflong Government College, Haflong (19-25 November 2016), (ii) “Of the People and by the People: Working towards a Bottom-up Cultural Model for Sustainability” at the international colloquium on *Value-based Approach to Sustainable Development* organized by the International Centre for North-East Studies, Synod College, Shillong (15-17 November 2016), (iii) “Prehistory of Jaintia Hills” at the national symposium on *Archaeological Researches in Northeast India: Recent Trends and Future Prospects* organised by the Archaeological Survey of India (Guwahati Circle), and the Department of Archaeology, Cotton College State University, Guwahati (25 November 2016), (iv) “The Language of the Spirits: Understanding Its Symbolism through the Garo World View” at the national workshop on *Translating the Oral Resources of Some Oral Communities in North-East India* organized by the Departments of English and Khasi, NEHU, and others at New NEHU Guest House, Shillong (24-25 February 2017), (v) “The Relevance of Mahari: A Look at the Present Status of Garo Matriliney” at the national seminar on *North East Since 1947 with Special Reference to Society, Economy and Polity in Meghalaya* organized by the Department of Political Science, NEHU, and Omeo Kumar Das Institute of Social Change, Guwahati, at ICSSR-NERC, NEHU (16-17 March 2017), and (vi) “Gods and Goddesses of the Fields: Understanding Rituals and Practices of the Garos” at the national seminar on *Cultural Heritage of Meghalaya* organised by IGRMS, Bhopal (21-22 March 2017).

Publications

Published in India

- Doisiammoi, Marak, Q. (2016). Drug ethnography: Problems of doing fieldwork among tribal women in Manipur, India. *Bulletin of the Department of Anthropology, Gauhati University*, 17: 40-49.
- Hoineilam, K., Langstieh, B. T. (2016). An ethnographic profile of the Thadou-Kuki, Senapati District, Manipur. *Anthropology Today: An International Peer Reviewed NEIRA Journal*, 2 (1): 63-87.
- Limbu, D.K., Marwein, L.D. (2016). Anthropometric characters of the Sakacheps of the Saitsama village, Meghalaya. *Spectrum*, 3: 19-34.
- Limbu, D.K., Saikia, S. (2016). Eruption of permanent teeth among the Khasi children of Shillong, Meghalaya. *Spectrum*, 3: 97-109.
- Meitei, A. M., Marak, Q. (2016). Giant stones: A study on the significance of Menhir(s) in Jaintia Hills, Meghalaya, India. *Nritattv: The Anthropology*, 8(11): 33-48.
- Sezolu, K., Langstieh, B. T. (2016). Functional competence among the Chakhesang elders. *Indian Journal of Gerontology*, 30(4): 470-480.
- Upadhyay, R., Ranjan, G. (2016). Occupational risks in mining: The case of Nepalese migrant workers in the coal mines of Jaintia Hills, Meghalaya. *The Oriental Anthropologist*, 16(1): 87-98.

Published Abroad

- Ghosh, S., Dosaev, T., Prakash J., Livshits, G. (2017). A comparative analysis of association between body composition and blood pressure in two ethnically diverse populations. *American Journal of Physical Anthropology*, 162 (4): 701-714.

- Limbu, D.K., Khongsai, L., Syiemlieh, S. (2016). Eruption of permanent teeth among the Deori boys of Mahadevpur Deori village of Arunachal Pradesh. *Imperial Journal of Interdisciplinary Research*, 3:157-159.

Edited Books

- Khongsdier, R., Sengupta, S., editors. (2017). *People of North East India: Bio-Cultural Dimensions*. Kalpaz Publications, New Delhi, ISBN: 978-93-5128-238-9.
- Marak, Q., editor. (2016). *Doing Autoethnography*. Serials Publications, New Delhi, ISBN: 978-8183876728.

Book Chapters

- Ghosh, S., Dawhuo, T. (2017). Association between somatotype components and body mass index: Case study of the adult Bhoi Males, In: *People of North East India: Bio-Cultural Dimensions*, R. Khongsdier and Sarthak Sengupta (Eds.). Kalpaz Publications, New Delhi, Chapter 9, p. 135-148.
- Khongsdier, R. (2017). Social and legal consequences of admixture in matrilineal tribes of Meghalaya. In: *People of North-East India: Bio-Cultural Dimensions*. R. Khongsdier and S. Sengupta (Eds.). Kalpaz Publications, New Delhi, Chapter 5, p. 83-98.
- Lalnuneng, A., Khongsdier, R. (2017). The effects of the interaction of household income with age and sex on BMI among the Pnars of Nangbah village in Jaintia Hills of Meghalaya. In: *People of North-East India: Bio-Cultural Dimensions*. R. Khongsdier and S. Sengupta (Eds.). Kalpaz Publications, New Delhi, Chapter 8, p. 123-134.

Department of Anthropology

- Marak, Q. (2016). Of gods and goddesses: Agricultural rituals of the Garos of Meghalaya. In: *People of North East India: Bio-Cultural Dimensions*. R. Khongsdier and S. Sengupta (Eds.). Kalpaz Publications, New Delhi, Chapter 12, p.183-200.
- Marak, Q. (2017). People, societies and cultures in Meghalaya: A review of anthropological researches from the beginning to recent times. In: *Social Science Researches in North East India*. K. Jose and B. Das (Eds.). DVS, Guwahati, Chapter 15, p. 288-312.
- Marak, Q., Kalita, J. (2017). Hunting ethnography: Narratives of hunting from Bolung Village, Arunachal Pradesh. In: *Contemporary Anthropological Research in Eastern and North Eastern India*. S. Sengupta (Ed.). Gyan, New Delhi, Chapter 7, p.101-114.
- Pakyntein, V. (2017). Dynamics of gender roles in Khasi-Pnar matrilineality. In: *People of North-East India: Bio-Cultural Dimensions*. R. Khongsdier and S. Sengupta (Eds.). Kalpaz Publications, New Delhi, Chapter 3, p. 45-62.
- Ranjan, G. (2016). Cast in a caste. In: *Doing Autoethnography*. Queenbala Marak (Ed.). Serials Publications, New Delhi: Chapter 8, p. 151-167.
- Ranjan, G., Kapesa, A. (2017). Transitions in the traditional institutions of a Mao Naga village: An ethnographic exploration. In: *People of North-East India: Bio-Cultural Dimensions*. R. Khongsdier and S. Sengupta (Eds.). Kalpaz Publications, New Delhi, Chapter 4, p. 63-82.
- Upadhyay R., Ranjan, G. (2017). Return of the Nepalese migrants working in the coal mines of Jaintia Hills Meghalaya. In: *Contemporary Anthropological Research in Eastern and North Eastern India*. Sarthak Sengupta (Ed.). Gyan, New Delhi, Chapter 16, p. 237-258.
- Zehol, L. (2017). The construction of gender in the Northeast: An anthropological critique. In: *People of North-East India: Bio-Cultural Dimensions*. R. Khongsdier and S. Sengupta (Eds.). Kalpaz Publications, New Delhi, Chapter 2, p. 31-44.

Fund Received from Agencies including NEHU/UGC

Non-Plan: Rs. 5.30 lakhs

Plan (2012-17): Rs.15.00 lakhs

Research Projects

New: 2

Title of Project	PI/Co-PI	Funding Agency	Rupees in lakh
Documentation of Endangered Material Culture of the Garos of Meghalaya	Dr. Q. Marak	Anthropological Survey of India	5.00
Pattern of Hearing Loss and Inheritance among Rural Population of Pynursla Block, Meghalaya	Dr. B. Langstieh (Co- PI) & Dr. A. Bhatia, NEIGRIHMS, Shillong	NEIGRIHMS/ICMR	1.90

School of Human and Environmental Sciences

Ongoing: 1

Title of Project	PI/Co-PI	Funding Agency	Amount (\$)
A Dental Morphometric Examination of the Distinctiveness and Affinities of Austro-Asiatic- and Tibeto-Burman-speaking Ethnic Groups of South Asia	Dr. B. Langstieh (Co-PI) & Dr. Brian E. Hemphill (PI), University of Alaska, Fairbanks, USA.	Fulbright-Nehru Senior Research Fellowship and College of Liberal Arts, University of Alaska, Fairbanks, USA.	5,000 plus

Completed: 2

Title of Project	PI/Co-PI	Funding Agency	Rupees in lakh
The Garo House: Traditional Craftsmanship and Cultural Expressions	Dr. Q. Marak	Sangeet Natak Akademi.	0.75
The Art of Pottery Making in Garo Hills, Meghalaya	Dr. Q. Marak	Sangeet Natak Akademi.	0.50

Academic Collaborations

Dr. B. T. Langstieh collaborated with Dr. Brian E. Hemphill, Department of Anthropology, College of Liberal Arts, University of Alaska, USA, on *Dental Morphometric Examination of the Distinctiveness and Affinities of Austro-Asiatic- and Tibeto-Burman-speaking Ethnic Groups of South Asia*.

Dr. Sudipta Ghosh collaborated with the Department of Anthropology and the Department of Exercise Science, Syracuse, New York, USA, on *Natural Selection and Genes Determining Higher Arterial Saturation in Tibetan Monpa*.

Ms. V. Pakyntein collaborated with the Meghalaya State Commission for Women (MSCW), Government of Meghalaya on the project - *An Exploratory Study on the Socio-economic Status and Problems of Single Mothers in Meghalaya*.

Honours/Awards/Recognitions

Prof. R. Khongsdier is a member of the Editorial Boards of the *Journal of Life Sciences*, *Indian Journal of Research in Anthropology*, and the *Anthropologist*. He is also a Member of Meghalaya State Level Scrutiny Committee for Scheduled Tribes, Government of Meghalaya.

Dr. Sudipta Ghosh is a member of the Editorial Board of the *Wyno Academic Journal of Biological Sciences*.

Other Activities

Prof. R. Khongsdier

Visitor's Nominee for Selection Committee of the School of Human Sciences, Sikkim University, Gangtok.

Member of Board of Post-Graduate Studies in Anthropology, Rajiv Gandhi University, Arunachal Pradesh.

Department of Anthropology

Prof. L. Zehol

As a resource person delivered a lecture on “Hazards-Risk Perspective and Their Management: An Anthropological Overview” at the refresher course in *Earth Science and Geography* organised by the Department of Geography, NEHU (2 December 2016), and served as a reviewer for the *Asiatic Journal of Social Sciences*.

Dr. B. T. Langstieh

As a resource person delivered a lecture on “Perspective of Anthropogenic Hazards and Their Management” at the refresher course in *Earth Science and Geography* organized by the Department Geography, NEHU (5 December 2016), and served as a reviewer for the *Journal of Indian Anthropological Society*.

Ms. V. Pakyntein

As a representative of Meghalaya State Commission for Women, she attended the Regional Consultation on the “Draft National Policy for Women 2016” at Assam Administrative Staff College, Khanapara (27 June 2016). She also attended the regional consultation on “Gender in North East India: A Social, Economic and Political Analysis” at the Office of the National Commission of Women, New Delhi (20-21 July 2016).

Delivered a talk on “Work- Life Balance” organized by Women’s Cell, Shillong College, Shillong (9 December 2016). Also participated as a resource person at the Symposium on *Ka Long-kur Ka Long-kha Ha Ka Jaidbynriew* organized by Ka Kur Ryntathiang, Shillong (January 21, 2017).

Dr. Q. Marak

Was a reviewer for *Journal of Indian Anthropological Society*.

Dr. Sudipta Ghosh

Presented a paper titled “A Comparative Study on Exhaled Nitric Oxide amongst High and Low Altitude Indigenous Populations” at the Department of Anthropology, University of Michigan, Michigan, USA (17 January 2017). She also delivered a lecture on “Living High: The Science of Adaptation to High Altitude in Populations from Peru and North-East India” at the South Asian Centre, Maxwell School, Syracuse University, New York, USA (February 21, 2017).

Visiting Research Scholar at the Department of Anthropology, Maxwell School of Citizenship and Public Affairs, Syracuse University, New York, USA (20 September 2016 to 30 May 2017).

DEPARTMENT OF ENVIRONMENTAL STUDIES

Head: Prof. Devesh Walia
Telephone: 0364-272-1150 (O)/91-9436163641 (M)
E-mail: hodces@nehu.ac.in, deveshwa@gmail.com

Faculty: 6

Designation	Name and Qualification	Specialization
Professor (5)	Lalit Kumar Jha, MSc (Bhagalpur), PhD (LNMU)	Forestry, Forest Laws and Rural Development
	B. K. Tiwari, MSc (Gorakhpur), PhD (NEHU)	Natural Resource Management
	O. P. Singh, MSc (BHU), PhD (BHU)	Environmental Monitoring and Remediation of Degraded Ecosystems
	Devesh Walia, MTech (Dr HSG), PhD (Gauhati Univ)	Magnetotelluric, GPS, Seismotectonics, Radon Monitoring Studies in NER
	D. Paul, MSc & PhD (NEHU)	IPM, Biopesticides
Assistant Professor (1)	S. S. Chaturvedi, MSc (Gorakhpur Univ), PhD (BHU)	Environmental Monitoring and Abetments and Environmental Biology

Thrust Areas of Research

Natural resource management, environmental monitoring and remediation of degraded ecosystems, forest management, forest biodiversity monitoring and management, land reclamation (social/agro forestry) and rural development, forests policy and law, environmental impact assessment, environmental biology, integrated pest management, policy oriented research on forest and environment and watershed management, magnetotelluric studies, global positioning system studies and micro-seismicity, radon activity concentration in the North-Eastern Region, earthquake forecasting research and impact of seismicity on infrastructure.

Brief Statement of Academic Activities

The Department took part in several international and national workshops, seminars, and training programs. It undertook research projects aimed at creating much-needed database for promoting ecologically sound and sustainable development of the hill regions in North-East India. The Department also contributed towards configuring the deeper crustal structure for understanding crustal evolutionary processes, global positioning system and seismicity of North-East India along with the radon activity concentration. The Department received grants from various external funding agencies for strengthening the on-going research and extension activities and for developing laboratories and other infrastructure.

Department of Environmental Studies

Students' Profile

Enrolment Capacity: MSc-25, PhD -Variable

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MSc	13	11		21		03	11	13	24
PhD	04	08	01	08		03	06	06	12

Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MSc	14	11		21		04	21	04	25
PhD		01		01			01		01

Students Awarded PhD Degree

Name of Student	Title of Thesis	Name of Supervisor
Ms. Marbakor Mary Lynrah	Regulation of Hydrological Processes and Conservation of Soil by Pine Forest in Khasi Hills, Meghalaya	Prof. B.K. Tiwari

Research Fellowship

CSIR-UGC-NET	UGC Non-Net	National Fellowship for Higher Education
02	04	04

Educational Tour of Students

Teacher-in-Charge: Professor Devesh Walia.

Places/Institutions Visited: New Delhi (Nehru Planetarium, Nuclear Centre, Meteorological Department, Qutub Minar, Delhi Zoo), Dehradun (GEOPIC, KGMPIE (ONGC), Wadia Institute of Himalayan Geology, Indian Institute of Remote Sensing, Kempti Falls, Forest Research Institute, Sahastradhara, Police Headquarters for interaction with the SP on Environmental Laws), Agra (Fathepur Sikri, Taj Mahal, Red Fort), Jaipur (Janta Mantar, Amber Fort, Hawa Mahal).

Duration of Tour: 15 days (25 January 2017 to 08 February 2017).

Purpose of Tour: To understand the importance of the places of visit and their relevance and contribution with special reference to environmental sciences.

Courses Conducted

Postgraduate: MSc

Semester I

Environment, Ecology and Ecosystem Dynamics; Environmental Pollution; Forestry and Water Resources.

Semester II

Environmental Microbiology; Biotechnology and Toxicology; Environmental Impact Assessment and Environmental Policies; Remote Sensing and Geographical Information System; Environmental Law.

Semester III

Disaster Management; Environmental Geoscience and Energy; Environmental Issues and Problems of North East India; Research Methods, Techniques and Statistical Analysis.

Semester IV

Environmental Economics and Sociology; Forest Management and Biodiversity.

PhD Courses

Research Methodology in Environmental Science; Contemporary Environmental Science.

Seminars/Conferences/Symposia/Workshops

Organized

National seminar on *Earth System Sciences for Causes Responses and Mitigation Strategies for Climate Change* on 5-7 January 2017, Department of Geology, Sri Venkateswara University, Tirupati. *Coordinator*: Prof. Devesh Walia.

Inception meeting-cum-workshop for preparation of the *State of Environment Report of Mizoram* on 31 May 2016 in Aizwal, Mizoram. *Coordinator*: Prof. O. P. Singh.

International Earth Sciences Olympiad (IESO) 2017 Entrance Test on 22 January 2017, Army Public School, Shillong. *Coordinator*: Prof. Devesh Walia.

Training programme on: (1) *Bio-Engineering Measures for Controlling Landslides and Geo-Environmental Issues by Vetiver Grass* at NEHU, Shillong (21-23 February 2017), and (2) *Disaster Management and Fire Safety in Hospital* at NEIGRIHMS, Shillong (20-22 February 2017). *Coordinator*: Prof. Devesh Walia.

Attended

Professor B. K. Tiwari

Attended: (i) Seminar on *Transforming Rural Areas in North East India: Vision for Future* and presented a plenary lecture on “Impact of Climate Change in North East” on 8-9 March 2016 at NIRD & PR, Guwahati, (ii) IUCN Roundtable on *Bonn Challenge and Restoration in India* on 16 March 2016 in New Delhi, and lead one of the working groups presented at the workshop, (iii) INSA Symposium on *Ecology and Biodiversity of Northeastern India*, and presented an invited paper entitled “Phytodiversity Content of the Sacred Groves of Meghalaya and Strategies for Their Conservation” on 17 October 2016 at IIT Guwahati, (iv) IPBES South and West Asia sub-regional dialogue workshop at Dhulikhel, Kathmandu, and presented a paper entitled “Traditional Knowledge Based Natural Resource Management Systems of North-East India” (November 29 to December 2, 2016), (v) 104th Session of Indian Science Congress Association at SV University, Tirupati, and delivered a lecture on “Role of Science and Technology in Development of North-East India” at the Plenary Session on 7 January 2017, and (vi) One-day national seminar on *Scientific Socioeconomic, Political and Ethical Perspectives of Climate Change* held at BBMC College, Agartala, on 19 February 2017, and presented a paper entitled “Impact of Climate Change on the People and Natural Resources of North East India” and also chaired the technical session III of the Seminar.

Prof. O. P. Singh

Attended and chaired two sessions of the international conference on *Climate Change*

Department of Environmental Studies

Mitigation and Technologies for Adaptation organized by the University of Technology and Management, Shillong (June 20-21, 2016). He also attended the second meeting of the national committee on *Surface Water (INCSW)* organised by the Central Water Commission, Ministry of Water Resources, Government of India, New Delhi (5 September 2016), and presented the research findings under the research project entitled “Impact of Mining on Water Resources in Jaintia Hills, Meghalaya.”

Delivered an invited talk on “Integrated Approach in Conservation of Water Resources” at the Water Conference 2016 organized by Lady Keane College, Shillong (28-29 July 2016), and also participated in the brain storming session as a panelist. He also delivered a speech on “DPSIR Framework for Preparation of the State of Environment Report of Mizoram” at the inception meeting-cum-workshop for preparation of the *State of Environment Report of Mizoram* in Aizwal on 31 May 2016.

Prof. Devesh Walia

Attended: (i) 13th Asia Oceania Geosciences Society (AOGS) Annual Meeting in Beijing, China (July 31 to August 5 2016), and presented a paper on “Seismotectonics,” (ii) 35th International Geological Conference in Cape Town during 27 August to 4 September 2016, and presented two papers on “Radon and Seismotectonics in parts of Shillong Plateau” and “Geosciences and Multiple Facets of Geoethics,” (iii) National seminar-cum-exhibition on *Earthquake Hazards: Effects, Mitigation and Management* organised by the Environmental Watch and Management Institute at Guwahati on 20-21 January 2017, and presented a

paper on “Earthquake Hazards: Effects, Mitigation and Management,” and (iv) delivered an invited talk on March 1, 2017 at the national conference on *Renewable Energy Technology Utilization for Rural Development and Trade Show* (NCRETURD 2017), Department of Energy Engineering, NEHU, Shillong (27 February to 1 March 2017).

Publications

Published in India

Lamare, R. E., Singh, O. P. (2016). Application of CCME water quality index in evaluating the water quality status in limestone mining area of Meghalaya, India. *Ecoscan*, 10 (1&2): 149-154.

Lamare, R. E., Singh, O. P. (2016). Seasonal variation in water quality of Lukha river, Meghalaya, India. *Current World Environment*, 11(1):101-113.

Marak, A. N. C., Singh, O. P. (2016). Environmental activities under corporate social responsibility by companies operating in Meghalaya, India. *Journal of Environmental Research and Development*, 11(2): 433-438.

Marbaniang, D., Deb, D.P., Banarilang, Chaturvedi, S.S. (2016). Heavy metal accumulation in *Pteris vittata* L. growing on abandoned lime stone kiln and abandoned coal stockpile of Meghalaya, India. *International Research Journal of Environmental Sciences*, 5(11):41- 46.

Mir, H. A., Iralu, V., Pao, N.T., Chaudhury, G., Khonglah, C.G., Chaudhary, K.L., Upadhaya, K. Tiwari, B. K. (2016). *Magnolia lanuginosa* (Wall.) Figlar & Noot. in West Khasi Hills of Meghalaya,

Northeastern India: Re-collection and implications for conservation. *Journal of Threatened Taxa*, 8: 8398-8402.

Mukherjee, S., Chaturvedi, S.S. (2017). Utilization aspects of floral non-timber forest products: A review. *Asian Journal of Multidisciplinary Studies*, 5(4):161-166.

Singh, O. P., (2016). Emerging pollutants and their future challenges. *Transient - A Journal of Natural Sciences and Allied Subjects*, V:1-7.

Sum, K., Chaturvedi, S.S. (2016). Forest conservation and climate change mitigation potential through REDD+ mechanism in Meghalaya, North Eastern India: A review. *International Journal of Science, Environment and Technology*, 5(6):3643-3650.

Tiewri, L. N., Tiwari, B. K. (2016). Application of SCS-CN method for estimation of runoff in a humid micro-watershed. *International Journal of Current Agricultural Sciences*, 6: 74-80.

Tiewri, L. N., Tiwari, B. K. (2016). Variability and interrelationship between evaporation and potential evapotranspiration. *International Journal of Scientific Research*, 5: 474-477.

Walia, D. (2016). AOGS-2016 Annual meeting: A report. *Journal Geological Society of India*, 88: 540-541.

Published Abroad

Chabukdhara, M., Singh, O. P. (2016). Coal mining in Northeast India: An overview of environmental issues and treatment approaches. *International Journal Coal Science & Technology*, 3(2):87-96.

Lynser, M. B., Tiwari, B. K. (2016). Diversity and utilization of floral non timber

forest products by communities in rural Meghalaya, North-East India. *Journal of Forest and Environmental Science*, 32:39-54.

Mir, H. A., Upadhyay, K., Odyao, N., Tiwari, B. K. (2017). Rediscovery of *Magnolia rabaniana* (Magnoliaceae): A threatened tree species of Meghalaya Northeast India. *Journal of Asia Pacific Biodiversity*, 10:127-131.

Books/Book Chapters/Proceedings

Achumi, B., Ayajuddin, M., Phom, L., Hegde, S.N., Lal, P., Singh, O. P., Yeniseti, S.C. (2016). Drosophilid (*Insecta, Diptera: Drosophilidae*) biodiversity of North-East India. In: *Bioprospecting of Indigenous Bioresources of North-East India*. Jubille Purkayastha (Ed.). Springer, Singapore, p. 231-252.

Chase P., Singh, O. P. (2016). Bioresources of Nagaland: A case of wild edible fruits in Khonoma village forest. In: *Bioprospecting of Indigenous Bioresources of North-East India*. Jubille Purkayastha (Ed.). Springer, Singapore, p. 45-60.

Nongbri, B., Tiwari, B.K. (2017). Sacred Groves: A treasure house of culture, biodiversity and natural resource conservation by indigenous people of Meghalaya. In: *Souvenir-cum-Resource Book on Traditional Farming and Indigenous Food of North East India*. Published by Director, ICAR Research Complex for NEH Region, Umiam, Meghalaya, p. 7-13.

Published Abroad

Tiwari, B.K., Tynsong, H., Dkhar, M. (2017). Traditional knowledge-based conservation

Department of Environmental Studies

and utilisation of bioresources by War Khasi tribe of Meghalaya, India. In: *Our Lands and Resources, Indigenous and Local Knowledge and Practices Related*

to Biodiversity and Ecosystem Services in Asia. M. Karki *et al* (Eds.). IPBES and UNESCO, Paris, p. 68-85.

Research Projects

New: 6

Title of Project	PI/Co-PI	Funding Agency	Rupees in lakh
Deep Lithospheric Structure Across the Indo Myanmar Arc in India Using Magnetotelluric Data	Prof. Devesh Walia	Ministry of Earth Sciences, New Delhi	30.42
Deep Structure of Tectonosphere in the Eastern Himalaya from Joint Electromagnetic and Seismic Soundings: Analysis of Magnetotelluric Responses and Receiver Functions	Prof. Devesh Walia	DST, New Delhi	29.15
Biodiversity Inventorization and Conservation through Assisted Regeneration of RET Species in Limestone Mining Area of Meghalaya Cements Ltd	Prof. D. Paul	Meghalaya Cements Ltd	16.27
Study on Flora and Fauna and Survival in Acidic Water of Kopili Reservoir of Kopili Hydro Electric Plant, Umrongso, Dima Hasao District, Assam with Emphasis on Identification of Endangered Species and a Practical Solution to Their Conservation under Existing Condition of Acidic Water	Prof. O. P. Singh	North Eastern Electric Power Corporation (NEEPCO) Limited	12.00
Preparation of the State of Environment Report (SoER) for Mizoram	Prof. O. P. Singh (PI), Prof. S. De (Co-PI), Dr. L. Cajee (Co-PI)	Department of Environment & Forests, Government of Mizoram	25.00
Deep Lithospheric Structure across the Indo Myanmar Arc in India Using Magnetotelluric Data	Prof. Devesh Walia	Ministry of Earth Sciences, New Delhi	30.42

School of Human and Environmental Sciences

Ongoing: 4

Title of Project	PI/Co-PI	Funding Agency	Rupees in lakh
Preparation of People's Biodiversity Register (PBRs) Covering 10 Gram Sevak Circles under Khatarshnong Laitkroh C&RD Block in the state of Meghalaya	Prof. B.K. Tiwari	Meghalaya Biodiversity Board, Shillong	13.86
Phytodiversity and Phytosociological Characterization of Sacred Groves of Meghalaya	Prof. B.K. Tiwari	Forest Department, Government of Meghalaya	20.00
Impact of Mining on Water Resources in Jaintia Hills, Meghalaya	Prof. O. P. Singh	Ministry of Water Resources, Government of India, New Delhi	7.99
Assessment of Carbon and Carbon Sequestration Potential of Major Land Use Sectors in Meghalaya	PI: Dr. S. S. Chaturvedi Co-PI: Prof. B. K. Tiwari	Department of Science and Technology, New Delhi	45.48

Academic Collaborations

Collaborated with: (1) Prof. Sunil Kumar De and Dr. L Cajee, Department of Geography, NEHU, on *Environmental Survey*, (2) Prof. A. Saxena, Department of Physics, NEHU, on *Radon Concentration Measurement Studies*, (3) Dr. P. Banerjee, Earth Observatory of Singapore, NTU, Singapore, on *GPS Studies*, (4) Prof Ivan Varentsov, Director, Institute of the Physics of the Earth, Moscow- DST-RFBR on *Magnetotelluric and Seismic Studies*, and (5) Dr. Alexander Zubovich, Head, Central-Asian Institute for Applied Geosciences (CAIAG), Bishkek, Kyrgystan, on *GPS studies*.

Honours/Awards/Recognitions

Prof. O. P. Singh was a member of the NAAC Peer Team to Thapar Institute of Engineering

and Technology, Patiala (May 4-7, 2016) and Netaji Subhashchandra Bose Arts, Commerce & Science College, Maharashtra (December 19-21, 2016).

Prof. Devesh Walia was given the Platinum Jubilee Lecture Award-2017 during the 104th Indian Science Congress, Earth System Sciences Section, Sri Venkatesawara University, Tirupati. He is also Sectional President, Earth System Sciences Section, 105th Indian Science Congress, Osmania University.

Other Activities

Prof. O. P. Singh

Delivered two lectures on "Environmental Impact Assessment" during the UGC-HRDC short-term course in *Environmental Sciences-2106* organized by UGC-HRDC, NEHU (30 September to 6 October 2016).

Department of Environmental Studies

Chief Guest at the celebration of the World Environment Day 2016 organised by Central Agriculture University at Barapani and delivered a talk on “Zero Tolerance against Wildlife Trade” on 5 June 2016, and acted as Judge of the Extempore Speech Competition organised by the Meghalaya Basin Development Authority, Shillong (8 June 2016). He was also member of the expert panel to deliberate on “Climate Change and Green Economy” at the workshop on *Climate Change and Green Economy* organized by the Meghalaya Climate Change Centre at Shillong College, Shillong (10 June 2016).

Prof. Devesh Walia

Member, Board of Studies, Department of Geology, Nagaland University, Kohima, and attended the GSI-NER meeting. He gave a lecture during the celebration of the Hindi week on “Seismic Risk Mitigation and Management.” He is also expert committee member for selection of Scientist, and executive member of the Executive Committee of the Geological Society of India (2016-2019), Bangalore, and the Indian Geophysical Union, Hyderabad (2016-2019).

Delivered four lectures on “Perspectives on Hazards and Their Management” and “Disaster Mitigation and Management and Global Positioning System Studies” during the UGC-HRDC refresher course in *Earth Sciences and Geography* organized by UGC-HRDC, NEHU (28 November to 18 December 2016). He also delivered an invited talk on: (i) “Earthquake Disaster with Special Reference to Arunachal

Pradesh” during a sensitization programme organized by the Arunachal University of Studies, Namsai, Arunachal Pradesh (7-8 November 2016), and (ii) “Landslide Hazard Mitigation and Management along National Highways in Meghalaya” at the meeting for formulation of a networking programme on *Landslide Hazard Mitigation for North Eastern States* organised by the Department of Earth Sciences, Manipur University, Imphal (16-17 March 2017). He was also a jury member of the national essay competition on “Role of Youth in Water Management” organized by the Central Ground Water Board, Ministry of Water Resources, RD & GR (24 March 2017).

Prof. D. Paul

Delivered an invited lecture entitled: (i) “Our Biosphere-Contemporary Issues” at St. Anthony’s College, Shillong (November 16, 2016), and (ii) “Water-Diminishing Quality and Conservation Issues” at St. Edmund’s College, Shillong (March 22, 2017). He also delivered a lecture on “Persistent Organic Pesticides - An Ongoing Environmental Disaster” at a refresher course, Department of Geography, NEHU (November 11, 2016). Panelist in panel discussion on “Globalization and the Environment” organized by the Post-Graduate Student’s Association, NEHU (8 June 2017).

Member of (i) BUGS, School of Ecology and Environmental Science, Assam University, and (ii) School Board, School of Environmental Sciences and Natural Resource Management, Mizoram University, Aizawl.

DEPARTMENT OF GEOGRAPHY

Head: Prof. H. J. Syiemlieh
Telephone: 0364-272-3211
Email: hjsyiemlieh@nehu.ac.in

Faculty: 9

Designation	Name and Qualification	Specialization
Professor (5)	A. C. Mohapatra, MPhil (JNU), PhD (NEHU)	Regional Development and Planning, Environment and Development
	B. S. Mipun, MA (JNU), PhD (NEHU)	Agricultural Geography, RS and GIS
	D. K. Nayak, MPhil & PhD (JNU)	Social and Population Geography, Gender and Health Related Issues
	H. J. Syiemlieh, MPhil & PhD (NEHU)	Fluvial and Applied Geomorphology
	Sunil Kumar De, MSc & PhD (Calcutta University)	Geomorphology (Geomorphological Hazards)
Associate Professor (2)	L. Cajee, MPhil & PhD (NEHU) (On lien as Controller of Examination, NEHU)	Bio-Geography and Quantitative Techniques
	P.G. Momin, MA (JNU), MPhil (NEHU)	Climate and Ecology
Assistant Professor (2)	P. K. Ryngha, MPhil & PhD (JNU)	Regional Development, Urban Geography, Remote Sensing and GIS
	S. Purkayastha, MPhil & PhD (NEHU)	Social and Population Geography, Environmental Issues

Thrust Areas of Research

(i) Geomorphology with focus on Regional and Applied Geomorphology, (ii) Environmental studies with focus on Climatology and Climate Change, Water Resources and Hydrology, Biogeography and Biodiversity and Watershed Management Studies, (iii) Regional Development and Regional Planning, (iv) Researches on Social and Cultural Diversity of the North-Eastern Region with special focus on Tribal Development, and (v) GIS and Remote Sensing applications in Environment and Land Use Planning.

Brief Statement of Academic Activities

Our collaborators, namely Prof. T. Hayashi, Prof. D. Tsutsumi from DPRI, Kyoto University, Kyoto, Japan and Prof. T. Terao and Dr. F. Murata, Kagawa University, Japan, paid visit to the Department during their stay for field work. Prof. P. Prokop, Prof. Z. Raczowska, Dr. Lukasz Wiejaczka and Dr. Eliza Placzowska from the Department of Geo-environmental Research, Polish Academy of Sciences, Krakow, Poland, were also in the Department during their stay in Shillong.

Department of Geography

The Department also organized a one-day workshop on *GIS and Remote Sensing* on 3 March 2017 to facilitate college teachers in the area of GIS and Remote Sensing. The Department

was also visited by Dr. Martin J. Ossewarde, Language Trainer at Komensky Consultancy, Pune, who delivered a talk on “Sustainability for Change Makers: The Time is Now.”

Students’ Profile

Enrolment Capacity: MA/MSc -39, MPhil -14, Diploma - 26, PhD - Variable

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MA/MSc	14	25		36		03	28	11	39
MPhil	05	09	01	11		02	03	11	14
PhD	06	02	01	05		02	03	05	08
PGD (Geoinfo)	13	13		15		11	06	20	26

Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MA/MSc	18	17		32		03	21	14	35
MPhil	06	08	02	10		02	04	10	14
PhD	04	07	01	09		01	03	08	11
PGD (Geoinfo)	11	12		20		03	17	06	23

Students Awarded PhD Degree

Name of Student	Title of Thesis	Name of Supervisor
Periya Raikham	Internal Displacement of Communities in Manipur Hills and Its Effect on Livelihood System	B. S. Mipun
Daisy Das	Landuse Change in the Fringe Areas of Guwahati Urban Agglomeration	B. S. Mipun
Jane E. Warjri	Sediment Load in Upper Umiew River Channel, East Khasi Hills, Meghalaya	H. J. Syiemlieh
Rabi N. Behera	Commercial Crops and Food Security in Rural Meghalaya	D. K. Nayak
Daianolin Nongshili	Health and Communicable Diseases in Meghalaya with Special Reference to West Khasi Hills District	D. K. Nayak
Imnarenla Aier	Channel Change of Tsurang-Bhogdoi River	H. J. Syiemlieh
Mary A. Jyrwa	Morphology of Language Boundaries: The Case of Khasi and Garo in Meghalaya	D. K. Nayak

School of Human and Environmental Sciences

Chanchibemo Shiteo	Prospects of Cultural Tourism in Nagaland	L. Cajee
Smita Linda	Land-Use Change in Ranchi City	P. K. Rynnga
Bhogtoram Mawroh	Quantity and Quality of Domestic Water Availability in Cherrapunjee Region of Meghalaya	H. J. Syiemlieh

Research Fellowships: 29

CSIR-UGC-NET	UGC NON-NET	UGC-NET	Malana Azad Minority Fellowship	NFHE	BSR
01	16	07	01	03	01

Fieldwork/Educational Tour of Students

A. Teacher In-Charge: Prof. B. S. Mipun, Accompanying Staff: Dr. M. Swer and Smti. S. Mawlong.

Places Visited: Phuntsholing, Thimphu, Punakha and Paro.

Duration: 1-12 February 2017.

Purpose: All India Study Tour under Course No. GEOC 201- Geography of India.

B. Teacher In-Charge: Prof. H. J. Syiemlieh.

Places Visited: To adopted village, Shangpung, West Jaintia Hills District, Meghalaya.

Duration: Ten days from 24 January to 4 February 2017.

Purpose: Socio-economic and physical survey by the IV Semester MA/MSc students, under Course No. GEOC 401- Dissertation.

Courses Conducted

Postgraduate: MA/MSc

Semester I

Geomorphology, Climatology; Economic Geography; Geographical Thought I; Quantitative Techniques in Geography I; Cartography I (Practical).

Semester II

Geography of India; Principles of Ecology (Open); Biogeography (Open); Population and Settlement Geography; Geographical Thought II; Quantitative Techniques in Geography II; Cartography-II (Practical); Geography of North-East India (Open)

Semester III

Regional Development and Planning; Social and Cultural Geography (Open); Environment and Development (Open); Research Methodology; Computer Aided Cartography (Practical); Remote Sensing and GIS (Practical).

Semester IV

Dissertation; Advanced Geomorphology; Tropical Geomorphology; Environmental Geomorphology; Applied Climatology; Agricultural Geography; Geography of Tourism; Urban Geography; Social Geography; Cultural Geography; Population and Development.

PG Diploma in Geoinformatics

Semester I

Principles of Remote Sensing and GPS; Fundamentals of GIS; Cartography and Geo-Statistics; Geosciences and Image Interpretation; Computer Programming.

Department of Geography

Semester II

Digital Image Processing; Spatial Analysis and Modelling; Project; Geoinformatics in Agriculture, Soil and Land Evaluation; Geoinformatics in Regional and Urban Planning; Geoinformatics in Water Resources; Geoinformatics in Disaster Management.

MPhil/PhD Courses

Research Methodology in Geography; Advanced Tools and Techniques in Geographical Researches; Contemporary Geomorphic Issues in North-East India; Geo-Hydrological Processes of Extreme Humid Tropics; Population, Development and Environment; Remote Sensing and GIS Techniques for Agricultural Geography; Contemporary Issues in Urban Development with Special Reference to India; Geographical Perspectives in Cultural Tourism.

Seminars/Conferences/Symposia/Workshops

Organized

National seminar-cum-workshop on *Research and Research Methods in Geography* under the UGC SAP DRS-III Programme during 24-25 March 2017. *Convenor*: Prof. B. S. Mipun.

Refresher course in *Earth Sciences and Geography* at UGC-HRDC, NEHU, Shillong (28 November to 18 December 2016). *Coordinator*: Prof. Sunil Kumar De.

Attended

Prof. B. S. Mipun

Paper presented on “Remote Sensing for Curriculum Development and Inclusion” at the two-day national seminar on *Integrating Geospatial Technologies in Higher Education Curriculum at IIC* organized by LIGHTS, New Delhi (7-8 December 2016).

Prof. D. K. Nayak

Attended: (i) National seminar on *The Need for the Development of Cartographic Education In India and Indigenous Production of Maps and Atlases* at the Department of Geography, University of Mumbai, Mumbai (30-31 August 2016), and presented a paper on “Declining Cartographic Skill and Education In India,” (ii) International Seminar and 48th Regional Science Conference on *Rural Habitat, Institutions and Development: Changing Nature and Challenges*, Department of Geography and Disaster Management, Tripura University (5-7 January 2017) wherein he presented a paper on “Agricultural Commercialization and Food Security Issues in Rural Meghalaya: A Geographical Perspective,” and chaired a session on “Social Inequality and Impact of Globalization,” (iii) 38th Annual Meet and National Conference on *Sustainable Earth Resource Development* at the School of Earth Science, Banasthali Vidyapeeth (Deemed University), Banasthali, Rajasthan (18-20 March 2017), and presented a paper on “Vulnerability, Sustainable Management and Livelihood Security of Lodhas in Rarh and Terai Regions of West Bengal” and chaired a session on *Concepts and Methods in Geography*, and (iv) UGC-sponsored national seminar on *Development Paradigm in Context of Aboriginal Resource Management*, Department of Geography, Jawaharlal Nehru College, Pasighat, Arunachal Pradesh (September 29-30, 2016). Presented an invited paper on “Socio-economic and Environmental Dimensions of Inclusive Growth” and chaired a session.

Delivered invited lectures on: (i) “Relevance of Environmental Education in the Present

Context” at the UGC-national seminar on *Need and Prospects of Environmental Education*, Alipurduar College, Alipurduar, West Bengal (November 16-17, 2016), (ii) “Understanding Tribal Problems in India from a Geographical Perspective” as a key note address at the UGC-sponsored national seminar on *Status of Tribes in North East India* organized by the Geographical Society of West Bengal at Jayanti near Alipurduar (17-18 December 2016), and (iii) “Population Growth, Land and Smart City Project in India” at the UGC-national seminar on *Population growth, Urbanization and Land Utilization* at the Department of Geography and Applied Geography, North Bengal University, West Bengal (13-14 February 2017).

Prof. Sunil Kumar De

Presented the following papers: (i) “Impacts of Rural Clusters and Urban Slum Areas on the River Haora, Tripura” at the 33rd International Geographical Congress (33rd IGC) held in Beijing, China (August 21-25, 2016), and (ii) “Impact of Rubber Plantation on Environment: A Study on Some Selected Areas of Tripura, India” at the UGC-sponsored national seminar on *Climate Change: Issues and Challenges to Society, Environment and Development* organized by the Department of Geography, Haringhata Mahavidyalaya (23-24 September 2016), and also at the 48th Regional Science Conference and International Seminar on *Rural Habitat, Institutions and Development: Changing Nature and Challenges* organized by the Department of Geography and Disaster Management, Tripura University (January 5-7, 2017).

Chaired a session of: (i) UGC-sponsored national seminar on “Environment and Sustainability: A Geographical Perspective” organized by the Department of Geography, Prasanta Chandra Mahalanabis Mahavidyalaya, Kolkata (18-19 November 2016), and delivered a speech as Special Guest during the inaugural session, and (ii) 38th Indian Geographers Meet-2017 and National Conference on “Sustainable Earth Resource Management” organized by Banasthali University, Rajasthan, and delivered a lecture on “Landslide Hazard Zonation Mapping of North Sikkim District, Sikkim Himalayas” (18-20 March 2017).

Dr. P. K. Ryngnga

Attended: (i) 2nd Annual International Conference on *Urban Planning and Property Development*, Singapore (10-11 October 2016), and presented a paper on “The Impact and Challenges of Land Issues on Urban Development in a Tribal Town of North East India,” (ii) UGC-Sponsored national conference on *Need and Prospect of Environmental Education* at the Department of Geography, Alipurduar College (16-17 November, 2016), and presented a paper on “Solid Waste Management in Major Cities of North East India,” (iii) National seminar on *25 years of Economic Reforms in India and Its Impact on North East India*, NEICSSR, Shillong (9-10 December, 2016), and presented a paper on “Tourism Development and Community Participation in Meghalaya: A Case Study of Mawphlang,” (iv) International Seminar & 48th Regional Science Conference, Tripura University (5-7 January 2017), and presented a paper on “Agricultural Productivity and Sustainability in Hemsukla Village in Tripura,” and (v) Workshop on

Department of Geography

Space Technology Inputs for Disaster Risk, Reduction with Special Emphasis on Early Warning, Preparedness and Mitigation, NESAC (16-17 March 2017), and presented a paper on “Risk and Vulnerability Reduction of Natural Hazard: A Case of Shillong.”

Dr. S. Purkayastha

Attended the 33rd International Geography Congress in Beijing, PRC (21-25 August 2016), and presented a paper titled “Potential for Special Tourism in Dzongu, Sikkim, India.” She also attended the international seminar and 48th Regional Science Conference, Tripura University (5-7 January 2017), and presented a paper titled “Rubber Plantation and Sustainable Livelihood in Dhalai District of Tripura.”

Publications

Published in India

- Das, B., Ryngnga, P.K. (2016). Land use change detection in Alipurduar using geo-spatial technique. *Journal of Scientific Research*, 5(4):12-17.
- Ganguly, K., De, S. K. (2017). Spatio-temporal analysis of flood and identification of flood hazard zone of West Tripura district, Tripura, India using integrated geospatial technique. *Hill Geographer* (2015), XXXI:1-22.
- Pukayastha, S. (2016). Ecotourism- An alternative development approach to the conservation of Dzongu, Sikkim. *Journal of North East India Council for Social Science Research, NEICSSR*, 37(1&2)-40(1&2): 82-92.
- Purkayastha, S. (2016). Migration in North Bengal: Challenges ahead. *Spectrum: Humanities, Social Sciences and Management*, 3:37-49.

Ray M., Ryngnga, P.K. (2016). Waste disposal behaviour of university students: A Case Study of North Eastern Hill University, Shillong, India. *Journal of Geo-Environmental Observer*, 5(2):2-9.

Roy, P., De, S. K. (2016). A comparative approach to flood frequency analysis of the Puthimari River in Assam, India. *Asian Journal of Spatial Science* (2016), 3:90-99.

Sar, N., Ryngnga, P.K. (2016). Quantitative Areal analysis of population density of India using GIS tool, featured article. *Indian Science Cruiser*, 30(4): 46-51.

Sarmah, P. J., Mohapatra, A. C. (2017). Paradox of natural capital: Livelihood strategies of Misings in Assam. *Hill Geographer* (2015), XXXI: 29-45.

Published Abroad

- Ghosh, K., Bandyopadhyay, S., De, S.K. (2016). Geophysical investigation and management plan of a shallow landslide along the NH-44 in Atharamura Hill, Tripura, India. *International Journal of Geohazards and Environment*, 2016 2(3): 119-130.
- Slaymaker, O., Panin, A., Micu, M., De, S.K. (2016): Geomorphological hazards: Past and present – Introduction to the special issue. *International Journal of Geohazards and Environment*, 2(3): 1-2.

Books

- Bandyopadhyay, S., De, S.K. (2017). *Human Interference on River Health: A Study on the Haora River, Tripura River, India*. Springer, 1-218, ISBN: 978-3-319-41017-3.
- Mipun, B.S., Bora, A., editors. (2016). *Desertification and Land Degradation Atlas of India*, Space Application Centre

(SAC). SAC, ISRO, Ahmedabad, ISBN: 978- 93-82760 -20-7.

Mitri, M., Kharmawphlang., D. L., Syiemlieh, H.J., editors. (2016). *Ka Thymmei Lariti bad Ka Khana Pateng U Lum Sohpetbneng na ka ĩit Khmih Archaeology: Ka Kaiphot halor ka Jingtih Wad Bniah na 'Law Nongthroh*. W. Roy, Shillong.

Book Chapters/Proceedings

Ghosh, K., Bandyopadhyay, S., De, S.K. (2017). A comparative evaluation of weight-rating and analytical hierarchical (AHP) for landslide susceptibility mapping in Dhalai District, Tripura. In: *Environment and Earth Observation*. S. Hazra, A. Mukhopadhyay, A. Ghosh, D. Mitra and V. Dadhwal (Eds.). Springer Remote Sensing/Photogrammetry, Springer, Cham, p. 175-193.

Mipun, B.S., Chubawati. (2017). Forest Resources for sustainable livelihood of the Ao Nagas of Longkhum village in Mokokchung society. In: *Society and Development: Human Geographic Perspective*. B. K. Kar and A.K. Bhagabati (Eds.). EBH Publishers, Guwahati, p. 23-33.

Mohapatra, A. C., Gangte, P. L. (2017). Quality of life in Churachanpur district of Manipur. In: *Society and Development: Human Geographic Perspective*. B.K. Kar and A.K. Bhagabati (Eds.). EBH Publishers, Guwahati, p. 136-152.

Mohapatra, A. C., Majumdar (Das), T. (2016). Management and planning for Disasters. In: *Disaster Management* (Course Material). Tripura University, Agartala, p.107-128.

Ray, M., Ryngnga, P.K. (2016). Municipal solid waste management in major cities of North-East India. In: *Proceedings, National Conference on Need and Prospect of Environmental Education*, Alipurduar College, p. 62-70.

Ryngnga, P.K. (2016). The impact and challenges of land issues on urban development in a tribal town of North East India: A Case of Shillong. In: *Proceedings of the 2nd Annual International Conference on Urban Planning and Property Development*, Singapore, p. 7-15.

Syiemlieh, H. J. (2017). U Sohpetbneng bad ki Padun jong U na ĩit Khmih jong ka Geography. In: *Ka Thymmei Lariti bad Ka Khana Pateng U Lum Sohpetbneng na ka ĩit Khmih Archaeology: Ka Kaiphot halor ka Jingtih Wad Bniah na 'Law Nongthroh*. M. Mitri, D. L. Kharmawphlang and H.J. Syiemlieh (Eds.). W. Roy, Shillong, Chapter 8, p. 106-109.

Zou, K., Nayak, D. K. (2017). Assessment of vulnerability to HIV/AIDS in Mizoram: A study of groups at risk. In: *Society and Development: Human Geographic Perspective*. B. K. Kar and A. K. Bhagabati (Eds.). EBH Publication, Guwahati, p. 182-197.

Fund Received from Agencies including NEHU/UGC

Non-Plan: Rs. 5.80 lakhs

Plan (2012-17): Rs.15.00 lakhs

Department of Geography

Research Projects

New Projects: 1

Title of Project	PI/Co-PI	Funding Agency	Rupees in lakh
Desertification and Land Degradation Monitoring Vulnerability Assessment	B.S. Mipun	ISRO, GoI	24.94

Ongoing: 5

Title of Project	PI/Co-PI	Funding Agency	Rupees in lakh
Remote Sensing and GIS Road Network Gap Assessment and Alignment for New Roads in Ri Bhoi District, Meghalaya	Prof. B.S. Mipun	ISRO, GoI	11.72
NWCA-2015-16, LULC 3 rd Cycle and Land Degradation	B.S.Mipun	NESAC, Umium	8.64
Rainfall-Runoff-Sediment Response near Uranium Mining Site, Domiasiat	Prof. H.J. Syiemlieh (PI) Prof. S.Singh (Co-PI) Prof. O.P.Singh (Co-PI)	DAE(BRNS) , Mumbai	34.38
‘Niangtaser’- A Unique Biodiversity Resource from Ri Bhoi District of Meghalaya	Prof. H.J. Syiemlieh (Co-PI)	Basin Development Agency, Meghalaya	Allocated to Zoology Dept., NEHU
NWCA-2015-16, LULC 3 rd Cycle and Land Degradation	B.S.Mipun	NESAC, Umium	8.64

Completed: 1

Title of Project	PI/Co-PI	Funding Agency	Rupees in lakh
Desertification Status Mapping of India (Second Cycle)	B.S. Mipun	MoEF, New Delhi	17.83

Academic Collaborations

Prof. H.J. Syiemlieh is collaborating with Prof. Pawel Prokop, Prof. Zofia Ranczkowska, Dr. Lukasz Wiejaczka, and Dr. Eliza Placzowska, Department of Geoenvironmental Research, Krakow, Poland, on *Impact of Extreme Rainfall on Soil Properties and Water Resources in NE India*.

Signed MoU with Kagawa University, Takamatsu, Japan, whereby Prof. H.J. Syiemlieh and Dr. L. Cajee are collaborating with Prof. T. Terao, Prof. T. Hayashi, Dr. F. Murata, Dr. Y. Yamane, and M. Kiguchi of Kagawa University on *Climate Change in South Asia*.

Honours/Awards/Recognitions

Prof. D. K. Nayak was appointed Joint editor, *Transactions of the Institute of Indian Geographers*, Pune.

Prof. S. K. De was appointed Journal Guest Co-Editor, *International Journal of Geohazards and Environment* (ISSN: 2371-9508).

Other Activities

Prof. A. C. Mohapatra

Delivered two lectures during a refresher course organised by UGC-HRDC, NEHU, Shillong (November-December, 2016).

Prof. B. S. Mipun

Delivered a talk on “Use of Space Technology in Every Sphere of Life” on the Remote Sensing Day 2016 Celebration organised jointly by ISG-Shillong Chapter and NESAC at NESAC Auditorium (August 12, 2016).

Prof. Sunil Kumar De

Panelist in panel discussion on “Himalayan and Sub-Himalayan West Bengal: Geomorphic Problems” at the 29th IGI Conference organized by the Department of Geography, University of Calcutta, Kolkata (24-26 November 2016), and delivered a speech as Secretary General of IGI during the inaugural session. He also delivered a lecture as an external expert at the Center of Natural Resources and Development International Science Policy Workshop on Ecosystem DRR in Urban Areas held in Jakarta, Indonesia (14-16 September 2016).

Delivered lectures on: (i) “Understanding basics of Landslides and Impacts with Special Reference to Residential Areas” at the training programme of government officers, teachers and CBOs/NGOs on *Comprehensive Landslide Risk Mitigation* organized by DDMA in collaboration with St. Anthony’s College, Shillong (April 07, 2017), (ii) “Landslide Hazard Mapping” at the three-day training programme on *Bio-Engineering Measures for Controlling Landslides and Geo-Environmental Issues by Vertiber Grass* organized by NIDM, Ministry of Home Affairs, in collaboration with MATI and NEHU during 21-23 February 2017, (ii) “Human Interference on Landslides” at the CCRT Workshop on *Cultural Education and CCRT’s Role* at Banamanlipur Priyanath Institution (H.S.), Barasat, Kolkata, on January 12, 2017, (iv) four lectures as UGC-SAP DRS-II Visiting Fellow, Department of Geography, North Bengal University (28-29 March 2017), and (v) four Lectures during the UGC-HRDC refresher course in *Disaster Management and Environmental Studies* at North Bengal University (4-5 November 2016).

Dr. S. Purkayastha

Delivered a lecture on “Disaster Management and Associated Gender Issues” during the refresher course in *Perspective on Hazards and Their Management* at UGC-HRDC, NEHU (28 November to 18 December 2016).

Department of Horticulture (Tura Campus)

DEPARTMENT OF HORTICULTURE (TURA CAMPUS)

Head: Dr. Sunil Kumar
Telephone: 91 9436221758
E-mail: nehuhort@gmail.com, sunu159@gmail.com

Faculty: 5

Designation	Name and Qualification	Specialization
Professor (1)	C. Perinba Suresh, MSc (Ag) Horticulture (BCKV), PhD (BCKV)	Fruits and Orchard Management, Post-Harvest Technology of Horticultural Crops
Associate Professor (1)	Sunil Kumar, MSc (Ag) Horticulture (BHU), PhD (CCS HAU)	Floriculture
Assistant Professor (3)	Arvind Kumar Chaurasiya, MSc (Ag) Horticulture (NDUAT), PhD (BCKV)	Post-Harvest Technology of Horticultural Crops
	Arindam Barman, MSc Vegetable Science (GBPUA &T)	Vegetable Science
	Yumnam Somi Singh, MSc (Hort) Fruit Science (UAS-Dharwad)	Fruit Science

Thrust Areas of Research

The thrust area includes conservation of genetic biodiversity, sustainable green farming and to adapt to the changing climatic scenario.

Brief Statement of Academic Activities

The utmost priority of the Department is to impart knowledge and education related to

Horticulture and allied branches and to serve as a centre for academic excellence in Horticulture. The Department mainly concentrates on multi-disciplinary research and extension works with an aim to improve the aspects of Hill Horticultural System and to develop technical manpower in North-Eastern regions in general and Meghalaya state in particular.

Students' Profile

Enrolment Capacity: MSc (Horticulture) – 18, PhD -Variable

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MSc	05	13		16		02	12	06	18
PhD	03	05		06		02	08		08

School of Human and Environmental Sciences

Degree Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MSc	02	06		07		01	06	02	08

Courses Conducted

Postgraduate: MSc

Semester I

Propagation and Nursery Management of Horticultural Crops; Protected Cultivation of Horticultural Crops; Organic Horticulture; Post-Harvest Technology of Horticultural Crops; Biotechnology of Horticultural Crops; Basic Statistical Methods in Agriculture.

Semester II

Growth and Development of Horticultural Crops; Tropical and Dry Land Fruit production; Biodiversity and Conservation of Fruit Crops; Production Technology of Warm Season Vegetable Crops; Seed Production Technology of Vegetable Crops; Production Technology of Cut Flowers; Landscaping and Ornamental Garden; Production of Plantation Crops; Library Information & Basic Concepts of Laboratory Techniques.

Semester III

Breeding of Fruit Crops; Breeding of Vegetable Crops; Breeding of Flower Crops and Ornamental plants; Sub-Tropical and Temperate Fruit production; Canopy Management of Fruit Crops; Production Technology of Cool Season Vegetable Crops; Production Technology of Loose Flowers; Turfing and Turf Management; Intellectual Property and Its Application in Agriculture; Processing of Plantation Crops, Spices, Medicinal and Aromatic Crops; Production Technology of Under Exploited Vegetable Crops; Research-I(Methodology and Seminar).

Semester IV

Research II (Field Laboratory Analysis); Research III (Data Analysis and Interpretation); Research IV Dissertation.

PhD Courses

Semester I

Research Methodologies in Horticulture; Advances in Production of Fruit Crops; Advances in Growth and Development of Fruit Crops; Advances in Production of Major and Under Utilized Vegetable Crops; Advances in Breeding of Vegetable Crops; Advances in Flower Production; Advances in Breeding of Flower Crops.

Semester II

Advances in Breeding of Fruit Crops; Biotic and Abiotic Stress Management in Vegetable Crops; Advances in Landscaping; Organic Horticulture; Advances in Post-Harvest Technology of Fruit Crops; Advances in Post-Harvest Technology of Vegetable Crops; Advances in Post-Harvest Technology of Flower Crops; Protected Cultivation of Fruit Crops; Protected Cultivation of Vegetable Crops; Protected Cultivation of Flower Crops.

Educational Tour of Students

Teacher-in-Charge: Prof. C. P. Suresh.

Places/Institutions Visited: New Delhi, Chandigarh, Ludhiana, Jammu & Kashmir, Shimla and Manali).

Duration of Tour: 17 days.

Purpose of Tour: Educational.

Seminars/Conferences/Symposia/Workshops

Organised

The Department organized: (i) national seminar on *Potential and Prospects of Horticulture in North-Eastern Region* in collaboration with Krishi Vigyan Kendra, ICAR, Tura (27-28 March 2017), and (ii) training-cum-workshop on *DNA Fingerprinting for Species Identification* (18-21 October 2016). *Coordinators*: Mr. Arindam Barman and Prof. C. P. Suresh.

Prof. C. P. Suresh

Co-organised the national conference on *Advances in Indian Floriculture with Focus on North East and Hill Region* at the Central Institute of Horticulture, Medziphema, Dimapur, Nagaland (January 13-15, 2017). He also coordinated the North-East Green Summit at Tura (November 1-5, 2016).

Attended

Prof. C. P. Suresh

Presented papers on (i) “Morphological and Biochemical Characterization of Blood Fruit (*Haematocarpus validus*) in Garo Hills of Meghalaya” which was given the best Poster Award at the 7th Indian Horticulture Congress-2016, New Delhi (15-18 November 2016), and (ii) “Scenario of Genetically Modified Crops in India” at the UGC-Sponsored national seminar on *Food Security and Sustainable Nutrition in India: The Present Scenario* at New Barrackpore (15-16 September 2016).

Co-chaired a technical session of the 5th International Symposium on *Lychee, Longan and Other Sapindaceae Fruits*

organized by Bihar Agricultural University in collaboration with ISHS, Belgium, and presented an invited lecture on “Socio Economic Prospects of Litchi Cultivation in Northeastern India” (31 May to 3 June 2016). He also chaired a technical session at: (i) UGC-sponsored national seminar on *Horticulture for Sustainable Farm Income and Protection of Environment with Special Reference to North Eastern Region*, Dhupdhara, Assam (29 June 2016), and delivered a lecture on “Role of Horticulture in Sustainable Farm Income in NE Region,” and (ii) National conference on *Enhancing Nutritional Security through Climate Smart Farming Practices*, UBKV, West Bengal (17-18 March 2017), and delivered an invited lecture on “Wild and Under-Utilized Fruits on Nutritional Security.”

Dr. Sunil Kumar

Convener of: (i) national conference on *Indian Floriculture with Focus on North East and Hill Region* at the Central Institute of Horticulture, Medziphema, Dimapur, Nagaland (January 13-15, 2017), and presented a lead lecture on “Native Ornamental Plants of Garo Hills, Meghalaya,” (ii) national seminar on *Potential and Prospects of Horticulture in North-Eastern Region* organized by the Department and Krishi Vigyan Kendra, ICAR, Tura (27-28 March 2017), and presented a lead lecture on “Potential of Floriculture in North-Eastern Region.” He also delivered a lecture on “Biotechnological Approach for Improvement in Floriculture” during the training-cum-workshop on *DNA Fingerprinting for Species Identification* organized by the Department during October 18-21, 2016.

Dr. A. K. Chaurasiya

Presented papers entitled: (i) “Optimization of Osmotic Dehydration of Pineapple Cubes Using Response Surface Technology” which was awarded the best poster paper at the 7th Indian Horticulture Congress-2016 Seminar on *Doubling Farmers Income through Horticulture* organized by the Horticultural Society of India, New Delhi (15-18 November 2016), and (ii) “Physio-biochemical Characteristics of Sohiong (*Prunus nepalensis* Ser) - An Underutilized Fruit of Meghalaya” at the national conference on *Natural Resources Management for Sustainable Agriculture* organized by the Agricultural Technology Development Society, Ghaziabad, U.P. (25 October 2016).

Mr. Arindam Barman

Delivered the best oral presentation at the national seminar on “Potential and Prospects of Horticulture in North Eastern Region” at the Department on 27-28 March 2017. He also delivered a lecture on “DNA Fingerprinting and Its Utilization in the Field of Plant Science” during the training-cum-workshop on *DNA Fingerprinting for Species Identification* organized by the Department during October 18-21, 2016.

Mr. Y. S. Singh

Presented a paper entitled “Integrating Horticulture into the School Education System” at the national seminar on *Re-thinking New Education Policy: Contextualizing the Issues of India's North-Eastern Region* organized by the Department of Education, NEHU, Tura (20-21 March 2016).

Publications

Published in India

Chakraborty, S., Barman, A. (2016). Correlation studies of quantitative characters in radish (*Raphanus sativus* L.) in Garo hills of Meghalaya, India. *International Journal of Agriculture Sciences*, 54(8): 2899-2902.

Chakraborty, S., Barman, A., Sangma, T.M. (2016). Correlation studies of carrot (*Daucus carota* L.) germplasms from Garo Hills of Meghalaya, India. *Int. J. Horti. Plant Sci.*, 1(1): 5-8.

Chakravarty, S., Bhutia, K. D., Suresh, C. P., Shukla, G., Pala, N. A. (2016). A review on diversity, conservation and nutrition of wild edible fruits. *Journal of Applied and Natural Science*, 8:2346-2353.

Gurung, S., Mahato S.K., Suresh, C. P., Chetri, B. (2016). Impact of foliar application of growth regulators and micronutrients on the performance of Darjeeling Mandarin. *American Journal of Experimental Agriculture*, 12(4): 1-7.

Kumar, K.R., Bhanu Sree, M.R., Ghosh, S.K., Suresh, C.P., Chakravarty, S. (2016). Economics and quality of banana (*Musa* spp., AAA) var. Grand Naine as influenced by sucker retention in Tarai zone of West Bengal. *International Journal of Tropical Agriculture*, 34(1): 55-58.

Kumar, K.R., Ghosh, S.K., Bhanu Sree, M.R., Suresh, C.P., Chakravarty, S. (2016). Effect of sucker retention on growth and yield of banana (*Musa* spp., AAA) var. Grand Naine: Plant crop. *International Journal of Tropical Agriculture*, 34(1): 49-54.

Kumar, S., Dewan, N., Nongrum, H.B., Marwein, B. (2016). Effect of nitrogen on

- growth, flowering and quality of China aster (*Callistephus chinensis*) cv. Kamini. *Current Horticulture*, 4(2): 25–29.
- Kumar, S., Nongrum, H.B., Marwein, B. (2016). Effect of graded levels of farmyard manure and nitrogen on growth, flowering and bulb production of tuberose (*Polianthes tuberosa*) cv. Suvasini. *Indian Journal of Agricultural Sciences*, 86 (12): 1591-1594.
- Mahato, S.K., Gurung, S., Chetri, B., Suresh C. P. (2016). Effect of inorganic fertilizers on leaf mineral content of plantain (CV. Nendran) and on the nutritional status of studied soil. *International Journal of Environment, Agriculture and Biotechnology*, 1(1): 25-30.
- Mahato, S.K., Chetri, B., Hasan, M. A., Suresh, C. P. (2016). Inorganic fertilization effects on growth, yield and fruit quality of plantain cv. Nendran. *Environment and Ecology*, 34(2): 432-436.
- Marak, C.M., Barman, A., Barman, R.M. (2016). A review on green biotechnology: An essential approach to tackle future challenges. *Transient*, 5: 33-48.
- Momin, K. Ch., Suresh, C. P., Momin, B. Ch., Singh, Y. S., Singh, S. K. (2016). An ethno-botanical study of wild plants in Garo Hills region of Meghalaya and their usage. *International Journal of Minor Fruits, Medicinal and Aromatic Plants*, 2 (1):47-53.
- Momin, K. Ch., Suresh, C. P., Momin, B. Ch., Singh, Y. S., Singh, S. K. (2016). An ethno-botanical study of wild plants in Garo Hills region of Meghalaya and their usage. *International Journal of Minor Fruits, Medicinal and Aromatic Plants*, 2 (1): 47-53.
- Sangma, C.S., Barman, A., Sangma, O.K. (2016). Analysis of diversity of scarlet egg plant from Garo Hills of Meghalaya. *Int. J. Horti. Plant Sci.*, 1(1): 1-3.
- Singh, A., Singh, B., Mohd. Mustafa, M., Kumar, S. (2016). Response of micro nutrients on growth, crop duration and yield of banana cv. Grand Nain. *Progressive Research*, 11 (Special-VII): 4602-4603.
- Published Abroad**
- Barman, A., Anshumali, Barman, R.M., Marak, C.M. (2017). Rapid seed DNA extraction for species identification and diversity analysis of Pumpkin. *J. Bio. Environ. Sci.*, 10(1): 161-168.
- Dewan, N., Kumar S., Sharma S., Chakraborty, S. (2016). Evaluation of chrysanthemum (*Chrysanthemum morifolium* Ramat) genotypes under West Garo Hills District, Meghalaya. *Hort. Flora Res. Spectrum*, 5(3): 189-194.
- Singh, A. K., Chaurasiya, A. K., Mitra, S. (2016). Aroid for ensuring livelihood security in India: A review. *European J. Biomed. Pharma Sci.*, 3(4): 459-463.
- Singh, A. K., Chaurasiya, A. K., Mitra, S. (2017). Quality attributes of Bael (*Aegle Marmelos* Corr.) Preserve and Candy. *Int. Food Res. J.*, 24(1): 298-303.
- Books/Book chapters**
- Kumar, S. 2017. Strategies for marketing of horticultural produce. In: *Agricultural Marketing Issues and Challenges*. D. Bhagat and S.L.S. Akoijam (Eds.). Biotech Books, New Delhi, p. 213-250.
- Momin, K.C., Pandey, A. K., Mehra, T.S., Tomar, K.S., Gupta, Y.C., Dhiman, S.R.,

- Kumar, S. 2017. Ornamental Proteas - An alternative cut flower and landscape plant. In: *Advances in Floriculture and Landscape Gardening*. S. K. Malhotra and Lallan Ram (Eds.). Central Institute of Horticulture, Dimapur, p.165-170.
- Singh, Y. S. (2016). Role of arbuscular mycorrhizae fungi in fruit crop propagation. In: *Plant Pathogen Interaction-Recent Trends*. R. Mitra and A. Barman (Eds.). Sharma Publication & Distributors, New Delhi, Chapter 22, p. 189-206.
- Singh, Y.S., Suresh, C.P., Momin, K. C. (2017). *A Textbook of Horticulture*. Biotech Books, New Delhi, ISBN-978-81-7622-388-1.
- Suresh, C. P., Momin, K. Ch., Singh, Y. S., Momin K. C. (2016). Horticulture entrepreneurship. In: *Women Entrepreneurship in India*. J. U. Ahmed and K. D. Singh (Eds.). New Century Publications, New Delhi, Chapter 7, p. 85-94.
- Suresh, C. P., Momin, K.C., Singh, Y.S. (2016). Socio-economic prospects of litchi cultivation in North-Eastern India. In: *Litchi - Global Perspectives*. V. Nath, M. Feza Ahmad, H. Mir *et al* (Eds.). Excel India Publishers, New Delhi, p. 136-139.
- Suresh, C.P., Momin, K.C., Mohan, J. (2016). Post-harvest management of horticultural produce for sustainable livelihood development in North East India. In: *Agricultural Marketing System in India: A Comparative Exploration with Manufacturing and Services Sector*. D. Bhagat and S. L. S. Akoijam (Eds.). Biotech Books, New Delhi, p. 165-174.

Research Projects

Ongoing: 2

Title of Project	PI/Co-PI	Funding Agency	Rupees in lakh
Molecular and Morphological Diversity Analysis of Cucurbits of Garo Hills Meghalaya	PI: Arindam Barman	Department of Biotechnology, New Delhi	42.81
Bio-prospecting of Lactic Cultures from 'North-Eastern Regions' to Develop Functional Fermented Soy Products with Potential Health Benefits	Co- PI: Dr. Arvind Kumar Chaurasiya	DBT Twinning Project, GoI	72.062

Academic Collaboration

Arindam Barman collaborated with Uttar Banga Krishi Viswavidyalaya, Coochbehar, West Bengal on the DBT project *Molecular and Morphological Diversity Analysis of Cucurbits of Garo Hills Meghalaya*.

Honours/Awards/Recognitions

Dr. A. K. Chaurasiya

Was given the Young Scientist Award-2016 by ATDS, Ghaziabad, Uttar Pradesh.

Department of Horticulture (Tura Campus)

Other Activities

Dr. Sunil Kumar

Acted as a resource person at the Entrepreneurship Awareness Camp organized by Placement and Counselling Cell, NEHU, Tura (March 20-22, 2017).

Mr. Arindam Barman

Participated and completed the UGC-Sponsored Orientation Programme-116 organized by HRDC, University of Calcutta (19 December 2016 to 14 January 2017).

DEPARTMENT OF RURAL DEVELOPMENT AND AGRICULTURAL PRODUCTION (TURA CAMPUS)

Head: Dr. D. C. Kalita
Telephone: 7005473148 (M)/ 8731998352 (M)
E-mail: himalidurga@gmail.com

Faculty: 6

Designation	Name and Qualification	Specialization
Professor (1)	S .C. Srivastava, PhD	Economics
Associate Professor (1)	D. C. Kalita, PhD	Agricultural Economics
Assistant Professor (4)	J. P. Jaiswal, MSc (Retired in March 2017)	Agricultural Engineering
	B. K. Mishra, PhD	Dairy and Livestock Management
	B. Mathew, PhD	Fruit and Orchard Management
	L. S. Pereira, PhD	Fruit and Orchard Management

Thrust Area of Research in the Department

The Department concentrates mainly on multi-disciplinary research in different areas of rural development and impact assessment - Micro and decentralized planning, local governance, globalization and food security, making of rural products, agronomy, horticulture, and animal sciences.

Brief Statement of Academic Activities

Being multidisciplinary in nature, the Department undertakes both teaching and research in areas concerning rural development, agronomy, horticulture, and animal sciences. The Department provides both theoretical

and practical exposure to the MSc students in various areas relating to the multidisciplinary PG programme within the stipulated time. The Department offers the MPhil and PhD programmes. In addition, the Department is involved in consultancy, research, seminars, and workshops. The Department has established one Bioinformatics Infrastructure Facility Lab with 12 computers, one instructional farm housing, Vermi-compost unit, Net House and Poly House, Cow and Heifer shed. The Department also has a fully functional-instructional dairy unit for horticulture and agronomy farm; laboratories for horticulture, agronomy, computers, and animal sciences were established for imparting practical training to MSc (RDAP) students.

Department of Rural Development and Agricultural Production (Tura Campus)

Students' Profile

Enrolment Capacity: MSc – 24, MPhil/PhD - variable

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MSc	06	17		21		01	19	04	23
MPhil		02		02			02		02
PhD	02	01		01		02	02	01	03

Degree Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MSc	05	20	01	23		01	23	02	25
MPhil		03		03			03		03
PhD	01	02		02		01	01	02	03

Students Awarded PhD

Name of the student	Title of Thesis	Name of Supervisor
Mr. Haokip	Decentralization and Rural Development: A Case Study of Manipur	Prof. S. C. Srivastava
Ms. Anindita D Sangma	Economic Analysis of Milk Production in Garo Hills of Meghalaya	Dr. B. K. Mishra
Ms. Rituparna Mitra Barman	Pesticide Residues in Bovine and Human Milk in Dhanbad City, Dhanbad, Jharkand	Dr. B. K. Mishra

Research Fellowships: 14

UGC Non-Net	ICSSR Fellowship	National Fellowship for Higher Education
11	2	1

Educational Tour of Students

Teacher In-Charge: Dr. D. C. Kalita and Mr. J. P. Jaiswal

Places/Institutions Visited: Agra, New Delhi, IARI

Purpose of Tour: Educational

Courses Conducted

Postgraduate: MSc (RDAP)

Semester I

General Aspects of Rural Development; Introductory Agriculture and Agronomy; Fundamentals of Horticulture; Introduction to Animal Husbandry and Poultry; Soil Conservation and Watershed Management; Computer Application.

Semester II

Rural Development Approaches, Programmes and Policies; Package and Practices of Field Crops; Plant Propagation and Nursery Management; Dairy and Livestock Management; Farm Management; Organic Farming (Open).

Semester III

Basic Statistics and Software Applications; Rural Development Organizations, Institutions and Administration; Production Technologies of Horticultural Crops I; Principles and Practices of Dairy Management; Rural Development Planning and Project Management; Commercial Floriculture and Landscaping; Swine, Goat and Sheep Production; Dairy Farming and Rural Development; Economic Reforms and Rural Development.

Semester IV

Rural Marketing and Entrepreneurship Development; Research Methods; Agricultural Surveying and Leveling; Rural Credit and Micro-finance; Production Technology of Horticultural Crops II; Processing of Livestock Products; IEC and Rural development; Post-harvest Management of Horticultural Crops; Rabbit, Fishery and Poultry Production; Micro-Enterprise and Non-Farm Sector Development; Protected Cultivation of Horticultural Crops; Indigenous Dairy Products and Soya Milk.

Seminars/Conferences/Symposia/Workshops

Organised

The Department organized a short-term training course on: (i) *Bioinformatics: Bridging In Vivo to In Silico* at BIF Center NEHU, Tura (March 21-23, 2017), and (ii) *Nursery Management and Plant Propagation of Horticultural Crops* on April 21-30, 2016.

Prof. S. C. Srivastava

Chaired a technical session of the national seminar on *Potential and Prospects of Horticulture in North East* organised by the Department of Horticulture, NEHU, Tura (27-28 March 2017).

Presented a keynote address at the national seminar on *Women Entrepreneurship* organised by the Centre for Women Studies, Bodoland University, Assam (4-5 October 2016). He also presented a paper on “Green Power: Emerging Business and Consumers to Influence Policy in North East Green Summit” at the Management Fest-Mosaic 2016 organised by the Department of Management, NEHU, Tura (5 November 2016).

Dr. B. K. Mishra

Delivered an invited talk on “Future Prospects of Dairy Business in India” at the national conference of the 19th Indian Agricultural Scientists and Farmers Congress, 2016, organized by the Bioved Research Institute of Agriculture and Technology (18 February 2017).

Delivered an oral presentation on “Evaluation of Probiotic Attribute of Lactobacillus Species Isolated from Fermented Foods of West Garo Hills Meghalaya” at the international symposium on *Bio-Resource, Environment and Agricultural Sciences* organized by the Society of Bio-Resource, Environment and Agricultural Research and Institute of Agriculture, Visva-Bharati University, Santiniketan, WB (4-6 February 2017).

Dr. B. Mathew

Presented a paper on “Diversity of Jackfruit (*Artocarpus heterophyllus* Lam.) in

Rongram Block of West Garo Hills of Meghalaya” at the national seminar on *Potential and Prospects of Horticulture in North-Eastern Region* organised by the Department of Horticulture, NEHU, Tura (27-28 March 2017).

Dr. L. S. Pereira

Presented a paper on “Diversity of Jackfruit (*Artocarpus heterophyllus* Lam. in Rongram Block of West Garo Hills of Meghalaya” at the national seminar on *Potential and Prospects of Horticulture in North-Eastern Region* organised by the Department of Horticulture, NEHU, Tura (27-28 March 2017).

Publications

Published in India

- Barman, P., Mishra, B. K., Kalita, D. C. (2016). Selection and consumption of milk and milk products in rural and urban areas: A study on Nagaon district of Assam. *EPRA International Journal of Agriculture and Rural Economic Research*, 4:28-37.
- Hangsing, H., Mathew, B., Kalita, D.C. (2016). Performance of Khasi Mandarin in Garo Hills, Meghalaya. *International Journal of Science, Environment and Technology*, 5(5): 3213-3223.
- Haolun, H., Mathew, B., Kalita, D.C. (2016). Performance of Khasi mandarin in Garo Hills of Meghalaya. *International Journal of Science, Environment and Technology*, 5(5): 3213-3223.
- Islam, M., Kalita, D.C. (2016). Studies on root phenology, productivity and economics of wetland rice (*Oryza sativa* L.) as influenced by establishment methods and weed management practices. *Indian Journal of Agricultural Research*, 50(4):358-361.
- Kar, A. D., Mathew, B. (2016). Jhuming vs. settled cultivation - A micro level study in the West Garo Hills of India. *International Journal in Management and Social Sciences*, 4(5):157-164.
- Lyngdoh, I., Pereira, L.S. (2016). Varietal evaluation of guava in West Garo Hills of Meghalaya. *Journal of Agriculture and Technology*, 3(1):26-30.
- Marak, L.C., Pereira, L.S., Chakraborty, R. (2016). Diversity of microbes associated with *Artocarpus heterophyllus* Lam. in Nokrek biosphere reserve of Meghalaya. *Transient - A Journal of Natural Sciences and Allied Subjects*, 5:86-96.
- Mathew, B., Marak, A. D. (2016). Traditional knowledge on ethnomedicines - A potential area of research among Garo tribe. *Transient - A Journal of Natural Sciences and Allied Subjects*, 5:125-129.
- Mishra, B.K., Hati, S., Das, S., Mishra, S., Mandal, S. (2016). α -galactosidase and β -glucosidase enzyme activity of lactic strains isolated from traditional fermented foods of West Garo Hills, Meghalaya, India. *International Journal of Current Microbiology and Applied Sciences*, 6(4):1193-120.
- Mishra, B.K., Hati, S., Das, S., Patel, K. (2017). Biodiversity of *Lactobacillus* cultures associated with the traditional ethnic fermented foods of West Garo Hills, Meghalaya, India. *International Journal of Current Microbiology and Applied Sciences*, 6(2):1090-1102.
- Mishra, B.K., Hati, S., Das, S., Patel, K. (2017). Identification and characterization

- of *Lactobacillus* isolates from fermented soya food “Tungrymbai” Meghalaya, India. *International Journal of Current Microbiology and Applied Sciences*, 6(2):1103-1112.
- Phaomei, G., Pereira L. S. (2016). Evaluation of diversity in jackfruit (*Artocarpus heterophyllus* Lam.) in Tikrikilla Block of West Garo Hills, Meghalaya. *Current Horticulture*, 4(2):11-16.
- Singh, K.D., Mathew, B. (2016). Wild edible plants among the Meitei of Eastern Himalaya, India. *International Journal of Agriculture Sciences*, 8(53): 2699-2702.
- Singh, K.D., Mathew, B., Mohan, R. (2016). Nutraceutical usage of wild edible plants among the Garo tribe of Meghalaya, India. *International Journal Science, Environment and Technology*, 5(5): 2959-2965.
- Srivastava, S.C., Bhattacharya, J. (2016). Impact of skill training on Tribal women livelihoods: A study in Dhalai district of Manipur. *TUI: A Journal on Tribal Life and Culture*. XX:136-152
- Srivastava, S.C., Bunghai, R. 2016. Decentralized governance: A comparative analysis on village councils and traditional local self-governing system. *TUI: A journal on tribal life and Culture*, XX: 38-52.
- Srivastava, S.C., Haokip, S. (2016). Horticulture as livelihood option. *Changemaker*, 5-13.
- Published Abroad**
- Islam, M., Kalita, D.C. (2016). Weed dynamics and productivity of wetland rice as influenced by establishment methods and integrated management. *Bangladesh Journal of Botany*, 45(1):1-8.
- Books/Book Chapters**
- Balamurgan, N., Mishra, B.K., Paul, B. (2016). Nakamsua: A traditional fermented fish product of Garo Hills, Meghalaya. In: *Dairy and Food Product Technology*. B. K. Mishra and S. Hati (Eds.). Biotech Books, New Delhi, p. 245-252.
- Majumdar, S., Kalita, D.C. (2016). Rural development through agri-preneurship. In: *Women Entrepreneurship in India*. J. U. Ahmed and K.D. Singh (Eds.). New Century Publication, New Delhi, Vol. I. p. 61-68.
- Mishra, B.K., Hati, S., editors. 2016. *Dairy and Food Product Technology*. Biotech Books, New Delhi, ISBN-978-81-7622-358-4.

Research Projects

Ongoing: 4

Title of the Project	PI/Co-PI	Funding Agency	Rupees in lakh
Prospecting Lactic Cultures from North-Eastern Regions to Develop Functional Fermented Soya Foods with Potential Health Benefits	Dr. B. K. Mishra (PI) Dr. A.K. Chaurasiya (Co- PI)	DBT GoI	72.06

Department of Rural Development and Agricultural Production (Tura Campus)

Development of Technology for the Preparation of Fermented Rice Beverage in Meghalaya and Evaluation of Its Functional Properties	Dr. B. K. Mishra (PI)	DBT, GoI	89.75
<i>In Vitro</i> Mass Multiplication and Conservation of Some Endangered Citrus Species of NEH Region of India	Dr. B. Mathew (PI) Dr. L. S. Pereira (Co-PI)	DBT, GoI	122.12
Research Study on SHGs and Their Utilization of MNREGA (Consultancy Project)	Dr. D. C. Kalita, J.P. Jaiswal, Dr. B. K. Mishra and Dr. B. Mathew	SRES, Meghalaya	6.40

Completed (Consultancy Project): 1

Title of the Project	PI/Co-PI	Funding Agency	Rupees in lakh
Modification/Revision of Comprehensive District Agriculture Plan (CDAP) and State Agriculture Plan(SAP) in Meghalaya under RKVY	Dr. D. C. Kalita, Prof. S. C. Srivastava, J.P. Jaiswal and Dr. B.K. Mishra	Directorate of Agriculture, Government of Meghalaya	33.00

Academic Collaboration

The Department is collaborating with NIRD, Hyderabad and CAPART, New Delhi, ICAR Research complex for NEH Region at Barapani *for Practical Exposure and Getting Better Seed Varieties for RDAP Farm*. The Department has also developed networking with local NGOs, where the 3rd and 4th semester students are resource persons and interact directly with the villagers. The Department has also collaborated with Anand Agricultural University, Gujarat, on *DBT Twinning Research Projects*.

Honours/Awards/Recognitions

Dr. B. K. Mishra was awarded Dr. R.S. Paroda Medal 2017 of the Bioved Research Society.

Other Activities

Prof. S. C. Srivastava

Contributed as a resource person at the national symposium MDP on *Managing the Organizations* organized at NEHU, Tura Campus (5-6 April 2016).

V

SCHOOL OF LIFE SCIENCES

Dean: Prof. R. Sharma
Telephone: 0364-2722001(O)/9436117141(M)
Fax: 0364-2550108
Email: deansls@nehu.ac.in

The School of Life Sciences comprises four academic departments, namely Biochemistry, Biotechnology and Bioinformatics, Botany, and Zoology. All the four departments of the School offer both MSc and PhD programmes. The total strength of the faculty during the period under report was 44 (forty four): 27 Professors, 6 Associate Professors and 11 Assistant Professors. The broad areas of research in the School include Biodiversity, Bioprospection, Biogerontology, Endocrinology, Cancer Biology, Cell and Molecular Biology, Enzymology, Bioremediation, Nutraceutical value addition, Forest Ecology and Environmental Toxicology. During the year, 30 research scholars of the School were awarded the PhD degree. The faculty of the School organized/attended

several conferences/symposia. Many of them delivered invited lectures and chaired sessions at conferences/symposia. The School has published 26 papers in national and 105 papers in international journals of repute. The faculty members of the School have received large amount of extramural funds from various research funding agencies. The activities of the faculty members have brought recognition and fame to the School. Many faculty members are members of various Project Advisory Councils/ Task Forces of the funding agencies. Our faculty had contributed to curriculum development and research activities of other Institutions by way of being members of Board of Studies/Academic/ Executive Council(s) of various universities in the country.

DEPARTMENT OF BIOCHEMISTRY

Head: Prof. D. Syiem
Telephone: 364-272-2101
E-mail: dsyiem@yahoo.com

Faculty: 11

Designation	Name and Qualification	Specialization
Professor (7)	A. N. Rai, MSc (BHU), PhD (Dundee, Scotland)	Plant-Microbe Interaction
	R. Sharma, MSc & PhD (BHU)	Biochemistry of Aging
	R. N. Sharan, MSc & PhD (JNU)	Radiation and Cancer Molecular Biology
	A. Alam, MSc (AMU), PhD (FTI, Moscow)	Cancer Immunotherapy
	D. Syiem, MSc & PhD (NEHU)	Medical Biochemistry, Enzymology, Natural Product
	A. K. Singh, MSc (Gorakhpur), PhD (HCU)	Molecular Microbial Ecology
	M. B. Syiem, MSc & PhD (NEHU)	Cyanobacterial Diversity, Cyanobacterial Biofertilizer and Bioremediation
Assistant Professor (4)	P. K. Ambasht, MSc & PhD (BHU)	Enzymology: Enzyme Purification, Kinetics and Immobilization
	L. Kma, MSc & PhD (NEHU)	Cancer and Radiation Countermeasures
	S. Bhan, MSc & PhD (BHU)	Medical Biochemistry, Nano-Biomaterials
	T. Tripathi, MSc (Mysore), PhD (JNU)	Molecular and Structural Biophysics

Thrust Areas of Research

1. Medical Biochemistry (Development and Aging, Medicinal Plants, Diabetes, Carcinogenesis and Radiation Biology, Drug Delivery and Tumor Immunology and Neurobiochemistry, Nanobiomaterial)
2. Microbial Biochemistry (Plant-Microbe Interaction, Cyanobacterial Diversity and Nitrogen Fixation, Microbial Bioremediation)
3. Protein Chemistry (Enzymology, Molecular Biophysics)

School of Life Sciences

Brief Statement of Academic Activities

The Department admitted twenty-one students for MSc and six students for PhD programme. During this period, twenty-one students have successfully completed their MSc and five

students have been awarded the PhD degree. Faculty members and research scholars participated and delivered lectures at various seminar/workshops/conference/symposia in India and abroad.

Students' Profile

Enrolment Capacity: MSc – 21, PhD – Variable

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MSc	03	18		18		03	18	03	21
PhD	01	05	01	05			03	03	6

Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MSc	08	13	01	19		01	17	04	21
PhD	01	04		02		03	03	02	05

Students Awarded PhD Degree

Name of Student	Title of Thesis	Name of Supervisor
Ms. Khriesituonuo Belho	Purification, Characterization and Immobilization of Phytase from Germinating Rice Bean (<i>Vigna umbellata</i> Thunb.)	Dr. P. K. Ambasht
Ms. Tripti Pandey	Structural and Functional Studies on the Glutathione-s-Transferases in <i>Synechocystis</i> Strain PCC-6803	Prof. A. K. Singh
Mr. Teikur Majaw	Dietary and Hormonal Regulation of Arginase in Mice	Prof. R. Sharma
Ms. Sthiti Porna Dutta	Effect of N-Nitrosodibutylamine on the Expression of Liver Mitochondrial Membrane Surface Proteins in Mice	Prof. A. Alam
Ms. Bobby Chettri	Dynamics and Abundance of Hydrocarbon Degrading Bacteria in Sediments Undergoing Bioremediation	Prof. A. K. Singh

Department of Biochemistry

Placement of Students

Mr. Manab Debbarma, Assistant Professor, Government College, Tripura.

Dr. S.T. Vaiphei, Assistant Professor, Department of Biotechnology, Central University, Rajasthan, Ajmer.

Dr. V. Saio, Research Associate, ICAR, Barapani, Shillong.

Dr. A. Syiem, Research Assistant, Forest Department, Government of Meghalaya, Shillong.

Research Fellowships: 29

CSIR-UGC-NET	UGC Non-Net	National Fellowship for Higher Education	DRS	DST Inspire
03	16	05	02	02

Courses Conducted

Postgraduate: MSc

Semester I

Chemistry and Biomolecules; Enzymology; Intermediary metabolism; Practical.

Semester II

Techniques in Biochemistry; Physiological Chemistry; Microbiology; Practical.

Semester III

Genetics; Medical Biochemistry; Environmental Biochemistry; Nutritional and Clinical Biochemistry; Practical.

Semester IV

Molecular Biology; Immunology; Bioenergetics; Project.

PhD Courses

Research Methodology; Topics in Biochemistry; Review of Literature and Seminar.

Seminars/Conferences/Symposia/Workshops

Organized

23rd National Seminar on *TREndys in Biochemistry*, October 3-04, 2016,

Department of Biochemistry, NEHU, Shillong. *Chairman*: Prof. R. Sharma, *Organizing Secretary*: Prof. A.K. Singh.

Attended

Prof. A. N. Rai

Presented a paper titled “Cyanobacteria as a Biofertiliser for Rice Cultivation: Towards Associative Nitrogen Fixation and Biotrophic Nitrogen Transfer” at the 23rd National Seminar on *TREndys in Biochemistry*, Department of Biochemistry, NEHU, Shillong (October 3-4, 2016).

Chief Guest and Speaker on: (i) “Quality Assurance Issues in Higher Education” at *IQAC Seminar* with College Principals, Kashi Vidyapeeth, Varanasi (24 September 2016), (ii) “Academic audit” at *NAAC Seminar*, Don Bosco Assam University, Guwahati (14.10.16), and (iii) “Appropriate Biotechnologies for Upliftment of Rural Poor” at the DBT Sensitization Workshop for *Promotion of Biotechnologies for Upliftment of Socio-Economic Conditions of SC, ST, Rural Poor and Women in Bihar and Jharkhand States of India*, Bhagalpur (January 20-21, 2017).

Prof. R. Sharma

Chaired a session of: (i) Interactive workshop on *Project Formulation and Report Writing by DBT State Biotech-Hub Programme* and delivered a talk on “Project Preparation Parameters” at NEHU, Shillong (June 8-10, 2016), (ii) 23rd National Seminar on *TRendys in Biochemistry*, and delivered a talk on “Geroscience: Then and Now” at the Department of Biochemistry, NEHU, Shillong (October 3-4, 2016), and (iii) *Healthy Aging* at the 18th Association of Gerontology India Meeting, and delivered a talk on “Nutraceuticals in Healthy Aging: Relieving Inflammation and Oxidative Stress” at AIIMS, New Delhi (November 9-11, 2016).

Prof. R. N. Sharan

Delivered a plenary lecture on “The Good, Bad and Ugly Faces of Betel (Areca) Nut: Price of Progress?” at the national seminar on *Environment and Development in Eastern India*, Ranchi University, Ranchi (December 17-18, 2016).

Chaired a technical session and delivered a talk on: (i) “Radiation Interaction with a Critical Biomolecule, the DNA: A Biologist’s View!” at the national conference on *Recent Advances in Nanoscience and Nanotechnology (NCRANNT-2016)*, NEHU, Shillong (September 8-9, 2016), and (ii) “Can Cancer be Conquered?” at the national seminar on *TRendys in Biochemistry-2016*, Department of Biochemistry, NEHU, Shillong (October 3-4, 2016).

Prof. D. Syiem

Resource person and Key-note Speaker on “Indigenous Knowledge System: Its Multidimensional Significance” in

PAPOTHECARY: North East Regional Conference on the Promotion and Protection of Traditional Health Care Remedy, Guwahati University, Guwahati (March 23-25, 2017).

Prof. A. K. Singh

Chaired a session and delivered an invited talk on: (i) “Bacterial Abundance and Dynamics in Crude Oil Contaminated Soil Sediments Undergoing Bioremediation” at the national conference on *Basic and Applied Researches in Plants and Microbes*, Department of Botany, Punjabi University, Patiala (November 3-5, 2016), and (ii) “Inorganic Nutrient Regulated Bacterial Abundance and Dynamics in Crude Oil Polluted Sediments” at the national seminar on *Petroleum Biotechnology and Bioenergy*, Tezpur University, Assam (March 3-4, 2017).

Dr. P. K. Ambasht

Presented a research paper entitled “Immobilization of α -Amylase from *Pennisetum Typhoides* onto Chitosan Beads and Its Characterization” at the national conference on *Science and Technology for National Development Health, Environment and Agriculture (NCST-ND)* 2016, Jain University, Bangalore (October 5-7, 2016).

Dr. L. Kma

Presented the following papers: (i) “Exploring the Anticancer Potential of *Aristolochia tagala* and *Curcuma caesia* on Hepatocellular Carcinoma in Mouse Model” at the national symposium on *Current Research in Cancer Biology and Therapy*, Department of Cell Biology, School of Biological Sciences and Biotechnology, Gandhinagar, Gujarat (October 7-8, 2016), (ii) “Radiosensitizing

effect of vicienin-2 on Human Non-small Cell Lung Cancer Cells” at the international conference on *Radiation Biology (ICRB-2016)* Chennai, Tamil Nadu (November 9-11, 2016), (iii) “Rural Development Model” at the NSS workshop on *Rural Community Engagement of Universities*, Hyderabad (March 6-7, 2017), and (iv) “Potential Changes Required in NSS Manual” at the conference on *Re-structuring of NSS*, Vigyan Bhawan, New Delhi (March 31, 2017).

Dr. Timir Tripathi

Delivered invited lectures on: (i) “Unusual Thiol-based Redox Metabolism of Liver Flukes” at the international conference on *Current Trends in Biotechnology 2016 (ICCB-2016)*, VIT University, Vellore (December 8-10, 2016), (ii) “Dynamic Thiol-based Redox Metabolism in the Liver Flukes Offer Novel Targets for Drug Development” at the international conference on *Structure and Dynamics of Biomolecules (SDBM-2017)*, Department of Physics, DDU Gorakhpur University, Uttar Pradesh (January 27-28, 2017), and (iii) “Thiol-based Redox Proteins as Drug Target Against *Fasciola*” at the *Asian Neglected Tropical Disease Conference 2017 (NTDASIA 2017)*, Khon Kaen University, Khon Kaen, Thailand (March 8-9, 2017).

Chaired a scientific session and delivered a plenary lecture on “Dynamic Thiol-based Redox Metabolism in the Liver Flukes Offer Novel Targets for Drug Development” at the national conference on *Structural Bioinformatics and Computer Aided Drug Discovery (SBCAAD-2017)*, Department of Bioinformatics, Alagappa University, Karaikudi, Tamil Nadu (February 14-15, 2017).

Publications

Published in India

Bhan, S. (2017). Increased apoptosis and DNA fragmentation during wound healing of streptozotocin induced diabetic rats. *Asian Journal of Research in Biological and Pharmaceutical Sciences*, 4:53-59.

Hadem, K. L. H., Majaw, T., Singh, A. K., Sharma, R. (2017). Changing paradigm of biochemical sciences: Molecular networks in health and disease. *Current Science*, 112: 219.

Majaw, S., Syiem, D. (2016). *In vitro* aldose reductase inhibitory potential of fractions isolated from *Potentilla fulgens* roots. *Journal of Applied Pharmaceutical Science*, 6: 102-109.

Patar, A. K., Bhan, S., Syiem, D. (2016). Effect of chlorophyllin, a semi-synthetic chlorophyll molecule on hyperglycemia and hyperlipidemia in streptozotocin induced diabetic mice. *International Journal of Pharmacy and Pharmaceutical Sciences*, 8:293-296.

Patar, A. K., Bhan, S., Syiem, D., Sharma, A. (2017). Ameliorative effect of chlorophyllin on oxidative stress in experimental model of diabetes. *International Journal of Phytomedicine*, 8:506-513.

Priya S., Kma, L. (2016). Identification of putative microRNA for early detection of hepatocarcinoma. *World Journal of Pharmaceutical and Life Sciences*, 4:307-326.

Sharma, A., Patar, A. K., Bhan, S. (2016). Cytoprotective, antihyperglycemic and antioxidative effect of naringenin on liver and kidneys of Swiss diabetic

mice. *International Journal of Health Sciences and Research*, 6:118-131.

Published Abroad

- Anjum, S., Gupta, A., Sharma, D., Gautam, D., Bhan, S., Sharma, A., Kapil, A., Gupta, B. (2016). Development of novel wound care systems based on nanosilver nanohydrogels of poly-methacrylic acid with *Aloe vera* and curcumin. *Materials Science and Engineering C*, 64:157-166.
- Anjum, S., Gupta, A., Sharma, D., Kumari, S., Sahariah, P., Bora, J., Bhan, S., Gupta, B. (2016). Antimicrobial nature and healing behavior of plasma functionalized polyester sutures. *Journal of Bioactive and Compatible Polymers*, 32:1-17.
- Arun, S., Manikandan, N. A., Pakshirajan, K., Pugazhenth, G., Syiem, M. B. (2016). Cu (II) removal by *Nostoc muscorum* and its effect on biomass growth and nitrate uptake: A photobioreactor study. *International Biodeterioration and Biodegradation*, 119:111-117.
- Bharati, A.P., Singh, N., Kumar, V., Kashif, M., Singh, A.K., Singh, P., Singh, S.K., Siddiqui, M.I., Tripathi, T., Akhtar, M.S. (2016). The mRNA capping enzyme of *Saccharomyces cerevisiae* has dual specificity to interact with CTD of RNA Polymerase II. *Scientific Reports*, 6:31294.
- Chettri, B., Mukherjee, A., Langpoklakpam, J. S., Chattopadhyay, D., Singh, A. K. (2016). Kinetics of nutrient enhanced crude oil degradation by *Pseudomonas aeruginosa* AKS1 and *Bacillus* sp. AKS2 isolated from Guwahati refinery, India. *Environmental Pollution*, 216:548-558.
- Gupta, A., Kesharwani, M., Velmurugan, D., Tripathi, T. (2016). *Fasciola gigantica* thioredoxin glutathione reductase: Biochemical properties and structural modeling. *International Journal of Biological Macromolecules*, 89:152-160.
- Hadem, K. L. H., Sharan, R. N., Kma, L. (2016). Phytochemicals of *Aristolochia tagala* and *Curcuma caesia* exert anti-cancer effect by tumor necrosis factor- α -mediated decrease in nuclear factor kappa B binding activity. *Journal of Basic and Clinical Pharmacy*, 7:1-11.
- Hande, P., Sharan, R.N., Belyakov, O. (2016). Strengthening biological dosimetry in member states of the International Atomic Energy Agency. *Genome Integrity*, 7:1,doi: 10.4103/2041-9414.197170.
- Hemam, R., Singh, L. R., Prasad, A. I., Gogoi, P., Kumar, M., Chougankar, M. P., Singh, S.D., Sharan, R. N. (2016). Critical view on TL/OSL properties of $\text{Li}_2\text{B}_4\text{O}_7$ nanoparticles doped with Cu, Ag and co-doping Cu, Ag: Dose response study. *Radiation Measurements*, 95: 44-54.
- Majaw, S., Syiem, D. (2016). Effect of *Osbeckia chinensis* root extract on aldose reductase and sorbitol dehydrogenase activity in mice of two different age groups. *Der Pharmacia Lettre*, 8:149-156.
- Mukherjee, A., Chettri, B., Langpoklakpam, J. S., Singh, A. K., Chattopadhyay, D. (2016). Draft genome sequence of hydrocarbon-degrading *Enterobacter cloacae* strain S1:CND1, isolated from crude oil-contaminated soil from the Noonmati oil refinery, Guwahati, Assam, India. *Genome Announcements*, 4:e00367-16.
- Mukherjee, A., Chettri, B., Langpoklakpam, J.S., Singh, A. K., Chattopadhyay, D. (2016). Draft genome sequence of

- hydrocarbon-degrading *Staphylococcus saprophyticus* strain CNV2, isolated from crude oil-contaminated soil from the Noonmati oil refinery, Guwahati, Assam, India. *Genome Announcements*, 4:e00370-16.
- Nongrum, S., Vaiphei, S. T., Keppen, J., Ksoo, M., Kashyap, E., Sharan, R. N. (2017). Identification and preliminary validation of radiation response protein (s) in human blood for a high-throughout molecular biodosimetry technology for the future. *Genome Integrity*, 8:5, doi: 10.4103/2041-9414.198910.
- Pandey, T., Shukla, R., Shukla, H., Sonkar, A., Tripathi, T., Singh, A. K. (2017). A combined biochemical and computational studies of the rho-class glutathione s-transferase sl1545 of *Synechocystis* PCC 6803. *International Journal of Biological Macromolecules*, 94: 378-385.
- Sahoo, M. K., Marbaniang, M., Sharan, R. N. (2016). UV light-assisted mineralisation and biotransformation of Ponceau S with hydroxyl and sulfate radicals. *Chemical Papers*, 70: 1066-1077.
- Sonkar, A., Shukla, H., Shukla, R., Kalita, J., Pandey, T., Tripathi, T. (2017). UDP-N-acetylglucosamine enolpyruvyl transferase (MurA) of *Acinetobacter baumannii* (AbMurA): Structural and functional properties. *International Journal of Biological Macromolecules*, 97:106-114.
- Suchiang, K., Sharma, R. (2016). Age-dependent modulation of fasting and long-term dietary restriction on acetylcholinesterase in non-neuronal tissues of mice. *Molecular and Cellular Biochemistry*, 419:135-145.
- Tripathi, T., Suttiprapa, S., Sriya, B. (2016). Unusual thiol-based redox metabolism of parasitic flukes. *Parasitology International*, doi: 10.1016/j.parint.2016.05.013.
- ### Books/Book Chapters/Proceedings
- Belho, K., Ambasht, P. K. (2017). Characterization of phytase isolated from rice bean cotyledons (*Vigna umbellata* Thunb.) with respect to influence of different factors. In: *Exploring Chemistry -Interface with Human Welfare*. M. N. Bhattacharjee, D. L. Buam, C. Masharing and B. M. Laloo. (Eds.). Eastern Book House Publishers, Guwahati, Chapter 18, p. 157-166.
- Bhan, S. (2016). Consequences of wound healing in diabetes and diabetic foot. In: *Trends in Experimental Biology*, Volume 2, L. Kma (Ed.). Excel India Publisher, New Delhi, Chapter 4, p. 49-73.
- Hadem, I.K.H., Sharma, R. (2017). Insulin-like growth factor-1 and its related signalling during aging: Modulation by dietary restriction. In: *Topics in Biomedical Gerontology*. P. C. Rath, R. Sharma and S. Prasad (Eds.). Springer International Publishing, Singapore, Chapter 5, p. 93-107.
- Kharbhih, W. J., Sharma, R. (2017). Inorganic pyrophosphatase of cardiac and skeletal muscle is enhanced by dietary restriction in mice during aging. In: *Topics in Biomedical Gerontology*. P.C. Rath, R. Sharma and S. Prasad (Eds.). Springer International Publishing, Singapore, Chapter 6, p. 117-122.
- Kharkongor, L.R., Ambasht, P.K. (2017). Characterization of xylanase from *Trichoderma longibrachiatum*. In: *Exploring Chemistry -Interface with Human Welfare*. M. N. Bhattacharjee, D. L. Buam, C. Masharing and B. M. Laloo. (Eds.).

School of Life Sciences

- Eastern Book House Publishers, Guwahati, Chapter 22, p. 198-206.
- Kma, L. (2016). Enzymes as potential targets for cancer therapy. In: *Trends in Experimental Biology*, Volume 2, L. Kma (Ed.). Excel India Publishers, New Delhi, Chapter 7, p. 112-150.
- Kma, L., editor. (2016). *Trends in Experimental Biology*, Volume 2. Excel India Publishers, New Delhi, ISBN-978-93-85777-64-6.
- Majaw, T., Sharma, R. (2017). Arginase I regulation by dexamethasone in the liver of aging mouse. In: *Topics in Biomedical Gerontology*. P. C. Rath, R. Sharma and S. Prasad (Eds.). Springer International Publishing, Singapore, Chapter 7, p. 109-116.
- Rath, P. C., Sharma, R., Prasad, S., editors. (2017). *Topics in Biomedical Gerontology*. Springer International Publishing, Singapore, Chapter 19, p. 327-333.
- Sharma, R. (2017). Dietary restriction, an intervention for healthy aging. In: *Topics in Biomedical Gerontology*. P. C. Rath, R. Sharma and S. Prasad (Eds.). Springer International Publishing, Singapore, Chapter 19, p. 327-333.
- Syiem, M. B., Singh, A. K., Rai, A. N. (2017). N₂-fixing cyanobacterial systems as biofertilizer. In: *Agro-Environmental Sustainability*, Volume 1. J. S. Singh and G. Senevirante, (Eds.). Springer International Publishing AG, Cham, Switzerland, Chapter 3, p. 43-61.
- Funds Received from Agencies including NEHU/UGC**
- NEHU: Rs.17,30,000
- UGC SAP DRS: Rs. 13,00,000

Research Projects

New: 2

Title of Project	PI/Co-PI	Funding Agency	Rupees in lakh
Bioprospection of Indigenous Medicinal Plant Species with Anti-Diabetic/ Oxidant and Hypolipidemic Properties	Prof. D. Syiem (PI)	Meghalaya Basin Development Authority (MBDA), Shillong, Govt of Meghalaya	30.80
Deciphering the Molecular Mechanisms Governing the Direct A β Aggregation Inhibition with the Serum Protein Transferrin: Implications for Alzheimer's Disease	Dr. T. Tripathi (PI)	Department of Biotechnology	42.23

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Ongoing: 4

Title of Project	PI/Co-PI	Funding Agency	Rupees in lakh
Mineralization and Biototoxicity Assessment Studies of Selected Surfactant Formulations by Some Advanced Oxidation Processes	Prof. R. N. Sharan (CI)	Board of Research on Nuclear Science, DAE, Mumbai	32.00
Study the Effect of <i>Potentilla fulgens</i> L Extract on the (AMP-Activated Protein Kinase) AMPK Pathway – Regulated Metabolism in Induced Diabetic Mice	Prof. D. Syiem (Co-PI)	Department of Biotechnology, Ministry of Science & Technology, New Delhi	13.50
Structural and Functional Study of the Unique Parasitic CYP450 in Liver Flukes	Dr. T. Tripathi (PI)	DST-Russian Foundation for Basic Research	23.78
Interactions of mRNA Export Factors and Nuclear Pores Characterized and Quantified by Biochemistry, Biophysics and High-Resolution Imaging	Dr. T. Tripathi (PI)	UGC-Israel Science Foundation	210.00

Completed: 3

Title of Project	PI/Co-PI	Funding Agency	Rupees in lakh
How AMFR Gene Regulates Cell Division and Cancer after Stress Exposure	R. N. Sharan (CI)	Board of Research on Nuclear Science, DAE, Mumbai	23.90
Evaluation of the Radiosensitizing Potential of <i>Ocimum sanctum</i> L. and Its Constituent on Human Cancer Cell Line	Dr. L. Kma (PI)	Science & Engineering Research Board, DST, New Delhi.	12.00
Biochemical and Functional Properties of <i>Synechocystis</i> Glutathione S-Transferase (S)	Dr. T. Tripathi (PI)	Science and Engineering Research Board	49.62

Academic Collaborations

Prof. R. N. Sharan

Collaborated with: (i) Dr. M. K. Sahoo, Department of Chemistry, NEHU, on the

Project-*Mineralization and Biototoxicity Assessment Studies of Selected Surfactant Formulations by Some Advanced Oxidation Processes* and (ii) Dr. Amit Kumar, Indian Institute of Technology Rajasthan, Jodhpur on

the Project *How AMFR Gene Regulates Cell Division and Cancer after Stress Exposure?*

Prof. M. B. Syiem

Collaborated with Prof. K. Pakshirajan, Department of Chemical Engineering, Indian Institute of Technology, Guwahati, Assam, on DBT Twinning Project on *Strategy Development for The Mitigation of Heavy Metals in Surface Waters Around Coal Mining Areas Using Native Cyanobacterial Strains*.

Dr. Timir Tripathi

Collaborated with: (i) Dr. Rajanish Giri, Indian Institute of Technology, Mandi, India, on DBT Project *Deciphering the Molecular Mechanisms Governing the Direct A β Aggregation Inhibition with the Serum Protein-Transferrin: Implications For Alzheimer's Disease*, (ii) Prof. V. Mordvinov, Institute of Cytology and Genetics, Russian Academy of Sciences, Novosibirsk, Russia, for DST Project *Structural and Functional Study of the Unique Parasitic CYP450 in Liver Flukes* and (iii) Prof. Yaron Shav-Tal, Bar-Ilan University, Israel, for UGC Project *Interactions of mRNA Export Factors and Nuclear Pores Characterized and Quantified by Biochemistry, Biophysics and High-Resolution Imaging*.

Honours/Awards/Recognitions

Prof. A. N. Rai

Member of the Standing Committee for Promotion of Women in Science, DST, Government of India, and Chairman, NAAC Team for Assessment and Accreditation of Modern Institute of Technology, Rishikesh (27-29 September, 2016).

Prof. R. Sharma

Editorial Board Member of the *International Journal of Developmental Neurosciences*,

Elsevier, USA; *Frontiers in Genetics of Aging*, Science Park, Switzerland.

Expert member of the Task Force on Neuro-Disease Biology, DBT, MoST, GOI (2015-17), and Expert Panel Member of NAAC Simulator Meeting at MS University, Vadodara (October 20-22, 2016). Member and Coordinator of NAAC Peer Team Visit to Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), Bengaluru (December 6-7, 2016). He is also Coordinator of the UGC DRS III Programme in Biochemistry (2015-20), and a member of the State Higher Education Council (SHEC), Mizoram (2014-20).

Prof. R. N. Sharan

Expert Consultant (International) of UN-body IAEA, Vienna (Austria), on Biodosimetry (April 2016-February 2017).

Prof. D. Syiem

Member of the Editorial Board of *Bio-Science Letters* (Bodoland University, open online science journal), and *Science Vision*, Mizo Academy of Sciences, Aizawl, Mizoram (2017 onwards).

State Level Expert Appraisal Committee (SEAC) for Environmental Impact Assessment, Government of Meghalaya, Shillong.

Prof. M. B. Syiem

Member of NAAC Peer Team Visit to Charusat University of Science and Technology, Anand, Gujarat (April 27-30, 2016), and Bhaktavatsalm College for Women, Chennai, Tamil Nadu (February 23-25, 2017).

Dr. Timir Tripathi

Elected as Joint Secretary of the Bioinformatics and Drug Discovery Society of India, Karaikudi.

Department of Biochemistry

Webmed Central Editor of *Biochemistry, Biophysics and Biochemistry Faculty*, and Editorial Board Member of the Journals of *SOJ Biochemistry and Scientific Journals International*.

Other Activities

Prof. A. N. Rai

Member of the Academic Council of: (i) Mizoram University, Mizoram and (ii) Kashi Vidyapeeth, Varanasi.

Member of IQAC, Hyderabad Central University, Hyderabad.

Prof. R. Sharma

Delivered lecture on: (i) "Protein Organization and Function" in Summer School on *Functional Biology* under DBT State Biotech-Hub Programme (June 14-24, 2016) at NEHU, Shillong, and (ii) "Nutrition and Aging" during the UGC-HRDC 37th Orientation Programme at HRDC, NEHU, Shillong (August 22, 2016).

Prof. R. N. Sharan

Member of the Research Advisory Committee of Mizoram University, Aizwal (2016-19). He is also Director, Design Innovation Center (DIC) at NEHU, Shillong (December 15, 2016 onwards).

Chief Guest at a function to commemorate the birth anniversary of Maulana Abul Kalam Azad in form of *International Student's Day*, Shillong (November 11, 2016). Invited as a Guest Faculty to deliver a lecture titled "Harm Reduction and Cessation Strategy" at the Department of Community Medicine, Maulana Azad Medical College, New Delhi (September 30, 2016). He also delivered the following:

(i) key-note address on "Paradigm Shift in Education - Challenges" at the annual inauguration of academic session 2016-17 of St. Anthony's College, Shillong (June 16, 2016), (ii) talk on "General Introduction to Cancer" to participants of the UGC-HRDC 37th Orientation Programme (General) at HRDC, NEHU, Shillong (August 25, 2016), (iii) "Electronic Nicotine Delivery System (ENDS) as a Substitute to Conventional Cigarette: An Evidence Based Audit" at Doctor's Round-Table Meeting in Imperial Hotel, New Delhi (September 30, 2016), and (iv) lecture on "Harm Reduction and Cessation Strategy" hosted by the International Institute of Hospital Management and Research, Dwarka, New Delhi (November 8, 2016).

Prof. D. Syiem

Delivered an invited talk on "Diabetes, Healthy Eating, Making the Right Choice" at the UGC-HRDC 36th Orientation Programme at HRDC, NEHU, Shillong (June 17, 2016).

Chaired a session and delivered a talk on "Bioprospection, Ethanobotanical Approach to Drug Discovery" in the *Meghalaya Traditional Practitioners Meet*, Shillong (August 12, 2016).

Participated in panel of Judges in "Assam Biotech Conclave" organised by Guwahati Biotech Park in Association with FINER, NEC and Oil India Ltd (January 5-6, 2017), and "Let's Talk about Cancer in the North East: Interaction and Discussion" organized by the Wellcome Trust DBT India Alliance and Indian Institute of Public Health, Shillong, (July 26, 2016). He was also a panelist in the panel discussion on "World Environment" organised by the NEHU Student Body, NEHU (June 3, 2016).

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Reviewer for the journal of *Pharmaceutical Biology*, Taylor & Francis.

Prof. M. B. Syiem

Reviewer for the *Journal of Hazardous Materials*; *CLEAN - Soil, Air, Water*; *Journal of Phytoremediation*; *International Biodeterioration and Biodegradation*; *Korean Journal of Chemical Engineering*; *3Biotech*.

Delivered an invited lecture on: (i) “ATP Synthesis” in the Summer School, Department of Botany, NEHU (June 15, 2016), (ii) “Environmental Pollution and Bioremediation” at UGC-HRDC, NEHU (September 30-October 6, 2016), and (iii) “Environmental Pollution, Bioremediation and Related Glossary of Environmental Science” at Union Christian College, Umiam, Meghalaya (November 30, 2016).

Panel of experts for various academic evaluations in the Department of Molecular Biology and Biochemistry at Guru Nanak Dev University, Amritsar, Punjab, and member of the Advisory Committee for DBT Star College Scheme for St. Anthony’s College.

Dr. P. K. Ambasht

Reviewer for the *Journal of Plant Biochemistry and Biotechnology* (Springer) and *Journal of Molecular Catalysis B: Enzymatic* (Elsevier).

Dr. L. Kma

Served as a judge of: (i) 11th R. R. Thomas Memorial Inter-College Debate

Competition, organized by the Meghalaya College Teachers’ Association (MCTA) at Shillong College, (November 30, 2016), and (ii) Annual Kenean Award, Science and Arts, Lady Keane College (26 November 2016, 2 December 2016).

Served as a panelist in a symposium on *The Role of Media and Civil Societies on Diabetes and Diabetic Retinopathy* organized by Bansara Eye Care Centre, Shillong in collaboration with the World Diabetes Foundation, Denmark (June 15, 2017), and Moderator at the workshop on “Drug Abuse Prevention” organized by St. Anthony’s College, Shillong, ICSSR (NERC), Shillong and National Institute of Social Defence, Ministry of Social Justice and Empowerment, Government of India (March 3-4, 2017).

Dr. S. Bhan

Successfully completed a short-term Training Course in *Life Sciences* conducted by UGC-HRDC NEHU, Shillong (August 1-6, 2016).

Dr. Timir Tripathi

Reviewer for *Scientific Reports*, *International Journal of Biological Macromolecules*, *Journal of Biomolecular Structure and Dynamics*, *Journal of Proteins and Proteomics*, *Plos ONE*, *BMC Research Notes*, *Protein Expression and Purification*, *Parasitology International*.

DEPARTMENT OF BIOTECHNOLOGY AND BIOINFORMATICS

Head: Professor S. Rama Rao

Telephone: 0364-272-2401/2402/2404

E-mail: hodbthbic@nehu.ac.in, biotechnologynehu@gmail.com, sr Rao@nehu.ac.in

Faculty: 7

Designation	Name and Qualification	Specialization
Professor (3)	Anupam Chatterjee, MSc (Burdwan), PhD (BHU)	Genetics and Molecular Biology
	S. Rama Rao, MSc & PhD (Jodhpur Univ)	Plant Cellular and Molecular Genetics
	Kripamoy Aguan, MSc (IARI), PhD (Birmingham)	Genetics and Molecular Biology
Associate Professor (1)	S. R. Joshi, MSc & PhD (NEHU)	Microbiology
Assistant Professor (3)	Suktilang Majaw, MSc (Tezpur), PhD (NEHU)	Biochemistry
	Atanu Bhattacharjee, MSc (NEHU), MSc (Annamalai Univ), PhD (NEHU)	Bioinformatics and Microbiology
	Neha Chaurasia, MSc & PhD (BHU)	Environmental Biotechnology

Thrust Areas of Research

1. Molecular Genetics
2. Microbiology

Brief Statement of Academic Activities

The Department of Biotechnology and Bioinformatics started in 2005. It offers the postgraduate (MSc and PhD) academic programmes. North-Eastern Region of India is the hotspot of biodiversity which rich in flora and fauna. The Department envisions for the development of bio-resources, its exploration, conservation and sustainable utilization coupled with the need of trained manpower in Biotechnology, and Bioinformatics network.

Therefore, the Department of Biotechnology and Bioinformatics is providing training and research environment with the latest information in their respective fields and bringing them closer to the rest of the world as far as scientific advancements are concerned. Based on the overall academic objectives of the Department and its faculty's potential, the Department was considered for financial support for "MSc Biotechnology" by the Department of Biotechnology, Government of India. Six batches of MSc students have completed their MSc degree and some of them have already joined in different IITs, IMTECH, AIIMS, IISc, and others for their PhD degree, while many others have joined different National Biotech Companies. While giving importance

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to the global scenario, the Department also lays emphasis on regional priorities in research and development incorporated into its programme. This programme is intended to develop, acquire, and maintain the modern state-of-the art in teaching, training, research, databases, and software development related to biologically rich resources of the North-Eastern Region of India, which could ultimately contribute towards socio-economic development of the people in

the region. The Department has been receiving adequate extramural-financial support from various Central Government agencies, which include Special Assistance program of UGC (SAP), phase I and II programs of DST-FIST, besides regular support from DBT for teaching and research programs. The extramural support in the form of projects also comes from DBT, ICAR, DST, UGC, DAE-BRNS, OIL, NEC, DRDO, etc., which are received by faculty members.

Students' Profile

Enrolment Capacity: MSc -24; PhD – Variable

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MSc	12	10		12	02	08	09	13	22
PhD	02	04	01	04		01	04	02	06

Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MSc	07	10	01	08	01	07	07	10	17
PhD	01	03		01		03	01	03	04

Students Awarded PhD Degree

Name of Student	Title of Thesis	Name of Supervisor & Joint Supervisor
Ms. Fenella M. W. Nongkhlaw	Characterization and Bioactivity Analysis of Epiphytic and Endophytic Bacteria Associated with Some Ethnomedicinal Plants in Meghalaya	Dr. S. R. Joshi
Ms. Archana Ojha	Host Range Analysis and Genotypic Characterization of Rhizobia Associated with Native Legumes of Meghalaya	Prof. S. R. Rao & Dr. S. R. Joshi
Mr. Kaushik Bhattacharjee	Diversity and Antimicrobial Potentials of Lithic Bacteria Prevalent in Meghalaya	Dr. S. R. Joshi
Ms. Pallavi Yadav	Studies on Polymorphic Association of Selected Glutathione-S-Transferase Family Genes in Betel Nut Induced Human and Tumor Samples	Prof. Anupam Chatterjee & Dr. A. Bhattacharjee

Department of Biotechnology & Bioinformatics

Placement of Students

1. Mr. Vipul Saxena, Project Associate, Stelis Biopharma, Bangalore.
2. Ms. Papori Saikia, Trainee Assistant, Dyde Engineering, Hyderabad.
3. Ms. Jasmin Akhtar, Trainee Assistant, Dr. Reddy's Hyderabad.

Research fellowships: 13

CSIR-UGC-NET	UGC-Non-NET	National Fellowship for Higher Education	DST	ICMR
02	07	02	01	01

Courses Conducted

Postgraduate: MSc

Semester I

Cell Biology and Genetics; Biomolecules; Microbiology.

Semester II

Molecular Biology; Immunology; Microbial Technology.

Semester III

Animal Cell Science and Technology; Genetic Engineering; Plant Biotechnology.

Semester IV

Bioprocess Engineering and Technology; Environmental Biotechnology; Molecular Genetics; Applied Microbiology.

The Department offers open courses on Microbial Technology, Applied Molecular Genetics, Bioinformatics in Molecular and cellular Biology under CBCS in the MSc 2nd and 3rd semesters.

PhD Courses

Research Methodology (School Level); Biotechnology in Medicine; Agriculture and Microbiology (Department Level); Review of literature (Department Level).

Seminars/Conferences/Symposia/Workshops

Organized

Prof. S. R. Rao

Organised the *DBT Project Network Programme Review Meeting* held on 26-27 September 2016 at the Department.

Attended

Prof. S. R. Rao

Attended and delivered a keynote address at the national conference on *Basic and Applied Researches in Plants and Microbes*, Department of Botany, Punjab University, Patiala (November 03-05, 2016). He also delivered a plenary lecture at the international conference on *The Green Planet: Past, Present and Future* at the Department of Botany, University of Calcutta (December 21-23, 2016).

Dr. S. R. Joshi

Attended: (i) American Society of Microbiologists' International Conference on *ASM Microbe* in Boston, MA, USA (June 16-20, 2016), and presented a paper entitled "Chemoheterotrophic Bacteria Contribute to Biogenic Evolution of Speleothems in Cave Formations," (ii) 57th Annual

Conference-Cum-International Symposium of Association of Microbiologists of India (AMI) at Guwahati University, Guwahati (November 24-27, 2016), and presented an invited talk on “Microbiology of Ethnic Fermented Foods of Meghalaya and Its Safety,” (iii) International conference on *Contemporary Antimicrobial Research* and delivered a talk on “Probiotics Gene Pool from Non-Dairy Fermented Products Prevalent in Northeast India” organized by Biotech Hub, Assam University, Silchar, India (14-17 November 2016), and (iv) International conference on *Advances in Nanotechnology* at the Department of Electronics and Telecommunications, Assam Don Bosco University, Assam (9-13 January 2017), and presented a paper “Macro and Micro-Fungi Mediated Synthesis of Silver Nanoparticles and Its Applications.”

Publications

Published in India

- Mandal, K.M., Chaurasia, N. (2016). Exploration of potential microalgae in biodiesel production in present milieu. *Northeast Bioline*, Issue-2: 32-34.
- Momin, K. C., Sangma, A. N., Suresh, C. P., Singh, Y. S., Ojha, A., Rao, S. R. (2017). ‘Te.pattang’ (*Haematocarpus validus* (Miers) Bakh. f. ex Forman) - The lesser known promising endemic fruit of Garo Hills, Meghalaya. *Indian Journal of Plant Genetic Resources*, 30(1):1-7.
- Upadhyay, S., Mustafa, M., Joshi, S.R. (2016). Naturally evolving extended spectrum cephalosporin resistance in soil borne isolates of Enterobacteriaceae. *National Academy Science Letters*, 39:181-184.

Published Abroad

- Ali, M. A., Lee, J., Rahman, M. O., Al-Anazi, F. S., Al-Hemaid, F. M., Hatamleh, A. A., Bhattacharjee, A. (2016). Phylogenetic implication of molecular genotyping of *Euryops jaberiana* Abedin and Chaudhary (Asteraceae). *Bangladesh Journal of Plant Taxonomy*, 23(1): 45-51.
- Banerjee, A., Bareh, D.A., Joshi, S.R. (2017). Native microorganisms as potent bioinoculants for plant growth promotion in shifting agriculture (*Jhum*) systems. *Journal of Soil Science and Plant Nutrition*, <http://dx.doi.org/10.4067/S0718-95162017005000010>.
- Banerjee, S., Joshi, S.R. (2016). Mineralogical footprints of bacterial biofilms associated with Labit cave, a part of the longest cave system in India. *Geomicrobiology Journal*, 33(8): 699–708.
- Banerjee, S., Joshi, S.R., Mandal, T., Halder, G. (2017). Insight into Crop reduction efficiency of *Rhodococcus erythropolis* isolated from coalmine waste water. *Chemosphere*, 167: 269- 281.
- Banerjee, S., Joshi, S.R. (2016). Culturable bacteria associated with the caves of Meghalaya in India contribute to speleogenesis. *Journal of Caves and Karst Studies*, 78(3): 144–157.
- Banerjee, S., Mukherjee, S., Ka-ot, A.L., Joshi, S.R., Mandal, T., Halder, G. (2016). Biosorptive uptake of Fe²⁺, Cu²⁺ and As⁵⁺ by activated biochar derived from *Colocasia esculenta*: Isotherm, kinetics, thermodynamics, and cost estimation. *Journal of Advanced Research*, <http://dx.doi.org/10.1016/j.jare.2016.06.002>.

- Bhattacharjee, B., Pathaw, N., Chrungoo, N. K., Bhattacharjee, A. (2017). Molecular modelling, dynamics simulation and characterization of antifungal chitinase from *Sechium Edule*. *Gene*, 606:39-46.
- Bhattacharjee, K., Joshi, S.R. (2016). A selective medium for recovery and enumeration of endolithic bacteria. *Journal of Microbiological Methods*, 129: 44-54.
- Bora, B., Biswas, A. D., Gurung, A. B., Bhattacharjee, A., Mattaparthi, V. S. K., Mukherjee, A. K. (2017). An in silico approach to understand the structure–function properties of a serine protease (Bacifrinase) from *Bacillus cereus* and experimental evidence to support the interaction of bacifrinase with fibrinogen and thrombin. *Journal of Biomolecular Structure and Dynamics*, 35(3): 622-644.
- Borthakur, M., Joshi, S.R. (2016). Micrographical analysis of growth deformities in common pathogens induced by voucher fungi from India. *Journal of Microscopy and Ultrastructure*, 4: 203-210.
- Chaurasia, N., Mishra, Y., Chatterjee, A., Rai, R., Yadav, S., Rai, L.C. (2017). Overexpression of phytochelatin synthase (pcs) enhances abiotic stress tolerance by altering the proteome of transformed *Anabaena* sp. PCC 7120. *Protoplasma*, <https://doi.org/10.1007/s00709-016-1059-7>.
- Das, A.R., Borthakur, M., Saha, A.K., Joshi, S.R., Das, P. (2017). Molecular characterization and antioxidant potential of three wild culinary-medicinal mushrooms from Tripura, Northeast India. *International Journal of Medicinal Mushrooms*, 19(1): 55–63.
- Devi, S. P., Kumaria, S., Rao, S. R., Tandon, P. (2016). Carnivorous plants as a source of potent bioactive compound: Naphthoquinones. *Tropical Plant Biology*, 9(4):267-279.
- Dey, J., Ray, D., Biswas, K., Aswal, V.K., Joshi, S.R., Joachim, K., Dey, J., Kochi, I. K. (2016). AOT Micelles/Vesicles for synthesis of silver nanoparticles and micellar transitions affected by nanoparticles. *ChemistrySelect*, 1: 2864-2871.
- Ghoshal, N., Sharma, S., Banerjee, A., Kurkalang, S., Raghavan, S.C., Chatterjee, A. (2017). Influence of reduced glutathione on end-joining of DNA double-strand breaks: Cytogenetical and molecular approach. *Mutation Research*, 795:1-9.
- Gurung, A. B., Aguan, K., Mitra, S., Bhattacharjee, A. (2016). Identification of molecular descriptors for design of novel isoalloxazine derivatives as potential Acetylcholinesterase inhibitors against Alzheimer’s disease. *Journal of Biomolecular Structure and Dynamics*, 35 (8):1729-1742.
- Gurung, A. B., Ali, M. A., Bhattacharjee, A., AbulFarah, M., Al-Hemaid, F., Abou-Tarboush, F. M., Lee, J. (2016). Molecular docking of the anti-cancer bioactive compound proceraaside with macromolecules involved in the cell cycle and DNA replication. *Genet. Mol. Res.*, 15(2), doi: 10.4238/gmr.15027829.
- Gurung, A. B., Ali, M. A., Bhattacharjee, A., Al-Anazi, K. M., Farah, M. A., Al-Hemaid, F. M., Al-Anazi, F. S. M. (2016). Target fishing of glycopentalone using integrated inverse docking and reverse pharmacophore mapping approach. *Genetics and Molecular Research*, 15: 01-13.
- Gurung, A. B., Bhattacharjee, A. (2017). Structure based virtual screening identifies

- Pranlukast as a potential inhibitor against plasmodium falciparum adenosine deaminase enzyme. *Gene Reports*, 6:54-66.
- Gurung, A. B., Bhattacharjee, A., Ali, M. A. (2016). Exploring the physicochemical profile and the binding patterns of selected novel anticancer Himalayan plant derived active compounds with macromolecular targets. *Informatics in Medicine Unlocked*, 5:1-14.
- Gurung, A. B., Bhattacharjee, A., Ali, M. A., Al-Hemaid, F., Lee, J. (2017). Binding of small molecules at interface of protein–protein complex—A newer approach to rational drug design. *Saudi Journal of Biological Sciences*, 24(2): 379-388.
- Gurung, A., Aguan, K., Mitra, S., Bhattacharjee, A. (2017). Identification of molecular descriptors for design of novel isoalloxazine derivatives against Alzheimer's disease. *Journal of Biomolecular Structure and Dynamics*, 35(8):1729-1742.
- Islam, M. M., Gurung, A. B., Bhattacharjee, A., Aguan, K., Mitra, S. (2016). Human serum albumin reduces the potency of acetylcholinesterase inhibitor based drugs for Alzheimer's disease. *Chemico-Biological Interactions*, 249:1-9.
- Islam, M. M., Gurung, A. B., Bhattacharjee, A., Aguan, K., Mitra, S. (2016). Human serum albumin reduces the potency of acetylcholinesterase inhibitor based drugs for Alzheimer's disease. *Chemico-biological interactions*, 249:1-9.
- Islam, M.M., Aguan, K., Mitra, S. (2016). Fluorescence properties and sequestration of peripheral anionic site specific ligands in bile acid hosts: Effect on acetylcholinesterase inhibition activity. *Journal of Photochemistry and Photobiology B: Biology*, 158:192-201.
- Ka-ot, A. L., Banerjee, S., Haldar, G., Joshi, S.R. (2016). Acid and heavy metal tolerant *Bacillus* spp. from rat-hole coal mines of Meghalaya, India. *Proceedings of National Academy of Sciences. Section B: Biological Sciences*, doi:10.1007/s40011-017-0856-x.
- Khaund, P., Joshi, S. R. (2016). *Lentinula edodes* based GIS mapping, biometabolites and anti-inflammatory activity of wild edible mushrooms from tropical 'sacred grove' forests of Meghalaya, India. *Revista de Biología Tropical*, 64 (1): 247-257.
- Kurkalang, S., Banerjee, A., Chatterjee, P., Panda, D., Chatterjee, A., Mukherjee, A. (2016). Mechanism of apoptosis induction in human breast cancer MCF-7 cell by Ruviprase, a small peptide from *Daboia russelii russelii* venom. *Chemico-biological interaction*, 258: 297-304.
- Lamare, A., Baruah, I., Borah, N., Rao, S. R. (2016). Analysis of intraspecific genetic variation in *Musa balbisiana* Colla from Meghalaya as revealed by single primer amplification reaction approach. *The Nucleus*, 59(1): 25-34.
- Lamare, A., Otaghvari, A. M., Rao, S. R. (2016). Phylogenetic implications of the internal transcribed spacers of nrDNA and chloroplast DNA fragments of musa in deciphering the ambiguities related to the sectional classification of the genus. *Genetic Resources and Crop Evolution*, <http://doi:10.1007/s10722-016-0433-9>.
- Lamo, J. M., Devi, S. P., Devi, K. M., Rao, S.R. (2016). Heterochromatin distribution pattern in aid of understanding plant species

- inter-relationships. *Electronic Journal of Biology*, 12(4):426-427.
- Lamo, J. M., Wahlang, D. R., Rao, S. R. (2016). Comparative analysis of heterochromatin distribution pattern in wild and cultivated species of *Curcuma* L. *Medicinal and Aromatic Plants*, S3:006, <http://doi:10.4172/2167-0412.S3-006>.
- Lamo, J. M., Rao, S. R. (2017). Chromosome counts in wild and cultivated species of *Curcuma* Linn. *Cytologia*, 82(2):1-6.
- Lyngwi, N. A., Nongkhlaw, M., Kalita, D., Joshi, S. R. (2016). Bioprospecting of plant growth promoting bacilli and related genera prevalent in soils of pristine sacred groves: Biochemical and molecular approach. *PLoS ONE* 11(4): e0152951, doi:10.1371/journal.pone.0152951.
- Majaw, S., Das, A., Borah, V. V. (2016). Effect of *Clerodendron colebrookianum* Walp. aqueous leaf extract on liver oxidative stress and the immune system of mice exposed to cold restraint stress. *International Journal of Current Science*, 19(2): E95-104.
- Majaw, S., Syiem, D. (2016). Effect of osbeckia chinensis root extract on aldose reductase and sorbitol dehydrogenase activity in mice of two different age groups. *Der Pharmacia Lettre*, 8(13): 149-156.
- Majaw, S., Syiem, D. (2016). *In vitro* aldose reductase inhibitory potential of fractions isolated from *Potentilla fulgens* roots. *Journal of Applied Pharmaceutical Science*, 6(08):102-109.
- Nath, A., Joshi, S. R. (2016). Endophytic fungi from tropical ethnoveterinary plants and their antibacterial efficacy against *Pasteurella multocida* capsular type A strain. *Revista de Biología Tropical.*, 64 (2): 733-745.
- Nongkhlaw, F. M. W., Joshi, S.R. (2016). Horizontal gene transfer of the non-ribosomal peptide synthetase gene among endophytic and epiphytic bacteria associated with ethnomedicinal plants. *Current Microbiology*, 72: 1-11.
- Nongkhlaw, F. M. W., Joshi, S.R. (2016). Microscopic study on colonization and antimicrobial property of endophytic bacteria associated with ethnomedicinal plants of Meghalaya. *Journal of Microscopy and Ultrastructure*, doi: 10.1016/j.jmau.2016.09.002.
- Phanrang, P. D., Sofinia, K. M., Mawkhiew, E., Marboh, W. M., Sobhani, R., Langbang, L., Thounaojam, R., Kripamoy, A. (2017). Distribution of the Val108/158 met polymorphism of COMT gene in the Khasi, Garo, Jaintia populations of Northeast India. *Neurology and Neurosurgery*, 3(4):555-620.
- Rynjah, C. V., Boruah, P., Majaw, S. (2016). Evaluation of hypoglycemic and antihyperglycemic effect of aqueous-methanolic leaves extract of two medicinal plants of Meghalaya in mice. *International Journal of Pharmacological Research*, 6(07):256-263.
- Rynjah, C. V., Ningthoujam, N., Khongthaw, N., Syiem, D., Majaw, S. (2017). Evaluation of the antidiabetic property of aqueous leaves extract of *Zanthoxylum armatum* using *in vivo* and *in vitro* approaches. *Journal of Traditional and Complementary Medicine*, 30:1-7.
- Sangilipandi, S., Sutradhar, D., Bhattacharjee, K., Kaminsky, W., Joshi, S. R., Chandra,

- A.K., Rao, K. M. (2016). Synthesis, structure, antibacterial studies and DFT calculations of arene ruthenium, Cp*Rh, Cp*Ir and tricarbonylrhenium metal complexes containing 2-chloro-3-(3-(2-pyridyl) pyrazolyl) quinoxaline ligand. *Inorganica Chimica Acta.*, 441: 95–108.
- Sen, B., Sheet, S. K., Thounaojam, R., Jamatia, R., Pal, A. K., Aguan, K., Khatua, S. (2016). A coumarin based Schiff base probe for selective fluorescence detection of Al³⁺ and its application in live cell imaging. *Spectrochimica Acta part A: Molecular and Biomolecular Spectroscopy*, 173:537-543.
- Sheet, S. K., Sen, B., Thounaojam, R., Aguan, K., Khatua, S. (2016). Highly selective light-up Al³⁺ Sensing by A Coumarin based Schiff base probe: Subsequent phosphate sensing DNA binding and live cell imaging. *Journal of Photochemistry and Photobiology A: Chemistry*, 332:101-111.
- Sheet, S. K., Sen, B., Thounaojam, R., Aguan, K., Khatua, S. (2017). Ruthenium (II) complex-based luminescent bifunctional probe for Ag⁺ and phosphate ions: Ag⁺-assisted detection and imaging of rRNA. *Inorganic Chemistry*, 56 (3):1249-1263.
- Sobhani, R., Pal, A. K., Bhattacharjee, A., Mitra, S., Aguan, K. (2017). Screening indigenous medicinal plants of Northeast India for their anti-Alzheimer's properties. *Pharmacognosy Journal*, 9(1):46-54.
- Sobhani, R., Pal, A. K., Bhattacharjee, A., Mitra, S., Aguan, K. (2016). Screening some indigenous medicinal plants of Northeast India for their inhibitory effect on AChE activity. *Pharmacognosy Journal*, 9(1):46-54.
- Swier, P, Joshi., S. R., Acharya. C. (2016). Cesium and strontium tolerant *Arthrobacter* sp. strain KMSZP6 isolated from a pristine uranium ore deposit. *AMB Express*, 6:69, doi 10.1186/s13568-016-0247-3.
- Thounaojam, R., Langbang, L., Itisham, K., Sobhani, R., Srivastava, S., Ramanujam, B., Verma, R., Tripathi, M., Aguan, K. (2017). *EFHC1* mutation in Indian juvenile myoclonic epilepsy patient. *Epilepsia Open*, 2(1):84-89.
- Trivedi, P. M., Graham, K.L., Scott, N. A., Jenkins, M. R., Majaw, S., Sutherland, R. M., Fynch, S., Burns, C.J., Krishnamurthy, B., Brodnicki, T. C., Mannering, S. I., Kay, T. W., Thomas, H. E. (2017). Repurposed JAK1/JAK2 inhibitor reverses established autoimmune insulinitis in preclinical trials in non-obese diabetic mice. *Diabetes*, 66(6):1650-1660.
- Umdale, S. D., Aitawade, M. M., Gaikwad, N. B., Madhavan, L., Yadav, S. R., Rao, S. R., Bhat, K. V. (2017). Pollen morphology of Asian vigna species (genus *Vigna*; Subgenus *Ceratotropis*) from India and its taxonomic implications. *Turkish Journal of Botany*, 41(1):75-87.
- Umdale, S. D., Patil, P. D., Malik, S. K., Latha, M., Rao, S. R., Yadav, S. R., Gaikwad, N.B., Bhat, K. V. (2017). Seed coat sculpture of subgenus *Ceratotropis* (Piper) verdc., genus *Vigna* Savi, in India and its taxonomic implications. *Botany Letters*, 164(1):63-78.
- Upadhyay, S., Hussain, A., Ingti, B., Laskar, M.A., Choudhury, M.D., Bhattacharjee, A., Joshi, S.R. (2016). Detection of a new class C beta-lactamase CM-139 in *Klebsiella pneumoniae* of food origin from India. *Journal of Global Antimicrobial Resistance*, doi: 10.1016/j.jgar.2016.11.002.

- Upadhyay, S., Joshi, S. R., Khryiem, A. B., Bhattacharyya, P. (2016). Acquired 16s methyl transferase associated high level aminoglycoside resistance in *Acinetobacter baumannii* recovered from ICU patients from a tertiary referral hospital of Northeast India. *International Journal of Infectious Diseases*, 45S-46, <http://dx.doi.org/10.1016/j.ijid.2016.02.144>.
- Upendra, J. M., Rao, S. R., Dagla, H. R. (2017). Genetic diversity analysis of *Salvadora persica*: An evergreen halo-xeric species of semi-arid and sub-humid regions of Rajasthan, India. *Ecological Genetics and Genomics*, 2:35-41.
- Books/Book Chapters/Proceedings**
- Chaurasia, N., Mishra, Y. (2016). Novel technologies for plant functional genomics In: *Current Developments in Biotechnology and Bioengineering*. S.K. Dubey, Ashok Pandey, R.S. Sangwan (Eds.) Elsevier, Chapter 11, p. 241-25.
- Kumari, A., Pandey, A., Joshi, S. R., *et al.* (2016). Indigenous alcoholic beverages of South Asia. In: *Indigenous Fermented Foods of South Asia*. V.K. Joshi (Ed.). Taylor and Francis Group, CRC, Chapter 3, p. 501-596.
- Molins., A. C., Galvez, A., Joshi, S. R. *et al.* (2016). Indigenous fermented foods of South Asia. In: *Indigenous Fermented Foods of South Asia*. V. K. Joshi (Ed.). Taylor and Francis Group, CRC, Chapter 1, p. 1-67.
- Rajpal, V. R., Rao, S. R., Raina, S. N., editors. (2016). *Gene Pool Diversity and Crop Improvement Series: Sustainable Development and Biodiversity*, Vol. 1. Springer International Publishing, Switzerland, ISBN: 978-3-319-27096-8.
- Rajpal, V. R., Rao, S. R., Raina, S. N., editors. (2016). *Molecular Breeding for Sustainable Crop Improvement Series: Sustainable Development and Biodiversity*, Vol. 2. Springer International Publishing, Switzerland, ISBN: 978-3-319-27090-6.
- Rosma, A., Singh, A., Joshi, S. R. *et al.* (2016). Indigenous fermented foods. In: *Indigenous Fermented Foods of South Asia*. V.K. Joshi (Ed.). Taylor and Francis Group, CRC, Chapter 10, p. 645-713.
- Senapati., A. K., Ann, A., Joshi, S. R. *et al.* (2016). Diversity of indigenous fermented foods and beverages of South Asia. In: *Indigenous Fermented Foods of South Asia*. V.K. Joshi (Ed.). Taylor and Francis Group, CRC, Chapter 2, p. 69-106.
- Funds Received from Agencies including NEHU/UGC**
- NON- PLAN: 9.55 lakhs
- DBT MSc Teaching: 52.94 Lakhs
- DBT: 352.34 lakhs
- DST: 98.20 lakhs
- OIL: 9.58 lakhs
- NEC: 39.0 lakhs
- UGC-SAP: 29.80 lakhs

Research Projects

New: 10

Title of Project	PI/Co-PI	Funding Agency	Rupees in in lakh
Association between the Loss of Tumor Suppressor Genes And Deregulation of Mad2 Expression In Raw Areca-Nut Induced Cancer Samples	Prof. A. Chatterjee	DST, GoI	36.60
Network Programme for Enrichment and Update of Plant Chromosome Database for Spermatophytes and Archegoniates	Prof. S. Rama. Rao	DBT, GoI	8.40
Study of Anti-Obesity Property of Root Extract of <i>Potentilla Fulgens</i> , A Known Anti-Diabetic Medicinal Plant Available in Meghalaya	Dr. S. Majaw (PI)	SERB,DST	16.00
Remediation of Produced Water from NE Oil Field by Microbial and Membrane Intervention with Modeling of an Affluent Unit for the Recovery of Usable Water	Dr. Suktilang Majaw (PI) from North-East under DBT-Twinning programme	DBT	0.19
Study the effect of <i>Potentilla fulgens</i> L. Extract on the AMP-activated Protein Kinase) AMPK Pathway-Regulated Metabolism in Induced-Diabetic Mice	Dr. Suktilang Majaw (PI)	DBT-Twinning	5.50
Metagenomic and Functional Characterization of Soy-Based Fermented Food of North Eastern Region	Dr. S. R. Joshi	Department of Biotechnology, GoI	24.10
Establishment of a Culture Collection Centre in Northeast Region of India-Phase II	Dr. S. R. Joshi	Department of Biotechnology, Govt of India	11.168
Integrating Herbal Medicine of NER with Contemporary Approaches to Develop Therapeutic Strategies for Metabolic Syndrome	Dr. Atanu Bhattacharjee	Department of Biotechnology, GoI	83.86
Elucidation of Mechanism of Action and Anti-Cancer activity of Novel Iminoamine Derivatives to Treat Androgen Independent Prostate Cancer	Dr. Atanu Bhattacharjee.	Department of Biotechnology, GoI	44.60

Department of Biotechnology and Bioinformatics

Molecular Studies of Potential Biodiesel Producing Strains of Microalgae of Meghalaya	Dr. Neha Chaurasia	Ministry of Science and Technology DBT, GoI	14.99
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Ongoing: 6

Title of Project	PI/Co-PI	Funding Agency	Rupees in in lakh
Technology Development, Management and Long-Term Monitoring of Shifting Cultivation and Coal Mining in North Eastern India	Dr. S. R. Joshi	Ministry of Environment, Forest and Climate Change, GoI	10.26
Impact Assessment of Jhumming on Native Plants and Soil Microbiota and Restoration of Sustainable Jhum Agro-Ecosystem in Northeast India	Dr. S. R. Joshi	Department of Biotechnology, GoI	9.31
Network Programme for Enrichment and Update of Plant Chromosome Database for Spermatophytes and Archegoniates	Prof. S. Rama Rao	DBT, GoI	26.95
Molecular Basis of Toxicity Analysis of Locally Used Alphamethrin on Cyanobacteria and Algae in Soil Microflora of Meghalaya	Dr. Neha Chaurasia	DST-SERB	25.50
Development of Ache-Inhibitor for Alzheimer's Disease: Screening, Designing, Synthesis and Biological Validation Using Chemical Library & Traditional North-East Indian Plants	Prof. K. Aguan	DBT , GoI	6.32
Mirna Mutation in Epilepsy - An Explorative Study	Prof. K. Aguan	DBT , GoI	21.18

Completed: 3

Title of Project	PI/Co-PI	Funding Agency	Rupees in in lakh
Collection and Molecular Characterization of Mushrooms from Sacred Groves of Meghalaya	Dr. S. R. Joshi	Department of Science & Technology, GoI	21.00

School of Life Sciences

Characterization of Probiotics of Non-Diary Origin from North-East India	Dr. S. R. Joshi	Department of Biotechnology, GoI	39.43
Studies on Upgrading of Water Quality in Coal Mining Areas of Meghalaya and Eastern Coal Mines by Chemisorption and Bioremediation towards Mitigation of Unscientific Coal Mining	Dr. S. R. Joshi	Department of Biotechnology, GoI	29.46

Academic Collaborations

The Department has collaborated with: (1) Dr. S. Borgohain, Department of Petroleum Technology and Prof. P.K. Gogoi, Department of Chemistry, Dibrugarh University, Assam, on the Project: *Remediation of Produced Water from NE Oil Field by Microbial and Membrane Intervention with Modelling of an Affluent Unit for the Recovery of Usable Water*, (2) Dr. Celin Acharya, BRNS, Bhabha Atomic Research Centre, Mumbai, on the Project: *Growth Kinetics and Adaptation Behaviour Characterization of Caesium and Strontium Tolerant Bacteria*, (3) Dr. K. Kiran Kondepudi, National Agri-Biotechnology Institute, Punjab, on the Project: *Metagenomic and Functional Characterization of Soy-Based Fermented Foods of North-Eastern India*, (4) Dr. Gopinath Halder, Department of Chemical Engineering, NIT, Durgapur, on the Project: *Studies on Upgrading of Water Quality in Coal Mining Areas of Meghalaya and Eastern Coal Mines by Chemisorption and Bioremediation towards Mitigation of Unscientific Coal Mining*, (5) Prof. Sumita Jha of the University of Calcutta on the Project: *Network Programme for Enrichment and Update of Plant Chromosome Database for Spermatophytes and Archegoniates*, (6) Prof. S.N. Raina and Prof. D. Ohri,

Amity University, Noida and Lucknow on the Project: *Network Programme for Enrichment and Update of Plant Chromosome Database for Spermatophytes and Archegoniates*, (7) Prof. R.C. Verma, University of Ujjain, on the Project: *Network Programme for Enrichment and Update of Plant Chromosome Database for Spermatophytes and Archegoniates*, (8) Prof. S.R. Yadav, Shivaji University on the Project: *Network Programme for Enrichment and Update of Plant Chromosome Database for Spermatophytes and Archegoniates*, (9) Prof. Manoj Dhar, University of Jammu on the Project: *Network Programme for Enrichment and Update of Plant Chromosome Database for Spermatophytes and Archegoniates*, and (10) Dr. Ramkrishna Sen, Department of Biotechnology and Dr. Sirshendu De, Department of Chemical Engineering, IIT-Kharagpur, West Bengal on the Project: *Remediation of Produced Water from NE Oil Field by Microbial and Membrane Intervention with Modelling of an Affluent Unit for the Recovery of Usable Water*.

Other Activities

Prof. S. R. Rao

Member of: (i) School Board of Life Sciences (SBLS) Nagaland University, Lumami, (ii)

Department of Biotechnology and Bioinformatics

UGC-SAP Advisory Committee Punjabi University, Patiala, Punjab, and (iii) School Board of Life Sciences (SBLS) Assam University, Silchar, Assam. He was also a reviewer for the journals of *BMC Genetics*, *Nucleus*, *PNAS India*, and *Protoplasma*.

Prof. K. Aguan was a reviewer for the journal of *Epilepsia*.

Dr. S. R. Joshi

Member Task Force, SERB, Department of Science and Technology, Government of India. Reviewer for the Journals of *PlosOne*, *Current Microbiology*, *Journal of Plant Science and Nutrition*, *Biotech*, *Indian Journal of Traditional Knowledge*, *Journal of Soil Science and Plant Nutrition*, *Proc of Nat Acad of Sciences, India*, *Indian Journal of Biotechnology*, and *Journal of Microscopy and Ultrastructure*.

Delivered lectures on: (i) “Issues and Concerns of Climate Change” at North-East Police Academy, Barapani, Meghalaya on 5 June 2016, and (ii) “Teaching Skills

and Strategies at Institutions of Higher Learning” each at the Thirty-Sixth, Thirty-Seventh, Thirty-Eight, and Thirty-Ninth Orientation Programmes organized by UGC-HRDC, NEHU, on 30 May 2016, 9 August 2016, 23 January 2017, and 3 March 2017, respectively.

Dr. S. Majaw

Reviewer for the *Journal of Traditional and Complementary Medicine*, and *Indian Journal of Experimental Biology*, and member of the Kendriya Vidyalaya Management Committee, Eastern Air Command, Upper Shillong. She also attended the 3rd Colloquium of Overseas Associates at NER organized by DBT, GoI, India held at Sikkim State S&T Council (29-30 November 2016).

Delivered an invited talk at the interactive session on *South Asia and the Pacific* organised by the Society of Petroleum Engineers, Dibrugarh University on 27 March 2017 at the Department of Petroleum Technology, Dibrugarh University, Assam.

DEPARTMENT OF BOTANY

Head: Prof. S. K. Barik (Till November 03, 2016)
 Prof. Uma Shankar (Since November 25, 2016)
Telephone: 0364-272 2201/2202
E-mail: hodbot@nehu.ac.in

Faculty: 12

Designation	Name and Qualification	Specialization
Professor (8)	A. K. Misra, MSc & PhD (Meerut)	Cell and Molecular Genetics
	N. K. Chrungoo, MSc & PhD (Kashmir)	Plant Physiology, Plant Molecular Biology
	M. S. Dkhar, MSc & PhD (NEHU)	Microbiology and Microbial Ecology
	N. Venugopal, MSc & PhD (Madras)	Plant Reproductive Biology and Anatomy
	S. K. Barik*, MSc (Berhampur), PhD (NEHU)	Forest Ecology and Management, Biodiversity Conservation, and EIA
	Uma Shankar, MSc (Agra), PhD (NEHU)	Ecology, Biodiversity and Conservation
	H. Kayang, MSc & PhD (NEHU)	Microbiology and Microbial Ecology
	S. Kumaria, MSc & PhD (NEHU)	Plant Biotechnology and Physiology
Associate Professor (3)	Y. Kumar, MSc (Agra), PhD(NEHU)	Plant Taxonomy and Biosystematics
	L. Kharlukhi, MSc (NEHU), PhD (IARI)	Seed Physiology
	P. Ramanujam, MSc & PhD (NEHU)	Plant Ecology, Algal Ecology
Assistant Professor (1)	M. C. Das, MSc & PhD (NEHU)	Plant Biotechnology

*on lien since November 04, 2016 (as Director, NBRI, Lucknow)

Thrust Area of Research:

Plant and Microbial Diversity: Assessment, Characterization, Bio-prospection, and Conservation.

Brief Statement of Academic Activities

The Department of Botany completed the Phase II, UGC Centre for Advanced Studies in Botany in March, 2017. It offers two MSc Programmes,

Department of Botany

i.e. MSc (Botany) and MSc (Plant Molecular Biology), and PhD Programme in Botany. The faculty members are actively involved in diverse areas of research in plant sciences and are operating several research projects funded by various national and international agencies. The Department is currently coordinating three all India research projects involving 55 institutions/universities in the country. Fifteen individual research projects are going on. The Department received a research grant of Rs. 253.86 Lakhs from different funding agencies (including non-plan grant from UGC) during the year 2016-17. The faculty members were invited to deliver lectures at important national and international events, such as symposia and seminars, as keynote and lead speakers.

Besides regular teaching and research programmes, the Department organized several workshops and training programmes. A short-term summer school of eight days was carried out for BSc (Botany Hons/Microbiology) students. The Department organized the first-ever Distance Learning Programme Course in collaboration with the Indian Institute of Remote Sensing (IIRS), Dehradun on “Remote Sensing and GIS Applications in Carbon Forestry” for three weeks duration (February 16, 2017 to March 10, 2017). A poster session and lecture series on “Emerging Horizons in Life Sciences” were also organized by the Department. Five students were offered student fellowship within the Department and three traineeships were awarded to Post-MSc students. Eight students of the Department availed internships at various universities/laboratories in the country. Against four vacant positions, Dr. Bibhuti B. Das, Dr. Marlykynti Hynniewta, Dr. Neeta Pathaw and Dr. Sonali Ray were appointed as Guest faculty during the year.

The research scholars participated in workshops and training programmes at universities/

institutions and also presented papers at national and international seminars/symposia in India and abroad. Ms. Upasna Chettry received the best paper presentation award for her paper on “Analysing Structural Diversity of Seed Storage Protein Gene Promoters: Buckwheat a Case Study” at the 13th International Symposium on Buckwheat held at Chungbuk National University, Korea (7-11 November 2016). She also received the best poster presentation award for her paper entitled “Comparative Transcriptomics and Metabolomics in Deciphering the Bottle Necks Regulating Carotenoid Metabolism in *Oryza sativa* L.” Mr. Prasenjit Paul was awarded Plant Tissue Culture Association (India) award for his poster presentation on “Quantitative Evaluation of β -sitosterol in the *In Vitro*-raised Plantlets of *Dendrobium fimbriatum* Hook - A Medicinally Important Orchid” at the national symposium on *Plant Biotechnology: Current Perspectives on Medicinal and Crop Plants* and 38th Annual Meeting of Plant Tissue Culture Association (India) organized by the CSIR-Indian Institute of Chemical Biology, Kolkata (3-5 March, 2017). Ms. H. Romola Devi received the appreciation award for her poster presentation on “Mycoflora Diversity in Soil of Mawphlang Sacred Forest, Meghalaya” during the poster session on “New Horizons in Life Sciences” organized by the Department (March 23, 2017).

Five students were awarded the PhD degree during the year. Thirty students were admitted to the MSc Botany and ten students to the MSc Plant Molecular Biology programmes. Twenty-eight students were awarded the MSc degree in Botany and ten students were awarded the MSc degree in Plant Molecular Biology. Two MSc students and one research scholar qualified NET during the year. Twenty-two research papers were published in peer-reviewed scientific journals of national and international repute.

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Two papers were published in the international symposium proceedings.

Several distinguished scientists were invited to deliver talks on different topics during the year. They were Prof. S.K. Sopori, Ex-Vice Chancellor, Jawaharlal Nehru University, New Delhi; Prof. Dattamadamwar, B.R.D. School of Biosciences, Sardar Patel University, Vallab Vidyanagar, Gujarat; Prof. A.N. Lahiri

Majumder, Bose Institute, Kolkata; Prof. R.N. Gohil, B.G.S.B. University, Rajouri, Jammu and Kashmir; Prof. H.S. Gehlot, J.N.Vyas University, Jodhpur; Prof. D.J. Bagyaraj, NASI Sr. Scientist and Chairman for Natural Biological Resources and Community Development, Bangalore; Prof. Madan Chattervedi, Department of Zoology, University of Delhi, New Delhi; Prof. A.K. Paul and Prof. Sumita Jha, University of Calcutta, Kolkata.

Students' Profile

Enrolment Capacity: MSc (Botany) – 30, MSc (Plant Molecular Biology)-10, PhD - Variable

Degree	Male	Female	ST	GEN	Meghalaya	Non-Meghalaya	Total
MSc (Botany)	12	18	29	01	20	10	30
MSc (PMB)	04	06	08	02	07	03	10
PhD	02	01	01	02	01	02	03

Degrees Awarded

Degree	Male	Female	ST	GEN	Meghalaya	Non-Meghalaya	Total
MSc (Botany)	09	19	27	01	18	10	28
MSc (PMB)	03	07	08	02	07	03	10
PhD	01	02	02	01	02	01	03

Students Awarded PhD Degree

Name of Student	Title of Thesis	Name of Supervisor & Joint Supervisor
Mr. Banshanlang langrai	Development of Microsatellite Markers and Assessment of Genetic Diversity in Rice Bean (<i>Vigna umbellata</i> (Thunb.) Ohwi and Ohashi) Collections from Northeast India	Prof. N. K. Chungroo (Supervisor) Dr. A. Patanayak (Jt. Supervisor)
Ms. Namita Thapa	Nutrient Conservation Mechanism of Ever-green and Deciduous Sub-Tropical Tree Species	Prof. S. K. Barik (Supervisor)
Ms. Evanoreen Ann Khongwir	Development of Protocol for Generic Transformation of Chickpea (<i>Cicer arietinum</i> L.) Using Cry1Aa Gene Construction	Prof. P. Tandon (Supervisor) and A. Patnayak (Jt. Supervisor)

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Mrs. Neeta Pathaw	Identification and Characterization of Novel Antifungal Peptides from Selected Plant Species of North East India	Prof. N. K. Chrungoo (Supervisor)
Ms. Diana Kharkongor	Seasonal Variations in Diversity and Pigment Composition of Subaerial Algal Communities in East Khasi hills, Meghalaya	Dr. P. Ramanujam (Supervisor)

Placement of Students

1. Dr. Paromik Bhattacharyya joined SERB-NPDF at CSIR-Institute of Himalayan Bioresource Technology (IHBT), Division of Biotechnology, Palampur, Himachal Pradesh.
2. Dr. Neeta Pathaw was appointed Guest faculty, Department of Botany, NEHU, Shillong.
3. Dr. Bibhuti Bhashan Das was appointed Guest faculty, Department of Botany, NEHU, Shillong.
4. Dr. Mipeshwaree Devi joined as Post-Doctoral Fellow, School of Life Sciences, Sun Yat-Sen University, Guangzhou, China.
5. Dr. Mark Kordor Lyngdoh joined as Research Associate, Department of Botany, NEHU, Shillong.
6. Dr. Evanylla Kharlyngdoh was appointed Scientist-C, Institute of Bioresources and Sustainable Development (IBSD), Imphal, Manipur.
7. Dr. Namita Thapa joined as Research Associate I, Department of Botany, NEHU, Shillong.
8. Dr. Preeti Ahuja joined as Research Associate, Horticultural Science Department, University of Florida, USA.
9. Dr. Devendra Kumar was appointed Scientist-C, G.B. Pant National Institute of Himalayan Environment and Sustainable Development, Sikkim Unit, Gangtok.

Research Fellowships: 59

CSIR-UGC-NET	UGC Non-NET	National Fellowship for Higher Education	Meritorious Fellowship	Moulana Azad Minority Fellowship	Project Fellowship	DST Inspired
01	10	10	04	02	30	02

Courses Conducted

Postgraduate: MSc

Semester I

Mycology, Plant Pathology and Microbiology; Algae, Bryophytes and Pteridophytes; Gymnosperms and Plant Anatomy.

Semester II

Plant Taxonomy and Economic Botany; Plant Biochemistry and Molecular Biology; Stress Biology (Open); Bioprocess Development (Open); Techniques in Molecular Biology (Open).

Semester III

Genetics, Cytogenetics and Plant Breeding; Plant Physiology; Biodiversity and Phytogeography (Open); Environmental Pollution and Conservation (Open); Biostatistics (Open).

Semester IV

Plant Reproductive Biology and Biotechnology; Plant Ecology and Ecosystem Analysis; Project Work and Submission of Dissertation.

Project Work (6 credits): Higher Plant Ecology; Plant Molecular Biology; Advanced Plant Physiology; Taxonomy and Diversity of Angiosperms; Development and Reproduction of Angiosperms; Plant Biotechnology; Plant Genetics and Cytogenetics; Algal Ecology; Microbial Ecology.

MSc Plant Molecular Biology

Semester I

Mycology and Plant Pathology; Microbiology; Cell Biology and Plant Physiology.

Semester II

Plant Biochemistry and Molecular Biology; Eukaryotic Genome Organization; Stress Biology (Open); Bioprocess Development (Open); Techniques in Molecular Biology (Open).

Semester III

Genetics, Cytogenetics and Plant Breeding; Metabolite Engineering; Environmental Pollution and Conservation (Open); Computer Applications and Bioinformatics (Open); Project Work.

Semester IV

Plant Biotechnology; Molecular Basis of Differentiation; Continuation of Project Work and Submission of Dissertation.

Project work (12 credits): Microbiology, Plant Biotechnology, Molecular Physiology; Molecular Ecology.

PhD Courses

Research Methodology; Plant Sciences; Review of Literature and Seminar.

Seminars/Conferences/Symposia/Workshops

Organized

The Department organised the following events:

- (i) Poster session for research scholars on the theme - *Emerging Horizons in Life Sciences* on March 23, 2017 at the Department with Prof. N. K. Chrungoo as Coordinator, (ii) Lecture series on *Emerging Horizons in Life Sciences* on March 24, 2017 at the Department with Prof. N. K. Chrungoo as Coordinator, (iii) Training workshop on *Transcriptome Profiling Using Next Generation Sequencing* from March 1 to 6, 2017 with Prof. N. K. Chrungoo as Programme Coordinator, (iv) Certificate course in *Remote Sensing and GIS Applications in Carbon Forestry through Distance Learning* under the 19th IIRS Outreach Program at the Bioinformatics Centre, NEHU, from February 16 to March 10, 2017 in collaboration with the Indian Institute of Remote Sensing of ISRO, Dehradun, for the PhD research scholars of NEHU; and Prof. Uma Shankar was *Course Coordinator*, (v) Celebrations of *National Science Day* on February 28, 2017 in the Community Hall, NEHU, organized by the Botanic Club and Zoonic Society in association with the Research Scholars' Forum under NEHUSU, (vi) Meeting of a delegation led by Her Royal Highness Princess Maha Chakri Sirindhorn of Thailand during her

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visit to NEHU (November 25, 2016), (vii) Training workshop on *Application of Open Geospatial Tools in Ecological Niche Modelling and Widening the Utilization of Niche Models for Conservation of Threatened Plants* at NEHU, on September 21-23, 2016 sponsored by the Department of Biotechnology, New Delhi; *Programme Coordinator*: Prof. S. K. Barik, (viii) Summer school on *Functional Biology* under DBT State Level Biotech HUB Programme during June 14-24, 2016 at the Department with Prof. M.S. Dkhar as *Programme Coordinator*, and (ix) Interactive workshop on *Project Formulation and Report Writing* under DBT Biotech Hub project on June 10, 2016 at the Department in which Prof. N.K. Chrungoo was *Programme Coordinator*.

Attended

Prof. N. K. Chrungoo

Delivered lead lectures on: (i) “Analysing Structural Diversity of Seed Storage Protein Gene Promoters: Buckwheat a Case Study” and an invited talk on “Perspectives in Diversity, Physiology and Molecular Biology of Buckwheat” at the *13th International Symposium on Buckwheat*, Cheongju, and Bongpyeong, Korea (September 9-11, 2016), and (ii) “Pearls in the Ocean: Prospects for Utilization to Meet Challenges of Food and Nutritional Security” at the national seminar on *Recent Trends in Plant and Environment Sciences* (NSPES-2017) at Guru Nanak Dev University, Amritsar (9-10 February 2017).

Prof. Uma Shankar

Presented a keynote lecture on “Medicinal Plant Diversity in Meghalaya: Utilization and Conservation Patterns” at the national seminar on *Role of AYUSH in Health Care*

Management in NE India organized by the North Eastern Institute of Ayurveda and Homeopathy, Mawdiangdiang, Shillong (February 23-24, 2017).

Dr. P. Ramanujam

Delivered an invited lecture on “Diversity and Potential of Subaerial Algae from East Khasi Hills, Meghalaya” at the international conference on *The Green Planet: Past, Present and Future* at CAS-VII, Department of Botany, University of Calcutta, Kolkata (December 22, 2016).

Publications

Published in India

Chrungoo, Nikhil K., Devi, Gangarani, A. (2016). Sequence polymorphism in the waxy locus and its relationship with apparent amylose content of endosperm starch in cultivars of rice (*Oryza sativa* L.) from Northeast India. *Indian journal of Plant Physiology*, 21(4): 556-568.

Das, M., Ramanujam, P. (2016). Structure and function of algal assemblages in the streams of Jaintia Hills District, Meghalaya. *Transient - A Journal of natural Sciences and Allied Subjects*, V: 63-85.

Kharwanlang, L., Das, M. C., Kumaria, S., Tandon, P. (2016). High frequency somatic embryos induction from the rhizome explant of panax pseudoginseng wall using thin cell layer section. *International Journal of Applied Biology and Pharmaceutical Technology*, 7(3): 32-40.

Marak, M.C.N., Kayang, H. (2016). Identification of fungal pathogens associated with solanum tuberosum L. of South West Garo Hills. *Transient – A Journal of Natural Sciences and Allied Subjects*, V: 58-62.

- Sarma, P., Kumar, M., Dkhar, M. S., Kayang, H., Laldinthar, R., Dubey, N. K., Raghuwanshi, R. (2016). Endophytic fungi associated with the medicinally important aromatic plant *Artemisia nilagirica* (Clarke) Pamp. and antimicrobial activity of selected endophytic fungi against rhizoctonia solani. *Asian Journal of Biological and Life Sciences*, 5(2): 154- 160.
- Sharma, D., Kayang, H. (2017). A Comparison of two different techniques to obtain monospecific culture of arbuscular mycorrhizal fungi. *Agricultural and Biological Research*, 33(2): 236-245.
- Sharma, D., Kayang, H. (2017). Effects of arbuscular mycorrhizal fungi (AMF) on *Camellia sinensis* (L.) O. Kuntze under greenhouse conditions. *Journal of Experimental Biology and Agricultural Science*, 5(2): 235-241.
- Published Abroad**
- Bhattacharjee, B., Pathaw, N., Chrungoo, N. K., Bhattacharjee, A. (2017). Molecular modelling, dynamics simulation and characterization of antifungal chitinase from *Sechium edule*. *Gene*, 606: 39-46.
- Bhattacharyya, P., Ghosh, S., Mandi, S. S., Kumaria, S., Tandon, P. (2017). Genetic variability and association of AFLP markers with some important biochemical traits in *Dendrobium thyrsiflorum*, a threatened medicinal orchid. *South African Journal of Botany*, 109: 214-222.
- Bhattacharyya, P., Kumaria, S., Bose, B., Paul, P., Tandon, P. (2017). Evaluation of genetic stability and analysis of phytomedicinal potential in micropropagated plants of *Rumex nepalensis* – a medicinally important source of pharmaceutical biomolecules. *Journal of Applied Research on Medicinal and Aromatic Plants*, doi:10.1016/j.jarmap.2017.02.003.
- Bhattacharyya, P., Kumaria, S., Job, N., Tandon, P. (2016). En-masse production of elite clones of *Dendrobium crepidatum*: A threatened, medicinal orchid used in traditional Chinese medicine (TCM). *Journal of Applied Research on Medicinal and Aromatic Plants*, 3(4): 168–176.
- Chuzho, K., Dkhar, M. S., Lyngdoh, A. (2017). Wood-rotting fungi in two forest stands of Kohima, North-east India – A preliminary report. *Current Research in Environmental and Applied Mycology*, 7(1): 15-21.
- Devi, R.J., Chrungoo, N.K. (2017). Evolutionary divergence in *Chenopodium* and validation of SNPs in chloroplast rbcL and matk genes by allele-specific PCR for development of *Chenopodium quinoa*-specific markers. *The Crop Journal*, 5(1): 32-42.
- Devi, S.P., Kumaria, S., Rao, S. R., Tandon, P. (2016). Carnivorous plants as a source of potent bioactive compound: Naphthoquinones. *Tropical Plant Biology*, 9 (4): 267-279.
- Dhar, M. K., Sharma, M., Bhat, A., Chrungoo, N.K., Kaul, S. (2017). Functional genomics of apocarotenoids in saffron: Insights from chemistry, molecular biology and therapeutic applications. *Briefings in Functional Genomics*, <https://doi.org/10.1093/bfpg/elx003>.
- Myllemngap, W., Nath, D., Barik, S. K. (2016). Changes in vegetation and nitrogen mineralization during recovery of a montane subtropical broadleaved forest in North-eastern India following anthropogenic disturbance. *Ecological research*, 31(1): 21-38.

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Nongkling, P., Kayang, H. (2017). Soil physicochemical properties and its relationship with AMF spore density under two cropping systems. *Current Research in Environmental and Applied Mycology*, 7(1): 33–39.

Nongthombam, D.S., Yadav, R., Venugopal, N., Sanjita, C. (2016). Climate control on ring width and intra-annual density fluctuations in *Pinus kesiya* growing in a sub-tropical forest of Manipur, Northeast India. *Trees - Structure and Function*, 30(5): 1-11.

Shankar, U., Tripathi, A.K. (2017). Rainforests north of the Tropic of Cancer: Physiognomy, floristics and diversity in ‘lowland rainforests’ of Meghalaya, India. *Plant Diversity*, 39: 20-36.

Vashi, C., Shankar, U., Misra, A.K. (2017). A reinstatement and a new combination in

Morella subgenus *Morella* (Myricaceae) with typification of *Myrica integrifolia*. *Phytotaxa*, 299(2): 211-222.

Proceedings

Chrungoo, N.K., Dohtdong, L. (2016). Cloning and *in silico* characterization of the 5’upstream regulatory region of gene coding for a endosperm-specific legumin-type seed storage protein in common buckwheat (*Fagopyrum esculentum* Moench). *Proceedings of the 13th International Symposium on Buckwheat*, Korea, p. 381-394.

Chrungoo N.K., Chettry, U., Dohtdong, L. (2016). Combinatorial approach to determine seed storage protein gene promoter regulation in gene expression. *Proceedings of the 13th International Symposium on Buckwheat*, Korea, p. 370-379.

Funds Received from Agencies including NEHU/UGC

Funding Agency

	Amount (Rupees in lakh)
NEHU (Non-Plan)	18.10
CAS	10.80
DBT	147.41
UGC	3.51
MoEF & CC	74.04
Grand Total	253.86

Research Projects

New: 2

Title of the project	PI/Co-I (s)	Funding Agency	Rupees in lakh
Exploration of Genomic-wide Polymorphism, Imprintomes and Methylomes to Unfold the Genetic, Epigenetic and Evolutionary Mysteries of Basal Angiosperms with Emphasis on <i>Nymphaea</i> L. under DBT's Program for the NE	Prof. Suman Kumaria (PI) Dr. Meera Chettri Das(Co-I) Collaborators: Prof. Manu Agarwal (PI) Prof. Shailendra Goel (Co-I) University of Delhi North Campus	DBT, New Delhi Sanction No. BT/PR16385/ NER/95/124/2015 Dated: 09/11/2016	20.52
Fungal and Mycotoxin Contamination of Stored Maize (<i>Zea mays</i> Linn) Samples in Meghalaya and Anti-microbial and Myco Toxin Inhibitory Efficacy of Some Biocontrol Agents and Essential Oils of Traditionally Used Medicinal Plants of the Region	Prof. M. S. Dkhar (PI) Dr. H. Kayang (Co-I) Prof. N. K. Dubey (PI) Dr. Bhanu Prakash (CO-I) BHU, Varanasi	DBT, New Delhi Sanction No. BT/PR16174/ NER/95/91/2015 dated 17. 01. 2017	15.35

On-going: 12

Title of the project	PI/Co-I (s)	Funding Agency	Rupees in lakh
Molecular Characterization and Chemoprofiling of Two Pharmacologically Relevant Species of <i>Dendrobium</i> Found in Northeast India	Prof. S. Kumaria (PI) Dr. M. C.s(Co-I) Dr. H. Choudhury (Co-I) Collaborators: Dr. S. Shailajan (PI); Prof. S. Pednekar (Co-I, Collaboration Institute I); Prof. S. Menon (Co-I, Collaboration Institute II) HR Lab, Ramnarain Ruia College, Mumbai	DBT, New Delhi Sanction No. BT/461/ NE/TBP/2013 Dated:21/01/2014	5.63

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Survey of Endophytic Fungi Associated with Some Aromatic Plants of North Eastern Region and Assessment of Their Effect on Chemical Profile and Biological Activity as Antimicrobial, Aflatoxin Inhibitors and Antioxidant	Prof. M. S. Dkhar (PI) Dr. H. Kayang (Co-I) Prof. N. K. Dubey (PI) Dr. Richa Raghuwanshi (CO-I) BHU, Varanasi	DBT, Sanction No. BT/470/NE/TBP/2013, dated 3. 03. 2014	12.34
Conservation of Some <i>Paphiopedilum</i> Species (Orchid) of North East India through Asymbiotic Seed Germination and Cryopreservation	Dr. Meera Chetri Das (PI) Prof. Suman Kumaria (Co-PI)	UGC New Delhi F.No.42/984/2013(SR) Dated: 01/04/2013	3.512
Preventing Extinction and Improving Conservation Status of Threatened Plants through Application of Biotechnological Tools (Sub-Project 1A)	Prof. S. K. Barik (PI) Prof. N. Venugopal (Co-PI) Dr. M. C. Das (Co-PI)	DBT, New Delhi Sanction No. BT/Env/BC/01/2010; 23 rd March, 2012	16.46
Preventing Extinction and Improving Conservation Status of Threatened Plants through Application of Biotechnological Tools (Sub-Project 2A)	Prof. N. K. Chrungoo (PI) Prof. S. Kumaria (Co-PI)	DBT, Govt of India, New Delhi BT/Env/BC/01/2010; Dated: 23 rd March 2012	Nil
Preventing Extinction and Improving Conservation Status of Threatened Plants through Application of Biotechnological Tools (Sub-Project 15A)	Prof. S. K. Barik (Coordinator) Prof. N.K. Chrungoo (Joint-Coordinator)	DBT, New Delhi BT/Env/BC/01/2010; Dated: 23 rd March 2012	24.05
Traditional Knowledge System-Network Programme on Convergence of Traditional Knowledge Systems for Integration to Sustainable Development in the Indian Himalayan Region	Prof. S. K. Barik (PI)	DST, New Delhi	Nil

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Technology Development, Management, and Long-Term Monitoring of Shifting Cultivation and Coal Mining in North-Eastern India	Prof. S. K. Barik (Coordinator)	MoEF & CC, New Delhi Sanction No. NMHS/LG-2016/005; Dated 31/03/2016	62.94
Chemical Ecology of the North East Region (NER) of India	Prof. S. K. Barik (PI) in collaboration with Bangalore researchers	DBT, Govt of India, New Delhi	Nil
Sacred Grove Ecosystem Services in Meghalaya	Prof. S. K. Barik (PI)	MoEF & CC, New Delhi Sanction No. 22/11/2011-SG/RE, Dated 28-03-2012	11.10
All India Network Project on Functional Genomics Approaches in Understanding the Regulation of Flowering and Carotenoid Biosynthesis in Saffron Crocus	Prof. N. K. Chrungoo (PI)	DBT, Govt of India	53.06
Establishment of State Level Biotech Hub	Prof. N. K. Chrungoo Coordinator	DBT (Special Programme for NE States)	Nil

Completed: 1

Title of the project	PI/Co-I (s)	Funding Agency	Amount
Popularization and Dissemination of Technology of Bio-pesticide Formulations among Poor and Marginal (ST) Farmers of Weaker Sections in North East Region	Dr. H. Kayang (PI) in collaboration with the Indian Institute of Horticultural Research (IIHR), Bengaluru	DST(DST/TDD/2K12/187(C) Dated 6. 6. 2013	Nil

Academic Collaborations

Prof. N. K. Chrungoo corroborated with Prof Manoj Dhar, University of Jammu and Dr Mukesh Jain, JNU, New Delhi, on the project - *Functional Genomics Approaches in Understanding the Regulation of Synthesis and Accumulation of Apocarotenoids in Saffron Crocus (Crocus sativus L.)*. He

also corroborated with Dr. Pushpa Kumari, Botanical Survey of India, Howrah, on the project - *Preventing Extinction and Improving Conservation Status of Threatened Plants through Application of Biotechnological Tools*.

Prof. M. S. Dkhar and Prof. H. Kayang collaborated with Prof. N. K. Dubey, BHU,

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Varanasi, Dr. Richa Raghuwanshi, BHU, Varanasi and Dr. Bhanu Prakash, BHU, Varanasi, on the projects: (a) *Fungal and Mycotoxin Contamination of Stored Maize (Zea mays Linn) Samples in Meghalaya and Anti-Microbial and Mycotoxin Inhibitory Efficacy of Some Biocontrol Agents and Essential Oils of Traditionally Used Medicinal Plants of the Region* and (b) *Survey of Endophytic Fungi Associated with Some Aromatic Plants of North Eastern Region and Assessment of Their Effect on Chemical Profile and Biological Activity as Antimicrobial, Aflatoxin Inhibitors and Antioxidant*.

Prof. S. K. Barik collaborated with Dr Radhika Venkatesan, Dr P. V. Shivaprasad, National Centre for Biological Science, Bangalore (NCBS) and Dr. Renee Borges, Indian Institute of Science (IISc), Bangalore, on the project - *Chemical Ecology of the North East Region (NER) of India*.

Prof. H. Kayang collaborated with Dr. M. S. Rao, Indian Institute of Horticultural Research (IIHR), Bengaluru, Dr. Pranab Dutt, Assam Agriculture University, Jorhat, and Dr. Zavei Hies, Nagaland Science and Technology Council, Nagaland, on the project entitled *Popularization and Dissemination of Technology of Biopesticide Formulations among Poor and Marginal (ST) Farmers of Weaker Sections in North East Region*.

Prof. S. Kumaria and Dr. M. C. Das collaborated with Prof. Manu Agarwal and Prof Shailendra Goel, University of Delhi, North Campus, on the project - *Exploration of Genomic-Wide Polymorphism, Imprintomes and Methylomes to Unfold the Genetic, Epigenetic and Evolutionary Mysteries of Basal Angiosperms with Emphasis on*

Nymphaea L. under DBT's Program for the NE.

Prof. S. Kumaria and Dr. M. C. Das collaborated with Dr. Sunita Shailajan, Prof Suhas Pednekar and Prof. Sasikumar Menon, Herbal Research Lab, Ramnarain Ruia College, Mumbai, on the project - *Molecular Characterization and Chemoprofiling of Two Pharmacologically Relevant Species of Dendrobium Found in Northeast India*.

Honours/Awards/Recognitions

Prof. N. K. Chrungoo

Member of the Editorial Board, *Fagopyrum*, the official journal of the International Buckwheat Researchers Association, and Member of: (i) Advisory Committee, UGC Special Assistance Programme, Department of Botany, Annamalai University, Annamalai Nagar, Chidambaram, Tamil Nadu (as UGC nominee), (ii) DBT Apex Committee on Agricultural Biotechnology, (iii) DBT Task Force on Biotechnology Based Programmes for Women, and Agriculture, Biology and Frontier Areas, and (iv) DST-SERB Young Scientists Expert Committee on Life Sciences.

Prof. S. K. Barik

Fellow, LEAD International, Rockefeller Foundation, USA, Member of the Editorial Board of the *Journal of Biodiversity*, Associate Editor of the *Tropical Ecology*, Chairman, SEAC, Arunachal Pradesh (MoEF & CC), and Member of: (i) Scientific Advisory Committee, ENVIS, MoEF & CC, and IBSD, DBT, Imphal, (ii) DBT Task Force on Environmental Biotechnology, Northeast Twinning Environmental Biotechnology Programme, and Northeast Apex Committee, (iii) Expert Committee

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for Sixth Schedule Areas, MoEF & CC, and (iv) Meghalaya State Biodiversity Board, and Meghalaya Wildlife Board.

Prof. Uma Shankar

Member of the Expert Committee of the Meghalaya Biodiversity Board, and a member of the Editorial Committee of the *NEHU Journal*.

Prof. H. Kayang

Member of the Editorial Board of *Science Vision*, an official publication of the Mizo Academy of Sciences.

Prof. Suman Kumaria

Was given the ‘Usha Vij Memorial Award-2017’ for Outstanding Contribution to “Orchid Art and Science” by the Orchid Society of India (TOSI) during the national conference-cum-workshop on *Recent Trends in Biology, Culture, Conservation, Commercialization, and Sustainable Utilization of Medicinally and Floriculturally Important Orchids* held on March 24-26, 2017, Dehradun (Uttarakhand), India.

Other Activities

Prof. N. K. Chrungoo

Member of: (i) Board of Faculty of Biotechnology, D.Y. Patil University, Pune, and (ii) Reviewer of the *Journal of Plant Biochemistry and Biotechnology*, *Indian Journal of Plant Physiology*, *Phytochemistry*, and *Journal of Environmental and Agricultural Sciences*.

Delivered an invited talk on “Omics Revolution in Post Genomics Era: Manipulating Complex Pathways for Improved Nutritional Quality of Plant Proteins” at St. Edmund’s College, Shillong (September 20, 2016).

Delivered popular lectures on “Role of Science in Societal Development” at Science Awareness Programme at Stephen Memorial Secondary School, Shillong (21 March 2017) and at Sacred Heart Girls Higher Secondary School, Shillong (22 March 2017).

Prof. M. S. Dkhar

Member of the School of Sciences, Nagaland University, and Fellow of International Society for Conservation of Natural Resources, BHU.

Prof. S. K. Barik

Executive Committee Member of the International Society for Tropical Ecology, and International Society of Environmental Botanists.

Prof. Uma Shankar

Reviewer for the journal of *Tropical Ecology*, *Crop Science*, and *Proceedings of National Academy of Sciences – Biological Sciences*.

Delivered an invited talk on “Rainforest North of the Tropics of Cancer” during lecture series on *Emerging Horizons in Life Sciences* at the Department of Botany, NEHU, Shillong, on March 24, 2017.

Prof. H. Kayang

Member of: (i) Board of Studies of the Department of Environmental Science, Mizoram, (ii) Board of Studies in Botany, Nagaland University, (iii) Advisory Committee of Transient, Don Bosco, Tura, and (iv) Fellow of the International Society for Conservation of Natural Resources, BHU.

Delivered three lectures on “Popularization and Dissemination of Technology of Biopesticide Formulation among the Poor

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and Marginal Farmers of Weaker Sections in North East Region” at Dadenggre, West Garo Hills District on 16 June 2016 and at Jewelgre village, South West Garo Hills and Snamite village, South West Garo Hills, on 17 June 2016.

Prof. Suman Kumaria

Executive member of the Orchid Society of India, and Fellow of the International Society for Conservation of Natural Resources, BHU.

Dr. P. Ramanujan

Member of the Krishnamurthy Institute of Algology and Advisory Committee of Transient, Don Bosco, Tura.

DEPARTMENT OF ZOOLOGY

Head: Prof. S. N. Ramanujam
Telephone: 0364-2722301
E-mail: ramanujamsunkam@gmail.com

Faculty: 14

Designation	Name and Qualification	Specialization
Professor (9)	B. K. Sharma, MSc & PhD (Panjab Univ)	Limnology and Biosystematics
	B. B. P. Gupta, MSc & PhD (BHU)	Endocrinology
	S. B. Prasad, MSc & PhD (BHU)	Cell and Tumour Biology
	R. N. K. Hooroo, MSc & PhD (NEHU)	Developmental Biology
	N. Saha, MSc & PhD, (NEHU)	Biochemical Adaptation
	S. N. Ramanujam, MSc (Bangalore), PhD (NEHU).	Fish Biology and Environmental Toxicology
	A. K. Yadav, MSc (Agra), PhD (NEHU)	Parasitology and Ethnopharmacology
	B. Roy, MSc (NBU), PhD (NEHU)	Parasitology and Toxicology
	A. S. Dixit, MSc (Gorakhpur), PhD (BHU)	Endocrinology
Associate Professor (2)	B. Keshan, MSc & PhD (Calcutta)	Insect Endocrinology and Molecular Biology
	S. Ghosh, MSc & PhD (Calcutta)	Genetics
Assistant Professor (3)	S. Choudhury, MSc & PhD (NEHU)	Entomology
	S. R. Hajong, MSc & PhD (NEHU)	Entomology
	B. Das, MSc (Berhampur), PhD (NEHU)	Biological Chemistry

Thrust Areas of Research

The Department is engaged in research under the thrust area “Faunal Diversity and Ecophysiology” in various disciplines, such as biodiversity of freshwater zooplanktons, fishes, amphibian and insects in the North-Eastern Region, adrenergic signal transduction in pineal gland, hormonal regulation of oxidative metabolism, and breeding biology of endangered fishes, amphibians and birds, cisplatin

action as an anticancer drug, and efficacy of putative anticancerous plants and animals from the North-Eastern Region, biochemical adaptation to nitrogen, carbohydrate, protein and oxidative metabolism, and nitric oxide signaling under various environmental stresses in air-breathing fishes, diversity of helminth parasites and entomopathogenic nematodes in the North-Eastern Region with an emphasis on molecular taxonomy of zoonotic parasites and bioprospection of anthelmintic efficacy

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of plants used in traditional medicine systems, chronoendocrinology and photophysiology of reproduction, migration and moult in some birds of the region, silkworm growth and development under various environmental stresses and the involvement of hormones mediated signalling pathway, and epigenetic study of human cancer with emphasis on the role of DNA methylation.

Brief Statement of Academic Activities

The Department of Zoology offers specializations in all major disciplines of Zoology. The Department is regularly conducting the UGC Refresher course in Zoology for college and university teachers. Faculty members of the Department have several collaborations with international and national academic and research institutions. The Department has successfully organized several national and regional seminars, symposia and workshops having direct regional and national relevance. Besides book(s)/book chapters, many research papers are published in reputed national and international journals. The Department offers the MSc and PhD Programmes. The Department has adopted the choice-based credit system (CBCS) at the MSc level. Some research students qualified in the CSIR-UGC NET examination.

Some students have acquired important faculty positions in educational and research institutions of the North-Eastern Region and other parts of the country. The total intake of students per year for MSc Zoology course is 30, and for the PhD programme it varies from 15 to 20. The faculty members and research students of this Department are recipients of various awards, distinctions and fellowships. Based on the overall academic and research contributions, the Department was awarded the three phases of DRS and two phases of DSA programme by the UGC under its Special Assistance Programme to promote higher research with special reference to the North-Eastern Region. Further, the Department has received grants recently under the DST-FIST programme for the second time and third phase of UGC-DSA programme. The Department has various research projects sponsored by UGC, DST, DBT, ICMR, ICAR, MoEF, etc. All these projects have a direct relevance to the socio-economic development of the North-Eastern Region. The Department is conducting seminars every week for MSc students under the supervision of faculty members. The Department runs a “Zoonic Society” for various activities involving students, teaching and non-teaching staff.

Students' Profile

Enrolment Capacity: MSc - 30, PhD - Variable

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MSc	08	22		30			22	08	30
PhD	08	05	01	07	02	03	06	07	13

Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MSc	11	17		24	01	03	11	17	28
PhD	08	08		08		08	04	12	16

School of Life Sciences

Students Awarded PhD Degree

Name of Student	Title of Thesis	Name of supervisor & Joint Supervisor
Mr. Thengtom Rongpi	Studies on the Antitumor Potentials of Some Selected Plants and Their Active Principle(s) Against Murine Ascites Dalton's Lymphoma	Prof. S. B. Prasad (Supervisor) Prof. A. Alam (Jt. Supervisor)
Ms. Lavinia M. Dkhar	Studies on Radioactivity Levels and Trace Elements in Earthworms of Uranium Containing Soils of Meghalaya	Prof. S. N. Ramanujam
Ms. Magdalene Kharbangar	Studies on the Biology of Thrips (<i>Thysanoptera</i>) and Their Effects on the Rice Crops in Meghalaya	Dr. S. Choudhury (Supervisor) Dr. S. R. Hajong (Jt. Supervisor)
Mr. Mrinal Kumar Hatimuria	Limnological Studies on Floodplain Lakes of Majuli River Island, Assam	Prof. B. K. Sharma
Ms. Thounaojam Bembem	Expression of Certain Genes Involved in Insulin Signalling in Silkworm, <i>Bombyx Mori</i> and its Hormonal Regulation under Fed and Food Deprived Conditions	Dr. Bela Keshan
Ms. Lily Lianmuankim Guite	Studies on Toxicity of Copper and Cadmium in the Catfish, <i>Heteropneustes fossilis</i> (Bloch) in Relation to pH Variation	Prof. S. N. Ramanujam
Mr. L. Ramnath	Comparative Biochemical Characterisation of Phosphoenolpyruvate Carboxykinase in a Cestode Parasite, <i>Raillietina echinobothrida</i> (Platyhelminthes: Cyclophyllidea) and Its Avian Host, <i>Gallus domesticus</i>	Dr. B. Das (Supervisor) Prof. (Mrs.) V. Tandon (Jt. Supervisor)
Mr. T. Paongam Haokip	Limnological Studies on Loktak Lake and Its Adjacent Basins, Manipur	Prof. B. K. Sharma
Ms. Vijaya	Anthelmintic and Toxicological Evaluation of Some Chemical Constituents of Traditional Medicinal Plants Used by Naga Tribes in North-East India	Prof. A. K. Yadav
Mr. Asim Dutta	Effect of Genistein on Biophysical Characteristics of Phosphoenolpyruvate Carboxykinase (PEPCK) from <i>Raillietina echinobothrida</i> , a Cestode Parasite of <i>Gallus domesticus</i>	Dr. B. Das (Supervisor) Prof. (Mrs.) V. Tandon (Jt. Supervisor)

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Mr. K. R. Sounii Pou	Limnological Studies in Lentic Ecosystems of Nagaland	Prof. B. K. Sharma
Ms. Longjam Merinda Devi	Effects of pH, Temperature and Food on the Development and Morphology of Some Organs in Ranid and Rhacophorid Tadpoles	Prof.(Mrs.) R. N. K. Hooroo
Ms. Hnunlalliani	Influence of Hyper-Ammonia and Dehydration Stresses on the Expression of Multiple Glutamine Synthetase Genes, Heat Shock Protein70 and Mitogen-Activated Protein Kinases in the Mud Eel, <i>Monopterusuchia</i>	Prof. N. Saha
Mr. Rajiv Paul	Studies on Histopathology and Oxidative Stress due to Copper and Cadmium Toxicity in the Air-breathing Catfish, <i>Heteropneustes fossilis</i> (Bloch)	Prof. S. N. Ramanujam
Mr. Bodhisattwa Banerjee	Molecular Characterization of the Expression of Genes of Glutamine Synthetases and Ornithine-Urea Cycle Enzymes and the Involvement of Mitogen Activated Protein Kinases under Hyper-Ammonia Stress in the Air-Breathing Catfish, <i>Clarias batrachus</i> (Bloch)	Prof. N. Saha
Ms. Jane Wanry Shangpliang	Diversity and Ecology of Wild Silk Moths of Meghalaya, North-East India	Dr. S. R. Hajong

Placement of Students

1. Dr. Saipari Sailo was appointed Scientist C, Zoological Survey of India, Jabalpur.
2. Dr. Longjam Merinda Devi was appointed Assistant Teacher, Lilavatibai Podar Higher Secondary School, Mumbai, Santacruz.
3. Dr. Mahua G. Choudhury was appointed Assistant Professor, Don Bosco University, Guwahati.
4. Dr. Rajiv Paul was appointed Scientific Officer, Eco-physiology, Auxilife Scientific Services Pvt. Ltd., Pune, Maharashtra, India.
5. Dr. Magdalene Kharbangar was appointed Ad-hoc Assistant Professor, St. Anthony's College, Shillong.
6. Dr. Seydur Rahman was appointed Research Associate, Institute of Advanced Studies, Guwahati, Assam.
7. Dr. Jane Wanry Shangpliang was appointed Ad hoc Assistant Professor, Lady Keane's College.
8. Dr. Asim Kumar Dutta was appointed N-PDF (DST-SERB), Institute of Advanced Study in Science and Technology (IASST), Guwahati, Assam.

Research Fellowships: 19

CSIR-UGC-NET	UGC Non-Net	National Fellowship for Higher Education
01	11	07

Courses Conducted

Postgraduate: MSc

Semester I

Cell Biology and Immunology; Biological Chemistry and Molecular Biology; Genetics and Developmental Biology.

Semester II

Animal Physiology; Parasitology and Entomology; Techniques in Biology.

Semester III

Endocrinology and Reproductive Biology; Aquatic Biology and Fisheries; Animal Diversity.

Semester IV

Biosystematics and Evolution; Ecology and Environmental Biology; Special Paper.*

**Special Papers Offered:* Biochemical Adaptation and Metabolic Regulation; Developmental Biology; Endocrinology and Reproductive Physiology; Fish Biology; Genetics; Helminth Parasitology; Insect Physiology; Limnology; Molecular Cell Biology and Immunology.

PhD Courses

Research Methodology; Optional Papers (Applied Entomology; Chronobiology; Fish Physiology and Toxicology; Freshwater Ecology; Molecular and Biochemical Zoology; Tropical Parasitology); Review of Literature.

Seminars/Conferences/Symposia/Workshops

Organized

NASI-Sponsored Brainstorming Session on *Frontiers of Research in Life Sciences*

in NE Region on 27 March 2017 in the Department's Seminar Hall.

DST-PAC Meeting NCSTC at the ICSSR Guest House, NEHU, Shillong (September 8-9, 2016) with Prof. (Mrs.) R.N.K. Hooroo as Coordinator.

Attended

Prof. B. B. P. Gupta

Attended and chaired a session of the 86th Annual Session of the National Academy of Sciences, India and Symposium on *Science, Technology and Entrepreneurship for Human Welfare in the Himalayan Region* at Uttarakhand Technical University and Uttarakhand Council of Science and Technology, Dehradun (December 2-4, 2016).

Prof. N. Saha

Attended, chaired a session and delivered an invited lecture on: (i) "Influence of High Environmental Ammonia on the Production of Nitric Oxide and Expression of Inducible Nitric Oxide Synthase in the Freshwater Air-Breathing Catfish (*Heteropneustes fossilis*): Possible Roles of NFkB and MAPKs" at the 5th International Conference on *Molecular Signalling: Basics to Application* held at the Anna University KBC Research Centre, Chennai (10-13 January 2017), and (ii) "Hyper-ammonia Stress Causes Induction of Nitric Oxide Production through the Activation of Inducible Nitric Oxide Synthase Gene in Freshwater Air-Breathing Catfish (*Heteropneustes fossilis*): Possible Roles of NFkB and MAPKs" at the

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national seminar on *Integrated Approach in Zoological Research and Biennial Conference of the Zoological Society of Assam* held at the Department of Zoology, Gauhati University, Guwahati (30-31 March 2017).

Prof. A. K. Yadav

Attended the 27th National Congress of Parasitology at the National Institute of Mental Health and Neurological Sciences, Bangalore, on 25-27 April 2017, and delivered an invited lecture on “Intestinal Parasitic Infections and Traditional Medicines: Current Trends and Future Perspectives.”

Prof. A. S. Dixit

Attended and delivered a talk on “Role of Photoperiod in Regulation Reproductive Seasonality in the Tree Sparrow” at the XXVI National Symposium on *Chronobiology* organized by the Department of Studies in Zoology, University of Mysore, Mysore (2-3 June 2016).

Attended and chaired a session of the Indo-US workshop and international symposium on *Biological Timing and Health Issues in the 21st Century* organized by the Department of Zoology, University of Delhi, Delhi (February 21-24, 2017).

Research Papers

Published in India

Bhaumik, A., Bahadur Gurung, A., Bhattacharjee A., Prasad, S.B. (2017). Betulinic acid-mediated induction in apoptosis and inhibition in lactate dehydrogenase activity in murine ascites Dalton's lymphoma. *Eur. J. Pharmaceut. Med. Res.*, 4(6):494-503.

Bhaumik, A., Prasad, S.B. (2016). Studies on the antitumor potentials of betulinic acid against murine ascites Dalton's lymphoma. *Int. J. Basic. Clin. Pharmacol.*, 5 (4): 1664-1671.

Borah, M.P., Prasad, S.B. (2016). Ethnozoological remedial uses by the indigenous inhabitants in adjoining areas of the Pobitora wildlife sanctuary, Assam, India. *Int. J. Pharm. Pharm. Sci.*, 7(4): 90-96.

Das K.S., Choudhury, S., Nonglait, K. C. L. (2017). Zootherapy among the ethnic groups of North Eastern Region of India - A critical review. *Journal of Critical Reviews*, 4(2): 1-9.

Gogoi, S., Yadav, A. K. (2016). Therapeutic efficacy of the leaf extract of *Croton joufra* Roxb. against experimental cestodiasis in rats. *J. Parasit. Dis.*, doi 10.1007/s12639-016-0819-9.

Koiri, R., Roy, B. (2016). Redescription and new locality record of some helminth parasites of *Clarias batrachus* in Tripura, India. *Int. J. Res. Biol. Sci.*, 6(1): 26-41.

Turnia, I., Prasad, S.B. (2017). Traditional zootherapeutic practices by the indigenous Khasi natives of Sohiong village, East Khasi Hills District, Meghalaya, India. *Asian J. Comp. Alt. Med.*, 5(13): 1-8.

Vijaya, Yadav, A. K. (2016). *In vitro* anthelmintic assessment of selected phytochemicals against *hymenolepis diminuta*, a zoonotic tapeworm. *J. Parasit. Dis.*, 40:1082-1086.

Yadav, A.K., Schmidt-Rhaesa, A., Laha, R, Sen, A. (2016). On the recovery of horsehair worms, *Gordius* sp. (*Nematomorpha: Gordiida*) from pork in Shillong, India. *J. Parasit. Dis.*, 41:302-304.

Published Abroad

- Banerjee, B., Koner, D., Lal, P., Saha, N. (2017). Unique mitochondrial localization of arginase 1 and 2 in hepatocytes of air-breathing walking catfish, *Clarias batrachus* and their differential expression patterns under hyper-ammonia stress. *Gene*, 622:13-22.
- Deori, K., Yadav, A.K (2016). Anthelmintic effects of *Oroxylum indicum* stem bark extract on juvenile and adult stages of *Hymenolepis diminuta* (Cestoda), an *in vitro* and *in vivo* study. *Parasitol. Res.*, 115:1275-1285.
- Dixit, A. S., Singh, N. S. (2016). Seasonality in circadian locomotor activity and serum testosterone level in subtropical tree sparrow (*Passer montanus*). *J. Photochem. Photobiol. B: Biology*, 158:61-68.
- Gogoi, S., Yadav, A.K. (2016). *In vitro* and *in vivo* anthelmintic effects of *Caesalpinia bonducella* (L.) Roxb. leaf extract on *Hymenolepis diminuta* (Cestoda) and *Syphacia obvelata* (Nematoda). *J. Inter. Ethnopharmacol.*, 5(4):427-433.
- Hangzo, H., Banerjee, B., Saha, S., Saha, N. (2017). Ammonia stress under high environmental ammonia induces Hsp70 and Hsp90 in the mud eel, *Monopterus albus*. *Fish Physiology and Biochemistry*, 43: 77-88.
- Keshan, B., Thounaojam, B., Kh., S.D. (2017). Insulin and 20-hydroxyecdysone action in *Bombyx mori*: Glycogen content and expression pattern of insulin and ecdysone receptors in fat body. *General and Comparative Endocrinology*, 241:108-117.
- Koiri, R., Roy, B. (2016). Seasonal incidence of parasitic helminth infestation among the walking catfish *Clarias batrachus* of Tripura, India. *Annals of Parasitology*, 62(4): 307-314.
- Lyngdoh, D., Sharma, S., Roy, B., Tandon, V. (2016). Animal fascioliasis: Perspectives from high altitudinal regions. *Veterinary Parasitology*, 232: 21-31.
- Manorama, M., Ramanujam, S. N. (2017). Diet of threatened fish *Pethia shalynius* (Yazdani and Talukdar 1975) in the Uiam River, Northeast India. *Asian Fish Sci.*, 30:38-49.
- Nath, P., Yadav, A.K. (2016). Anthelmintic activity of a standardized extract from the rhizomes of *Acorus calamus* Linn. (Acoraceae) against experimentally induced cestodiasis in rats. *J. Inter. Ethnopharmacol.*, 5:390-395.
- Paul, S., Keshan, B. (2016). Ovarian development and vitellogenin gene expression under heat stress in silkworm. *Bombyx mori*. *Psyche*, <http://dx.doi.org/10.1155/2016/4242317>.
- Rahman, S., Hajong, S.R., Shemilt, S., Drijfhout, F.P. (2016). Cuticular hydrocarbon in queens, workers and drones of the Indian honeybee *Apis cerana indica* (Fab.). *Entomologia Generalis*, 36(2):117-126.
- Rahman, S., Hajong, S.R., Gévar, J., Lenoir, A., Darrouzet, E. (2016). Cuticular hydrocarbon compounds in worker Castes and their role in nestmate recognition in *Apis cerana indica*. *J. Chem. Ecol.*, 42:444-451.
- Ramnath, Dutta, A.K., Dkhar B., Tandon V., Das B. (2017). Biological significance of phosphoenolpyruvate carboxykinase in a cestode parasite, *Raillietina echinobothrida*, and effect of phytoestrogens on the enzyme from the parasite and its host, *Gallus domesticus*. *Parasitology*, doi: 10.1017/S0031182017000518.

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- Sharma, S., Lyngdoh, D., Roy, B. Tandon, V. (2016). Differential diagnosis and molecular characterization of *Hymenolepis nana* and *Hymenolepis diminuta* (Cestoda: Cyclophyllidae: Hymenolepididae) based on nuclear rDNA ITS2 gene marker. *Parasitology Research*, <https://doi.org/10.1007/s00436-016-5210-3>.
- Sharma, S., Lyngdoh, D., Roy, B. Tandon, V. (2016). Molecular phylogeny of *Cyclophyllidea* (Cestoda: Eucestoda): An in-silico analysis based on mtCOI gene. *Parasitology Research*, <https://doi.org/10.1007/s00436-016-5092-4>.
- Singh, P., Dey, M., Ramanujam, S. N. (2016). A description of the tadpole of *Leptobranchium smithi* (anura: megophryidae) from south Assam, India. *Herpetol. Cons. Biol.*, 11: 280-285.
- Books/Book Chapters/Proceedings**
- Gupta, B. B. P. (2016). Comparative endocrinology of the pineal organ: Structural evolution, regulation and functions. In: *Updates on Integrative Physiology and Comparative Endocrinology*. C. Halder, S. Gupta, and S. Goswami, S. (Eds.). Publication Cell, Press and Publication Division, Banaras Hindu University, Varanasi, Chapter 14, p. 297-328.
- Roy, B., Giri, B. R. (2017). *Carex baccans* nees, an anthelmintic medicinal plant in northeast India. In: *Medicinal Plants and Its Therapeutic Uses*. K. Birla Singh (Ed.). OMICS Group International, USA, p. 60-81.
- Tandon, V., Das, B., Kumar, S. (2017). Proteases of parasitic helminths: Their metabolic role in establishment of infection in the host. In: *Proteases in Human Disease*. S. Chakraborti and N. S. Dhallia (Eds.). Springer Nature, Singapore, Chapter 12, p. 1-16.
- Trivedi, A.K., Singh, D., Dixit, A.S., Kumar, V. (2017). Pineal gland, melatonin and timekeeping in nonmammalian vertebrates: Avian perspective. In: *Biological Timekeeping: Clocks, Rhythms and Behaviour*. V. Kumar (Ed.). Springer (India), p. 521-441.
- Funds Received from Agencies including NEHU/UGC: Rs. 6,36,57,077**

Research Projects

New: 1

Title of Project	PI/Co-PI	Funding Agency	Rupees in lakh
Effect of Climate Change on Breeding Strategies of Songbirds	Prof. A. S. Dixit	DBT, New Delhi	45. 28

Ongoing: 8

Title of Project	PI/Co-PI	Funding Agency	Rupees in lakh
Studies on Circadian Rhythm of Arylalkylamine N-acetyl-Transferase Gene Expression and Its Regulation in Photoreceptive Pineal of the Fish, <i>Clarias gariepinus</i>	Prof. B. B. P. Gupta	SERB (DST), New Delhi	35.00

School of Life Sciences

DSA-Phase III (2016-17)	Prof. B. B. P. Gupta (Prog. Coordinator)	UGC-SAP, New Delhi	120.00
Possible Upregulation of Ornithine-Urea Cycle Genes and Involvement of MAPKs to Adapt under Hyper-Ammonia Stress in Air-Breathing Catfish, <i>Clarias batrachus</i>	Prof. N. Saha	DST-SERB, New Delhi	49.95
Anticipation in Genes: Molecular, Physiological and Behavioral Correlates of Response of Circa-Annual Clocks to Seasons in Night-Migratory Songbirds: Investigation of Physiological and Metabolic Adaptations in Migrants	Prof. A. S. Dixit	DBT, New Delhi	69.88
Identification and Development of DNA Methylation Biomarkers for Oral/Oropharyngeal Cancers Prevalent in the North-Eastern States of India	Dr. Srimoyee Ghosh (PI) Dr. B. Shunyu (Co-PI)	DBT, GoI	53.08
Identification of Biomarkers of Oropharyngeal Cancer Prevalent in North-Eastern States of India by Whole Genome Methylation and Expression Profiling	Dr. S. Ghosh (PI), Dr. B. Syunyu (Co-PI), Dr. A. Maitra (Co-PI), Dr. S. Sengupta (Co-PI)	DBT (NER) GoI	85.20
‘Niangtaser-...Insect Resource from Ribhoi’	Dr. S.R. Hajong (PI), Prof. H.J. Syiemlieh (Co-PI)	Meghalaya Basin Dev. Agency	3.50
Evaluation of Mitochondrial Glycerophosphate Dehydrogenase (mGPDH) for its Role in type 2 Diabetes Mellitus (T2DM)	Dr B. Das (PI)	DST-SERB, GoI	29.54

Completed: 4

Title of Project	PI/Co-PI	Funding Agency	Rupees in lakh
Studies on the Pharmacological Properties of <i>Lysimachia ramosa</i> and Its Active Component(s)	Dr. B. Roy	UGC, New Delhi	12.79

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Cyto-toxic Potential of α -viniferin, a Natural Polyphenolic Compound, in Swiss Albino Mice	Dr. B. Roy	DST, New Delhi	49.58
Identification and Development of DNA Methylation Biomarkers for Stomach Cancers Prevalent in Mizoram, India	Dr. S. Ghosh (PI), Dr. Saia Chenkual (Co-PI)	DST, GoI	46.54
Epigenetic Status of Pro/Anti Apoptotic Activity of Age-Related Genes Involved in Breast Cancer	Dr. B. Das (PI and Coordinator) and Others	DBT, GoI	36.23

Academic Collaborations

India

Prof. R.N.K. Hooroo collaborated with Prof. S.K. Dutta, Nature Environment and Wildlife Society (NEWS), Nature House, Salabani, Gauda Sahi, Odisha, on *Studies on the Breeding Biology and Development of Amphibians with Reference to Meghalaya North-East India*.

Prof. N. Saha collaborated with Dr. Manas Santra, Scientist F, National Centre for Cell Sciences, Pune, on *Possible Induction of Ornithine-Urea Cycle Genes in Air-Breathing Catfishes under Ammonia Stress*.

Prof. A. S. Dixit collaborated with: (i) Prof. Vinod Kumar, Department of Zoology, Delhi University, New Delhi, (ii) Prof. Sangeeta Rani, Department of Zoology, Lucknow University, Lucknow (iii) Dr. Praful Singru, NISER, Bhubaneswar, (iv) Dr. Monika Sadanada, Mangalore University, Mangalore, and (v) Sanjay Bhardwaj, Ch. Charan Singh University, Meerut on *Molecular, Physiological, Metabolic and Behavioral Correlates of Responses of Circadian and Circa-Annual Clocks to Seasons in Non-Migratory and Night-Migratory Songbirds*.

Dr. S. Ghosh collaborated with: (i) Dr. Arindam Maitra, National Institute of Biomedical Genomics (NIBMG), Kalyani, West Bengal, for the project *Identification of Biomarkers of Oropharyngeal Cancer Prevalence in North-Eastern States of India by Whole Genome Methylation and Expression Profiling*, (ii) Dr. Neizekhotuo Brian Shunyu of (NEIGRIHMS) for the projects: (a) *Identification of Biomarkers of Oropharyngeal Cancer Prevalence in North-Eastern States of India by Whole Genome Methylation and Expression profiling*, (b) *Identification and Development of DNA Methylation Biomarkers for Oral/ Oropharyngeal Cancer Prevalence in the North-Eastern States of India*, and (iii) Dr. Saia Chenkual, Civil Hospital, Aizwal, Mizoram, for the project *Identification and Development of DNA Methylation Biomarkers for Stomach Cancers Prevalent in Mizoram, India*.

Dr. B. Das collaborated with: (i) Prof. K. Satyamoorthy, Director, MLSC, Manipal University, Manipal, and (ii) Prof. S. Mishra, Scientist-E, ILS, Bhubaneswar, Odisha, on *Verification of Epigenetic Status with Pro/Anti Apoptotic Activity of the Genes Involved in Aging and Their Possible Correlation with Breast Cancer*.

Abroad

Prof. R.N.K. Hooroo collaborated with Prof. Indraneil Das, Institute of Biodiversity and Environmental Conservation, University of Malaysia, Sarawak, on *Survey and Identification of Some Amphibians in Some Select Forests of Meghalaya*.

Dr. B. Das collaborated with Dr. Todd Holyoak, Associate Professor, Department of Biology, University of Waterloo, 200 University Avenue West Waterloo, ON N2L 3G1, Canada, on *Crystallisation of PEPCK Variants from Different Organisms in Order to Find Out Possible Inhibitors*.

Prof A. S. Dixit collaborated with Prof. Kazuyoshi Tsutsui, Laboratory of Brain Science, Faculty of Integrated Arts and Sciences, Hiroshima University Higashi-Hiroshima, Japan, on *The Role of GnIH in Seasonal Reproduction of Tree Sparrow*.

Honours/Awards/Recognitions

Prof. B. B. P. Gupta

Member of the Editorial Board of the *American Journal of Experimental Biology*, Columbia International Publication, USA.

Prof. R. N. K. Hooroo

Member of DST-PAC for Communication and Popularisation of Science and Technology, Department of Science and Technology, New Delhi.

Member of the State Council of Science, Technology and Environment (SCSTE), Government of Meghalaya, Shillong.

Prof. N. Saha

PAC member of the DST-SERB Animal Science Group, New Delhi (2015-2018). He is also

Expert Committee Member for the DST-SERB Young Scientists Scheme, New Delhi (2015-2018), and Task Force Member of the DST-SERB Empowerment and Equity Opportunities for Excellence in Science Committee (2016-2019).

Prof. A. K. Yadav

Received the Dr. B.P. Pandey Memorial Oration Award given by the Indian Society for Parasitology for an outstanding contribution to teaching in parasitology.

Member of the Editorial Board of the *Journal of Parasitic Diseases* (Springer), and the *Journal of Alternative Medical Research*, Elyns Publishing Group, USA.

DBT-NER Overseas fellowship for NE Scientist to visit University of Hamburg, Germany (June-September, 2016).

Other Activities

Prof. B. B. P. Gupta

Member of the Selection Committee for Summer Research Fellowships in Life Sciences (2016-17) of the Indian Academy of Sciences, Bengaluru.

Prof. R. N. K. Hooroo

Delivered a lecture for the school children of Myllem Block at Gorkha Higher Secondary School, Lummawbah, on 22 April 2016, to celebrate the World Earth Day organized by the District Planning, East Khasi Hills, Government of Meghalaya.

Panelist in the panel discussion on the World Environment Day 2016 organized by NEHU-NSS, Shillong, in collaboration with NEHUSU and NEHU-Alumni, at NEHU, Shillong.

Department of Zoology

Prof. N. Saha

Visitor's Nominee for the Life Sciences' Selection Committee of Mizoram University, Aizawl.

Member of the (i) Board of Post graduate Studies, Department of Zoology, Sikkim University, Gangtok, and (ii) Board of Studies of the Department of Zoology, Tripura University, Agartala.

Prof. S. N. Ramanujam

Member of the Board of Studies of the Department of Zoology, Mizoram University, Aizawl.

Prof. A. K. Yadav

Adhoc reviewer for *PLoS Neglected Tropical Diseases* and *Journal of Ethnopharmacology*, *PLOS ONE*, *BMC Complementary and Alternative Medicine*.

Prof. B. Roy

Member of the Under graduate Studies of Zoology, Tripura University, Agartala.

Prof. A. S. Dixit

Reviewer for reputed journals of *Physiology and Behavior*, *Journal of Experimental Biology*, and *Biological Rhythm Research*.

Dr. S. Ghosh was a reviewer for the journal of *Current Science*, Bangaluru, India.

Dr. S. R. Hajong

Reviewer for the *Journal of Threatened Taxa*, Coimbatore, India. Completed a short-term course in *Environmental Sciences* at the UGC-HRDC, NEHU, Shillong, from 30 September to 6 October 2016.

VI

SCHOOL OF PHYSICAL SCIENCES

Dean: Prof. B. Jyrwa (Till 2 February 2017)
Prof. R. H. Duncan Lyngdoh (Since 3 February 2017)
Telephones: 0364-2722502/2503/2830, 9436333332(M)
Fax: 0364-2550486/2550076
E-mail: rhdl@nehu.ac.in, harkuduncanl@yahoo.co.in

The School of Physical Sciences consists of the Departments of Chemistry, Mathematics, Physics and Statistics. All departments conduct the Postgraduate MSc programme in their respective disciplines and conduct the PhD programme in research. The Departments of Mathematics and Statistics also conduct the MPhil programme. Eighty-six MSc students and 14 PhD scholars were awarded their degrees. Faculty members are actively involved in teaching and research, many having received

grants for individual research projects, with 75 research publications from the School. Many faculty members are also engaged in research collaborations at the national and international levels. The departments receive financial support from the UGC-SAP and DST-FIST schemes, where the Department of Chemistry has the status of UGC Centre for Advanced Study. Departmental activities include Seminars, Workshops/Schools, Camps and Refresher Courses.

Department of Chemistry

DEPARTMENT OF CHEMISTRY

Head: Prof. K. M. Rao
Telephone: 0364-2722601(O)/9436166937 (M)
E-mail: kmrao@nehu.ac.in

Faculty: 18

Designation	Name and Qualification	Specialization
Professor (7)	K. Ismail, MSc & PhD (AMU)*	Physical Chemistry
	B. Myrboh, MSc & PhD (NEHU)	Organic Chemistry
	R. H. Duncan Lyngdoh, MSc (NEHU), PhD (IIT Madras)	Organic Chemistry
	R. A. Lal, MSc & PhD (BHU)	Inorganic Chemistry
	K. Mohan Rao, MSc (SV Univ), PhD (IIT Kanpur)	Inorganic Chemistry
	A. K. Chandra, MSc & PhD (Burdwan)	Physical Chemistry
	G. Bez, MSc & PhD (Gauhati)	Organic Chemistry
Associate Professor (5)	H. Askari, MSc/PhD (AMU)	Physical Chemistry
	T. S. Basu Baul, MSc (Jabalpur), PhD (N. Bengal)	Inorganic Chemistry
	M. K. Sahoo, MSc (Utkal), PhD (Comenius, Czechoslovakia)	Organic Chemistry
	S. Mitra, MSc (Vidyasagar), PhD (IACS, Kolkata)	Physical Chemistry
	M. Velusamy, MSc & PhD (Bharathidasan)	Inorganic Chemistry
Assistant Professor (6)	R. L. Nongkhlaw, MSc & PhD (NEHU)	Organic Chemistry
	E. K. Rymmai, MSc & PhD (NEHU)	Inorganic Chemistry
	D. P. S. Negi, MSc & PhD (IIT Roorkee)	Physical Chemistry
	B. Sarkar, MSc (N. Bengal), PhD (IIT Guwahati)	Physical Chemistry
	A. K. Pal, MSc (Calcutta), PhD (Kalyani)	Organic Chemistry
	S. Khatua, MSc (Vidyasagar), PhD (IIT Kharagpur)	Inorganic Chemistry

*Superannuated in May 2016

Thrust Areas of Research

Organometallic Chemistry, Coordination Chemistry, Computational Chemistry, Theoretical Reaction Kinetics, Synthetic Organic Chemistry, Heterocyclic Chemistry, Chemistry of Surfactants, Dynamics of Excited States, Photocatalysis, Natural Products Chemistry.

Brief Statement of Academic Activities

The Department is a UGC Centre for Advanced Studies in Chemistry and also supported by

DST-FIST. The Department offers the MSc and PhD programmes. Thirty-seven MSc and eleven PhD students were admitted to the Department in 2016-17. Nine students were awarded the PhD degree. All faculty members are engaged in active research. The Department organized a national symposium, which was attended by many reputed national scientists. Nine students qualified for the CSIR NET JRF/Lectureship. There are many individual research schemes funded by DST, SERB, UGC, CSIR, DAE (BRNS), DBT and DIT.

Students' Profile

Enrolment Capacity: MSc – 36, PhD- Variable

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MSc	14	23		22		15	13	24	37
PhD	06	05		06		05	06	05	11

Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MSc	18	11	03	18		08	22	17	29
PhD	07	02	02	03		04	01	08	09

Students awarded PhD degree

Name of the student	Title of Thesis	Name of Supervisor & Joint Supervisor*
Mr. Tariq Ahmad Wagay	A Study on the Aggregation and Adsorption Behaviours of Metallosurfactants	Prof. K. Ismail
Mr. Pynsakhiat M. Gashnga	Combined Experimental and Theoretical Studies on Photoinduced Hydrogen Transfer Processes	Dr. S. Mitra
Mr. Azmol Hussain Barbhuiya	A Study on Natural Fiber Reinforced Polymer Composites	Prof. K. Ismail
Ms. Chingrishon Kathing	Studies on the Synthesis of Derivatives of Indole, Pyrimidine and Related Heterocycles	Dr. R. L. Nongkhaw
Mr. J. S. Momo Hmungshel Anal	Studies on Isolation, Purification and Characterization of Various Secondary Metabolites Present in <i>Potentilla Fulgens</i>	Prof. G. Bez Prof. D. Syiem*

Department of Chemistry

Mr. Nongthombam Geetmani Singh	Organo and Nano Catalysed Approach towards the Synthesis of Oxygen and Nitrogen Heterocycles	Dr. R. L. Nongkhlaw
Mr. S. Sangilipandi	Syntheses and Structural Studies on Rhenium and Platinum Group Metal Complexes Containing Nitrogen Bases	Prof. K. Mohan Rao
Ms. Shougaijam Premila Devi	Computational Studies on Metal-Free and Metal-Catalyzed Nitrene Transfer Reactions	Prof. R. H. Duncan Lyngdoh
Mr. Mullah Muhaiminul Islam	Fluorescence Based Studies on Drug-Receptor Interaction: Characterization of Acetylcholinesterase Inhibitors	Dr. Sivaparasad Mitra

Placement of Students

MSc students passing out from this Department have been placed as teachers in different colleges and schools, as scientists in research organizations, and as research scholars in this Department and other institutes. Some research scholars have joined different University/institute as research associates. Three PhD scholars got faculty position in colleges in Shillong.

1. Dr Icydora Kharkongor, Assistant Professor, St. Anthony's College, Shillong.
2. Dr Barisha Wahlang, Assistant Professor, Shillong College, Shillong.
3. Mr Balamphrang Kharrngi, Asst. Professor, St. Mary's College, Shillong.

Courses Conducted

Postgraduate: MSc

Semester I

Inorganic Chemistry I; Organic Chemistry I; Physical Chemistry I; Quantum Chemistry; Laboratory Course in Organic Chemistry.

Semester II

Inorganic Chemistry II; Organic Chemistry II; Physical Chemistry II; Molecular Spectroscopy;

Laboratory Course in Inorganic Chemistry. Topics in Organic Synthesis; Computer Programming in Chemistry, Organometallic Chemistry, Bioorganic Chemistry; Chemistry of Surfactants.

Semester III

Inorganic Chemistry III; Organic Chemistry III; Physical Chemistry III; Applications of Spectroscopic Methods; Laboratory Course in Physical Chemistry; Environmental and Analytical Chemistry; Photochemistry; Bioinorganic Chemistry; Natural Products Chemistry; Principles and Applications of Fluorescence Spectroscopy.

Semester IV

Inorganic Chemistry IV; Organic Chemistry IV; Physical Chemistry IV; Seminar; Project Work in Inorganic; Organic and Physical Chemistry.

PhD Courses

Research Methodologies in Chemistry; Spectroscopic and Crystallographic Techniques in Chemistry; Advanced Inorganic Chemistry; Advanced Organic Chemistry; Advanced Physical Chemistry; Advanced Quantum Chemistry.

Seminars/Conferences/Symposia/ Workshops

Organized

The Department organized a three-day *Residential Chemistry Camp* for school students (sponsored by the Salters Institute, London and Royal Society of Chemistry, Bangalore) during 30-31 January and 1 February 2017.

Attended

Prof. R. H. Duncan Lyngdoh

Presented an invited paper entitled “Possible Role of O4-alkylthymines for Presence or Absence of Carcinogenic Activity in Alkylating N-nitroso Compounds” at the Theoretical Chemistry Symposium (TCS-2016) organized by the School of Chemistry, University of Hyderabad, Hyderabad (12-16 December 2016).

Delivered the keynote address entitled “Metal-metal Bonds in Transition Metal Chemistry” at the national seminar on *Interdisciplinary Research in Chemical Sciences* (NSIRCS-2016) hosted by Kohima Science College (Autonomous), Jotsoma, Nagaland (28-29 September 2016).

Prof. Ghanashyam Bez

Presented an invited lecture on “Stereoselective Synthesis Employing Catalyst Derived from Nature’s Pool” at the national seminar on *Recent Developments in Synthesis and Catalysis* organized by the Department during 10-11 March 2017.

Delivered the Keynote Addresses entitled: (i) “Hydrolase Enzyme: An Easily Accessible Catalyst for Asymmetric Synthesis” during

the 1st Mizoram Science Congress held in Aizawl, October 13-14, 2016, and (ii) “Inculcating Research Culture in Colleges: A Potential Renaissance in Education and Research in India” at the UGC-sponsored national seminar on *Prospects and Challenges of Chemical Education and Research Activities in the UG Colleges of Assam* under the aegis of the Department of Chemistry and IQAC, Mangaldai College in collaboration with Assam Science Society, Mangaldai Branch (30-31 August, 2016).

Delivered a plenary lecture on “Research on Interdisciplinary Sciences in Colleges: Prospects and Perspectives” at the UGC-sponsored national seminar on *Interdisciplinary Research in Chemical Sciences* (NSIRCS-2016) at the Department of Chemistry, Kohima Science College (Autonomous) during September 28-29, 2016.

Dr. M. K. Sahoo

Delivered an invited talk on “Mineralization and Biodegradation of Calcon and Calconcarboxylic Acid by Transition Metal Ion Catalyzed Oxidation in the Presence of Light: Effect of Substituent” at the 4th International Conference on *Advanced Oxidation Processes (AOP 2016)*, BITS, Pilani, K.K. Birla Goa Campus (December 17-20, 2016).

Dr. Velusamy

Delivered an invited lecture on: (i) “Metal-Free Organic Dye for Dye Sensitized Solar Cells (DSSC): An Overview” at the Science Academies’ lecture workshop on *Emerging Trends in Chemical Sciences* organized by the Department of Chemical Sciences, Tezpur University (11-13 November

Department of Chemistry

2016), and (ii) “Two-Photon Absorption in Quadrupolar type p-Conjugated Molecules: Their Applications in Two-Photon Fluorescence Imaging and Two-Photon Photodynamic Therapy” at the symposium on *Inorganic Chemical Biology* organised by the School of Chemistry, Madurai Kamaraj University, Madurai (March 17-18, 2017).

Dr. R. L. Nongkhlaw

Delivered an invited lecture on “Natural Products: Prospects and Perspectives” at the national symposium on *Natural Products: Prospects and Perspectives* held at CSIR-North East Institute of Science and Technology, Jorhat, Assam (21-22 March 2016), and presented a poster on “Role of $\text{Fe}_2\text{O}_3/\text{SiO}_2/\text{VitB}_1$ -Nanoparticles in the Synthesis of Oxygen and Nitrogen Spiro Heterocycles” at the 11th CRSI-RSC Symposium and 20th CRSI National Symposiums on *Chemistry* (2-5 February 2017).

Chaired a session of the international symposium on *Applied Chemistry (ISAC-17)* at St. Mary's College, Shillong (February 13, 2017).

Publications

Published in India

Askari, H. (2016). Solid state interaction of 4-Nitrophenol with nickel, zinc and cadmium carbonates. *Asian Journal of Chemistry*, 28(12): 2670-74.

Khiangte, V., Bora, P., Bez, G. (2017). Monofunctional primary amine: A new class of organocatalyst for asymmetric aldol reaction. *J. Chem. Sciences*, 129: 301-312.

Palepu, N.R., Rao, K.M. (2017). Synthesis and structural studies of half-sandwich Cp^* rhodium and Cp^* iridium complexes featuring mono, bi and tetradentate nitrogen and oxygen donor ligands. *J. Chem. Sciences*, 129:561-571.

Palepu, N.R., Rao, K.M. (2017). Half-sandwich ruthenium, rhodium and iridium complexes of triazolopyridine ligand: Synthesis and structural studies. *J. Chem. Sciences*, 129: 177-184.

Published Abroad

Adhikari, S., Kaminsky, W., Kollipara, M.R. (2017). Pyridyl azine Schiff-base ligands exhibiting unexpected bonding modes towards ruthenium, rhodium and iridium half-sandwich complexes: Synthesis and structural studies. *J. Organomet. Chem.*, 836-837: 8-16.

Adhikari, S., Palepu, N.R., Sutradhar, D., Shepherd, S.L., Phillips, R.M., Kaminsky, W., Chandra, A.K., Kollipara, M.R. (2016). Neutral and cationic half-sandwich arene ruthenium, Cp^*Rh and Cp^*Ir oximate and oxime complexes: Synthesis, structural, DFT and biological studies. *J. Organomet. Chem.*, 820: 70-81.

Adhikari, S., Sutradhar, D., Shepherd, S.L., Phillips, R.M., Chandra, A.K., Rao, K. M. (2016). Synthesis, structural, DFT calculations and biological studies of rhodium and iridium complexes containing azine Schiff-base ligands. *Polyhedron*, 117: 404-414.

Akbarshad, M. A., Palaniandavar, M. (2016). Synthesis, structures, and DNA and protein binding of ruthenium(II)-p-cymene complexes of substituted pyridylimidazo[1,5-a] pyridine: Enhanced

- cytotoxicity of complexes of ligands appended with a carbazole moiety. *RSC Advances*, 6:1486-1491.
- Basu Baul, T. S., Dutta, D., Duthie, A., Guchhait, N., Rocha, B.G.M., Guedes da Silva, M. F. C., Mokhamatam, R. B., Raviprakash, N., Manna, S. K. (2017). New dibutyltin(IV) ladders: Syntheses, structures and optimization and evaluation of cytotoxic potential employing A375 (melanoma) and HCT116 (colon carcinoma) cell lines *in vitro*. *J. Inorg. Biochem.*, 166: 34–48.
- Basu Baul, T. S., Dutta, D., Duthie, A., Guedes da Silva, M. F. C. (2017). Perceptive variation of carboxylate ligand and probing the influence of substitution pattern on the structure of mono- and di-butylstannoxane complexes. *Inorg. Chim. Acta*, 455: 627–637.
- Basu Baul, T. S., Dutta, D., Duthie, A., Prasad, R., Rana, N. K., Koch, B., Tiekink, E. R. T. (2017). Triphenyltin (IV) benzoates with diazenyl/imino scaffold exhibiting remarkable apoptosis mediated by reactive oxygen species. *J. Inorg. Biochem.*, 173: 79-92.
- Basu Baul, T. S., Kehie, P., Duthie, A., Guchhait, N., Raviprakash, N., Mokhamatam, R. B., Manna, S. K., Armata, N., Scopelliti, M., Wang, R., Englert, U. (2017). Synthesis, photophysical properties and structures of organotin-Schiff bases utilizing aromatic amino acid from the chiral pool and evaluation of the biological perspective of a triphenyltin compound. *J. Inorg. Biochem.*, 168: 76–89.
- Basu Baul, T. S., Kehie, P., Duthie, A., Höpfl, H. (2017). Dinuclear organotin(IV) coordination polymers derived from Schiff bases with L-aspartic acid. *J. Organomet. Chem.*, 838: 24-36.
- Basu Baul, T. S., Kehie, P., Duthie, A., Wang, R., Englert, U., Höpfl, H. (2017). Synthesis, characterization, crystal structures and supramolecular features of bicycloazastannoxides derived from Schiff bases with L-tyrosine. *J. Organomet. Chem.*, 828: 96-105.
- Basu Baul, T. S., Kehie, P., Höpfl, H., Duthie, A., Eng, G., Linden, A. (2017). Organotin(IV) complexes derived from proteinogenic amino acid: Synthesis, structure and evaluation of the larvicidal efficacy on anopheles stephensi mosquito larvae. *Appl. Organomet. Chem.*, 31, doi: 10.1002/aoc.3547.
- Dam, B., Saha, M., Jamatia, R., Pal, A. K. (2016). Nano-ferrite supported glutathione as a reusable nano-organocatalyst for the synthesis of phthalazine-trione and dione derivatives under solvent free condition. *RSC Advances*, 6: 54768-54776.
- Devi, M., Lyngdoh, R. H. D. (2016). Favored and less favored codon-anticodon duplexes arising from the GC codon family box encoding for alanine: Some computational perspectives. *J. Biomol. Struct. Dynam.*, doi: 10.1080/07391102.2017.1308886.
- Diamai, S., Negi, D.P.S. (2016). EDTA-capped gold nanoparticles as a colorimetric probe for aluminium. *Mater. Res. Express*, <https://doi.org/10.1088/2053-1591/3/11/115002>.
- Gupta, A., Jamatia, R., Mahato, M., Pal, A. K. (2017). Metalloprotein-Inspired ruthenium polymeric complex: A highly efficient catalyst in parts per million level for 1,3-Dipolar Huisgen's reaction in aqueous medium at room temperature. *Ind. Eng. Chem. Res.*, 56: 2375-2382.
- Gurung, A.B., Aguan, K., Mitra, S., Bhattacharjee, A. (2016). Identification of molecular

- descriptors for design of novel isoalloxazine derivatives as potential acetylcholinesterase inhibitors against Alzheimer's disease. *J. Biomolecular Structure and Dynamics*, doi: 10.1080/07391102.2016.1192485.
- Islam, M. M., Mitra, S. (2016). Cholinergic inhibitors replace thioflavin-T from acetylcholinesterase binding pocket: A potential fluorescence based molecular switch. *Chem. Phys. Letts.*, 664:63- 69.
- Jamatia, R., Gupta, A., Dam, B., Sahab M., Pal, A. K. (2017). Graphite oxide: A metal free highly efficient carbocatalyst for the synthesis of 1,5-benzodiazepines under room temperature and solvent free heating conditions. *Green Chemistry*, 19: 1576-1585.
- Jamatia, R., Gupta, A., Mahato, M., Patil, R. A., Ma, Y.R., Pal, A.K. (2016). A metalloprotein inspired ruthenium complex as an efficient and reusable catalyst for selective oxidation of alcohols to their corresponding carbonyl compounds. *ChemistrySelect*, 1: 5929-5935.
- Kathing, C., Kumar, S., Tumtin, S., Singh, N. G., Rani, J. W. S., Nongrum, R., Nongkhlaw, R. (2016). N, N'-dialkyl-4-aryl-3,4-dihydropyrimidinones and thiones: Ceric ammonium nitrate catalysed synthesis and molecular structure determination by X-ray crystallography. *Journal of Heterocyclic Chemistry*, 53:1486-1491.
- Kathiravan, A., Srinivasan, V., Themmla, K., Velusamy, M., Jaccob, M., Pavithra, N., Anandan, S., Kandavelu, V. (2017). Pyrene based D-p-A architectures: Synthesis, density functional theory, photophysics and electron transfer dynamics. *Phys. Chem. Chem. Phys.*, 19:3125-3135.
- Khamrang, T., Hung, K. C., Hsia, C. H., Hsieh, C. Y., Velusamy, M., Jayakumar, T., Sheu, J.R. (2017). Antiplatelet cctivity of a newly synthesized novel ruthenium (II): A potential role for Akt/JNK Signaling. *Int. J. Mol. Sci.*, 18(5), doi: 10.3390/ijms18050916.
- Khamrang, T., Kartikeyan, R., Velusamy, M., Rajendiran, V., Dhivya, R., Balaji, P., Akbarshad, M. A., Palaniandavar, M. (2016). Synthesis, structures, and DNA and proteinbinding of ruthenium(II)-p-cymene complexes of substituted pyridylimidazo[1,5-a]pyridine: Enhanced cytotoxicity of complexes of ligands appended with a carbazole moiety. *RSC Advances*, 6:114-143.
- Khanh, P. N., Ngan, V. T., Hong Man, N. T., Nhung, N. T. I., Chandra, A. K., Trung, N. T. (2016). A theoretical study of $C_{sp}-H \cdots \pi$ hydrogen bonds and stability of complexes formed by acetylene and its substituted derivatives with C_6H_6 and $B_3N_3H_6$. *RSC Advances*, 6: 106662-106670.
- Kharbani, D., Deb, B. K., Mawnai, I. L., Kurbah, S. D., Sarkar, B., Rymmai, E. K. (2017). Pyrazole cleavage of tris(3,5-dimethylpyrazole)borate with ruthenium(II) complexes: Synthesis, structural characterization and DFT studies. *Journal of Molecular Structure*, 1133: 264-270.
- Kharnaior, K.S., Devi, M., Lyngdoh, R. H. D. (2016). Generation of $C_7H_7^+$ cations with isomerization reactions. *Comput. Theor. Chem.*, 1091:150-164.
- Kumar Deb, D., Sarkar, B. (2017). Theoretical investigation of gas-phase molecular complex formation between 2-hydroxy

- thiophenol and a water molecule. *Phys. Chem. Chem. Phys.*, 19: 2466-2478.
- Kurbah, S. D., Kumar, A., Shangpung, S., Asthana, M., Syiemlich, I., Lal, R. A. (2017). Oxidation of alcohols by hydrogen peroxide catalyzed by tri-nuclear copper(II) complex $[\text{Cu}_3(\text{slmh})(\mu\text{-Cl})_2(\text{CH}_3\text{OH})_3] \cdot 0.5\text{CH}_3\text{OH}$ derived from disalicylaldehyde malonoyldihydrazone. *Current Organocatalysis*, 4: 62-68.
- Lily, M., Baidya, B., Chandra, A. K. (2017). Theoretical studies on atmospheric chemistry of HFE-245mc and perfluoroethyl formate: Reaction with OH radicals, atmospheric fate of alkoxy radical and global warming potential. *Chem. Phys. Letts.*, 669: 211-217.
- Mandal, S., Das, G., Askari, H. (2015). Physicochemical properties of the ternary complexes of Pt(II) with uracil and small peptide moieties: An experimental and computational study. *RSC New J. Chem.*, 39: 5208-5217.
- Mandal, S., Das, G., Askari, H. (2015). Amino acid-type interactions of L-3,4-dihydroxyphenylalanine with transition metal ions: An experimental and theoretical investigation. *Journal of Molecular Structure*, 1100: 162-173.
- Mishra, B. K., Lily, M., Deka, R. C., Chandra, A. K. (2016). A theoretical insight on atmospheric chemistry of HFE-7100 and perfluoro-butyl formate: Reactions with OH radicals and Cl atoms and fate of alkoxy radical. *New J. Chem.*, 40: 6148-6155.
- Muthuramalingam, S., Subramaniyan, S., Themmila, K., Velusamy, M., Mayilmurugan, R. (2017). Copper(II)-bioinspired models for copper amine oxidases: Oxidative half-reaction in Water. *ChemistrySelect*, 2(3):940-948.
- Nandia, S., Islam, M. M., Saha, M., Khatua, S., Mitra, S., Pal, A. K. (2016). Regioselective synthesis of functionalized [1,6]-naphthyridines by KF/basic alumina as a recyclable catalyst and a brief study of their photophysics. *Synthetic Communications*, 46:1461-1476.
- Nongrum, R., Nongthombam, G.S., Kharkongor, M., Rani, J.W.S., Rahman, N., Kathing, C., Myrboh, B., Nongkhlaw, R. (2016). A nano-organo catalyzed route towards the efficient synthesis of benzo[b]pyran derivatives under ultrasonic irradiation. *RSC Advance (RSC)*, 6:108384-108392.
- Palepu, N. R., Adhikari, S., Premkumar, J. R., Verma, A. K., Shepherd, S. L., Phillips, R. M., Kaminsky, W., Kollipara, M. R. (2017). Half-sandwich ruthenium, rhodium and iridium complexes featuring oxime ligands: Structural studies and preliminary investigation of *in vitro* and *in vivo* antitumor activities. *Applied Organometallic Chemistry*, 31(7), doi: 10.1002/aoc.3640.
- Palepu, N. R., Kaminsky, W., Kollipara, M. R. (2017). Synthesis and structural studies of Cp* rhodium and Cp* iridium complexes of picolinic hydrazine ligand. *Bull. Korean Chem. Soc.*, 38: 99-106.
- Rani, J. W. S., Kathing, C., Singh, N. G., Nongrum, R., Rahman, N., Kharmawlong, G., Nongkhlaw, R. (2016). One-pot synthesis of 3, 4-dihydropyrimidin-2(1H)-ones catalysed by [BMIM]Br under solvent-free condition. *Bulgarian Chemical Communications*, 48(4): 3-10.

- Rao, A. B. P., Gulati, K., Joshi, N., Kumar Deb, D., Rambabu, D., Kaminsky, W., Poluri, K.M., Kollipara, M.R. (2017). Synthesis and biological studies of ruthenium, rhodium and iridium metal complexes with pyrazole-based ligands displaying unpredicted bonding modes. *Inorg. Chim. Acta*, 462: 223-235.
- Rao, A. B. P., Kalidasan, M., Gangele, K., Kumar Deb, D., Shepherd, S.L., Phillips, R.M., Sarkar, B., Poluri, K.M., Rao, K.M. (2017). Synthesis, structural and biological studies of half-sandwich platinum group metal complexes with pyrimidine based ligands. *ChemistrySelect*, 2: 2065-2076.
- Rao, A. B. P., Uma, A., Chiranjeevi, T., Bethu, M. S., Venkateswara Rao, J., Kumar Deb, D., Sarkar, B., Kaminsky, W., Kollipara, M.R. (2016). The *in vitro* antitumor activity of oligonuclear polypyridyl rhodium and iridium complexes against cancer cells and human pathogens. *J. Organomet. Chem.*, 824: 131-139.
- Rao, A. B. P., Uma, A., Chiranjeevi, T., Bethu, M.S., Yashwanth, B., Venkateswara Rao, J., Poluri, K.M., Kollipara, M.R. (2017). Synthesis, structural and *in vitro* functional characterization of arene ruthenium complexes with 1, 3, 5-tris (di-2-pyridylaminomethyl) benzene ligand. *Inorg. Chim. Acta*, 453: 284-291.
- Rohman, M. A., Sutradhar, D., Sangilipandi, S., Rao, K.M., Chandra, A.K., Mitra, S. (2017). Photophysical behavior of systematically substituted (di-2-pyridylaminomethyl) benzene ligands and its Re(I) complexes: A combined experimental and theoretical approach. *J. Photochem. Photobiol. A: Chemistry*, 341:115-126.
- Sahoo, M. K., Marbaniang, M., Sharan, R. N. (2016). UV light assisted mineralization and biodegradation of *Ponceau S* with hydroxyl and sulphate radicals. *Chem. Pap.*, 70: 1066-1077.
- Sarma, K., Devi, N., Sutradhar, D., Sarma, B., Chandra, A. K., Barman, P. (2016). Synthesis of a novel six membered CNS palladacycle; TDDFT study and catalytic activity towards microwave assisted selective oxidation of terminal olefin to aldehyde. *J. Organomet. Chem.*, 822: 20-28.
- Sen, B., Sheet, S. K., Thounaojam, R., Jamatia, R., Pal, A. K., Aguan, K., Khatua, S. (2017). A coumarin based Schiff base probe for selective fluorescence detection of Al^{3+} and its application in live cell imaging. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, 173: 537-543.
- Sheet, S. K., Sen, B., Thounaojam, R., Aguan, K., Khatua, S. (2017). A ruthenium(II) complex-based luminescent bifunctional probe for Ag^+ and phosphate ions: Ag^+ assisted detection and imaging of rRNA. *Inorg. Chem.*, 56: 1249-1263.
- Sheet, S. K., Sen, B., Thounaojam, R., Aguan, K., Khatua, S. (2017). Highly selective light-up Al^{3+} sensing by a coumarin based Schiff base probe: Subsequent phosphate sensing DNA binding and live cell imaging. *Journal of Photochemistry and Photobiology A: Chemistry*, 332: 101-111.
- Sobhani, R., Kumar Pal, A., Bhattacharjee, A., Mitra, S., Aguan, K. (2017). Screening indigenous medicinal plants of Northeast India for their anti-Alzheimer's properties. *Pharmacognosy Journal*, 9: 46-54.
- Sonu, V. K., Islam, M. M., Rohman, M. A., Mitra, S. (2016). Lysozyme binding

ability toward psychoactive stimulant drugs: Modulatory effect of colloidal metal nanoparticles. *Colloids and Surfaces B: Biointerfaces*, 146:514-522.

photocatalytic activity. *Mater. Res. Express*, 3, <https://doi.org/10.1088/2053-1591/3/9/095004>.

Warjri, W., Negi, D.P.S. (2016). Au@Co_{0.4}S core-shell nanoparticles: Synthesis, characterization and evaluation of

Funds Received from Agencies including NEHU/UGC

UGC SAP (CAS): Rs. 1,10,75,000.00

Research Projects

New: 1

Title of Project	PI/Co-PI	Funding Agency	Rupees in lakh
Synthetic Studies on Organo Encapsulated Nanoparticles for Fabrication of C-N, C-O, C-S Bonds Leading to Five and Six Membered Rings: An Experimental and Computational Approach	Rishanlang Nongkhlaw	DST-SERB	29.22

Ongoing: 6

Title of Project	PI/Co-PI	Funding Agency	Rupees in lakh
Synthetic Studies of Selenium Dioxide (SeO ₂), Selenous Acid (H ₂ SeO ₃) and Selenic Acid (H ₂ SeO ₄) in Organic Reactions: Synthesis of Important Organo-Selenium Intermediates and Attempt at Asymmetric Synthesis of a Substituted Propiophenones and Related Reactions	Prof. B. Myrboh	SERB, DST, New Delhi	49.06
Study of Redox Potential of Novel 1,2,4-Trioxane Nanoparticles and Assessment of Their Compatibility to Radiotherapy	Prof. G. Bez	DAE-BRNS, Mumbai	27.44
Mineralization and Biototoxicity Assessment Studies of Selected Surfactant Formulations by Some Advanced Oxidation Processes	Dr. M. K. Sahoo.	DAE-BRNS, Mumbai	31.19
Development of Lab-on-a-Molecule Chemosensor for Cation and Anion Sensing	Dr. S. Khatua,	SERB-DST, New Delhi	27.60

Department of Chemistry

Phosphorescent Iridium Dendrimers Based on Imidazole Containing Conjugated Dendrons	Dr. M. Velusamy	UGC, New Delhi	14.49
Theoretical Investigations of Hydrogen Bond Interactions Involved in the Reactions of Volatile Organic Compounds Presents in the Atmosphere	Dr. Biplab Sarkar	SERB, DST	25.00

Completed: 4

Title of Project	PI/Co-PI	Funding Agency	Rupees in lakh
Synthetic and Structural Studies Projected towards Self-Assemblies of Extended Schiff Base and Reduced Schiff Base Amino Acetate Skeletons Incorporating Organotin (IV) Moieties and Evaluation of Their Cytotoxic Potential- Pr (ongoing)	Dr. T. S. Basu Baul	CSIR, New Delhi	20.90
Synthesis and Characterization of Organotitanium(IV) Carboxylates and Evaluation of Their Antitumour Properties	Dr. T. S. Basu Baul	UGC, New Delhi	15.30
Rational Design, Synthetic Strategies for Developing Organometallic Anticancer Compounds Based on Organotin and Organoiron	Dr. T. S. Basu Baul.	DBT, New Delhi	52.00
Development of AChE-Inhibitor for Alzheimer's Disease: Screening, Designing, Synthesis and Biological Validation Using Chemical Library & Traditional North-East Indian Plants	Dr. S. Mitra (Co-PI)	DBT, New Delhi	100.00

Academic Collaborations

Prof. K. M. Rao has academic collaborations with Roger M Phillips, Professor of Cancer Pharmacology, Director of Research, School of Applied Sciences, Department of Pharmacy, University of Huddersfield, Queensgate, Huddersfield HD1 3DH and Werner Kaminsky, Department of Chemistry, University of Washington,

Seattle, WA 98195-1700, USA, on *Carrying Biological Studies and Single Crystal X Ray Analysis*.

Prof. A. K. Chandra has academic collaboration with the Quantum Chemistry Group, University of Leuven, Belgium, and the Department of Chemistry, Quy Nhon University, Vietnam, on *High End Theoretical Calculations*.

Other activities

Prof. K. M. Rao

Presented a poster presentation with Sanjay Adhikari on “Arene Ruthenium, Cp*Rh and Cp*Ir Oximate and Oxime Complexes: Synthesis, Structural, DFT and Biological Studies” at Chemical Research Society

of India, Guwahati University, Guwahati (February 3-5, 2017).

Dr. B. Sarkar

Delivered lectures to the participants of 39th and 40th Orientation Programs conducted by UGC-HRDC, NEHU, Shillong, and attended the 20th CRSI Symposium, Gauhati University, Guwahati (2-5 February 2017).

DEPARTMENT OF MATHEMATICS

Head: Dr. A. M. Buhphang
Telephone: 0364-2722723 (O)/09436161409 (M)
E-mail: ardeline17@gmail.com, ardeline@nehu.ac.in

Faculty: 6

Designation	Name and Qualification	Specialization
Professor (1)	H. K. Mukerjee, DPhil (Allahabad)	Algebraic and Differential Topology
Assistant Professor (5)	A. T. Singh, PhD (NEHU)	Algebraic and Differential Topology
	S. Dutta, PhD (NEHU)	Rings of Continuous Functions
	A. M. Buhphang, PhD (NEHU)	Ring Theory
	John Paul Jala Kharbhih, MSc (NEHU)	Rings of Continuous Functions
	Ph. Chinglensana, MSc (Delhi)	Algebraic Topology

Thrust Areas of Research

Thrust areas of research in alphabetical order are Algebra, Algebraic and Differential Topology, Dynamical Systems, Geometry.

Brief Statement of Academic Activities

In the year under review, the Department continues to give quality and rigorous MSc/M. Phil. and Pre-PhD courses of different subjects of Mathematics like Algebra, Analysis, Complex Function Theory, Differential Equations, Linear Algebra, Mechanics, Number Theory, Numerical Analysis and Computer Programming, Theory

of Field Extensions, Galois Theory, Topology, Algebraic Topology, Differential Topology, Commutative Algebra. The Department conducted regular seminar and colloquia on topics in the thrust areas of research. It continues to follow the culture of pursuing fundamental research of original nature and refraining from repetitive and marginal research. It continues to emphasize on the quality of research output rather than quantity. Students of the Department continue to perform well in obtaining UGC/ CSIR NET Junior Research Fellowship and NET Lecturership.

Students' Profile

Enrolment Capacity: MSc – 36, MPhil/PhD – Variable

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MSc	22	14		34		02	24	12	36
MPhil	01			01			01		01
PhD	04			02		02	02	02	04

School of Physical Sciences

Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MSc	13	07		17		03	17	03	20
PhD	01					01		01	01

Student Awarded PhD Degree

Name of Student	Title of Thesis	Name of Supervisor
Mr. Deiborlang Nongsiang	Certain Graph Theoretic Characterizations of Finite Groups	Dr. P. K. Saikia

Placement of Student

Mr. Damelahun Jyrwa was appointed Assistant Professor in Synod College, Shillong.

Research Fellowships: 11

CSIR-UGC-NET	UGC Non-Net	National Fellowship for Higher Education
04	05	02

Fieldwork/Educational Tour of Students

Teacher-in-Charge: Dr. A. M. Buhphang.

Places/Institutions Visited: Kerala University, Calcutta University, Napier museum, Thiruvananthapuram.

Duration of Tour: 14 days (January 12-26, 2017).

Purpose of Tour: The tour is aimed at exposing students to the academic atmosphere of some institutes in the country by visiting libraries, museums and some historical places.

Courses Conducted

Postgraduate: MSc

Semester I

Analysis I; AMES; Linear Algebra; ODE; Classical Mechanics.

Semester II

Elementary Graph Theory; Algebra; Topology; PDE; Analysis II.

Semester III

CFT; Tensor Analysis and Riemannian Geometry; Theory of Field Extensions; ENT; Programming in C and Applications; Computer programming practical.

Semester IV

Computer Practical; Numerical Analysis; Algebraic Topology; Ring Theory; Theory of Relativity.

MPhil/PhD Courses

Compulsory Course: Research Methodology in Mathematics

Optional Courses: Galois Theory; Rings of Continuous Functions; Algebraic Geometry; Commutative Algebra; Advanced Ring Theory;

Department of Mathematics

Magneto Fluid Dynamics; Fluid Mechanics; Advanced Algebraic Topology; Differential Topology; Cosmology; Tensor Analysis and Theory of Relativity, Analytic Number Theory; Algebraic Number Theory; Topics in Algebra; Topics in Differential Manifolds; Topics in Riemannian Geometry; Homological Algebra; Advanced Group Theory; Theory of Characters; Topological Graph; Application of Linear Algebra; Advanced Topics in Discrete Mathematics; Computational Homology; Relativistic Mechanics.

Seminars/Conferences/Symposia/Workshops

Organized

The Department organized: (i) *Advanced Instructional School in Differential Topology* during June 13-July 2, 2016, with Prof. H.K. Mukerjee and Dr. A.T.Singh as Coordinators, (ii) Four-day workshop on *Hyperbolic Partial Differential Equations and Conservation Laws* in collaboration with the Department of Basic Sciences and Social Sciences during February 22-25, 2017, (iii) UGC-SAP-sponsored national seminar on *Current trends in Mathematics* during March 14-16, 2017 with Dr. A. M. Buhphang as Coordinator, and (iv) Mathematical Olympiad Training Camp for students of Meghalaya during January 9-14, 2017.

Attended

Prof. H. K. Mukerjee

Delivered lectures on (i) “On Adam’s Operation in K-theory” at the symposium on *Equivariant Homology Theory* organised by the Indian Mathematical Society, Kalyani University,

Kalyani, W.B (December 27-30, 2016), and (ii) “On Classification of Manifolds” at the UGC-SAP national seminar *On the Recent Trends in Mathematics* organised by the Department during March 14-16, 2017.

Dr. A. T. Singh

Delivered two lectures on “Second Order Partial Differential Equations” at the Science Academies’ lecture workshop on *Hyperbolic Partial Differential Equation and Conservation Laws (HPECL-2017)* organised by the Department in collaboration with the Department of Basic Sciences and Social Sciences, NEHU (22-25 February 2017).

Publications

Published Abroad

Dutta, S., Lanong, C. (2017). On annihilator graph of a commutative ring. *Transactions on Combinatorics*, 6(1): 1-11.

Mawiong, S. M., Mukerjee, H. K. (2016). Strong Conley index over a phase space. *Topology and Its Applications*, 210:216-245.

Mawiong, S. M., Mukerjee, H. K. (2016). Strong shift equivalence and strong Conley index. *Dynamical Systems-An International Journal*, 31(3): 280-292.

Singh, A. T., Mukerjee, H. K. (2016). The rational homotopy type of the complement of the graph of a map. *Journal of Homotopy and Related Structures*, 11(2): 153-172.

Subedi, T., Buhphang, A. M. (2016). On left SF-rings and strongly regular rings. *Kyungpook Math. Journal*, 6: 861-866.

Funds Received from Agencies including NEHU/UGC

1. NBHM LIBRARY GRANT – Rs. 13.90 lakhs.
2. UGC-SAP (DRS-II) (Recurring) - Rs. 9.10 lakhs
3. NEHU (Non-plan) – Rs. 3.80 lakhs
4. NEHU XII Plan (Consumable) – Rs. 10.00 lakhs
5. NEHU XII Plan (Equipment) – Rs. 20.00 lakhs

Academic Collaborations

International Centre for Pure and Applied Mathematics (CIMPA), Nice, France, on *Promotion of the Research in Mathematics in Developing Countries*.

Other Activities

Prof. H. K. Mukerjee

Delivered lectures on: (i) “Homology and Cohomology, Cup and Cap Products, Orientations of Manifolds and Poincare Duality, Cohomology Operations, K-Theory as Generalized Cohomology Theory” at the Advanced Instructional School in Algebraic Topology, NEHU (June 13 to July 02, 2016), (ii) six lectures on “Vector Fields on Spheres” at the School on K theory at the Indian Statistical Institute, Bangalore (26 December 2016 to 7 January 2017), and (iii) two invited talks on “Real Number System” during the Mathematics Day Celebration organised by the National Academy of Sciences, India, at Allahabad University (December 22-23, 2016).

Dr. A. T. Singh

Delivered six lectures on “Smooth Manifolds and Homotopy Theory” at the *Advanced Instructional School in Algebraic Topology* organised by the Department during 13 June to 2 July 2016.

DEPARTMENT OF PHYSICS

Head: Prof. Y. N. Tiwari (Till 2 February 2017)
 Prof. Atul Saxena (Since 3 February 2017)
Telephone: 0364-2722827/2722801
E-mail: atulnehu@yahoo.co.in, hodphy@nehu.ac.in

Faculty: 8

Designation	Name and Qualification	Specialization
Professor (5)	B. M. Jyrwa, MSc & PhD (NEHU)	Nuclear Physics Theory
	P. Nongkynrih, MSc & PhD (NEHU)	Nuclear Physics Experiment
	Y. N. Tiwari, MSc (Patna), PhD (Patna)	Atomic and Molecular Physics Theory (Theoretical)
	A. Saxena, MPhil (IAS, Meerut), PhD (NEHU)	Nuclear Physics Experiment
	M. C. Mahato, MSc (Ranchi), PhD (IISc, Bangalore)	Solid State Physics Theory
Associate Professor (2)	S. S. Khatri, MSc & PhD (NEHU)	Laser Physics
	A. K. Biswas, MSc (IIT, Kharagpur), PhD (IP, Bhubaneswar)	High Energy Physics Theory
Assistant Professor (1)	Dr. S. S. Pohlong, MSc & PhD (NEHU)	Solid State Physics Theoretical

Thrust Areas of Research

Theoretical physics with thrust in using covariance matrix of nuclear data needed for nuclear reactors, measurement of high energy photon and neutron nuclear reaction cross-sections in structural materials, study of pre-equilibrium processes, EXFOR Compilations, Experimental Nuclear Physics with thrust in characterization of radiation detectors and measurement of environmental radioactivity (hazard indices), with particular emphasis on radon measurement, Solid State Physics (Theory), High Energy Physics (Theory), Laser Physics (Experiment).

Brief Statement of Academic Activities

The main academic activity of the Department is the teaching of MSc (Physics) courses to a class of 34 students in each semester of MSc (First and Second years). The Department also conducts the PhD Course Work for newly admitted doctoral candidates. In addition to teaching of MSc and PhD courses, members of the faculty have been engaged in guiding research for the PhD scholars and in carrying out their own research works. Faculty members visited various reputed national and international institutions to carry out research collaborations and delivered talks on their research contributions.

School of Physical Sciences

Students' Profile

Enrolment Capacity: MSc – 34, PhD - Variable

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MSc	25	09		30		04	27	07	34

Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MSc	20	09		19		10	18	11	29
PhD	01	01				02	01	01	02

Students Awarded PhD Degree

Name of Student	Title of Thesis	Name of Supervisor
Mr. Yubaraj Sharma	Studies in Stopping Power, Etching and Annealing Characteristics of Heavy Ion Irradiated Nuclear Track Detectors	Prof. A. Saxena
Ms. Diana Thnongjaomayum	Studies in Non-equilibrium Statistical Mechanics	Prof. P. Shukla

Research Fellowships: 16

CSIR UGC-NET	UGC Non-NET	National Fellowship for Higher Education	Others
02	01	10	03

Fieldwork/Educational Tour of Students

Teacher-in-Charge: Prof. Atul Saxena.

Places/Institutions Visited: Goa, Bombay and Kolkata.

Duration of Tour: 15 Days (11-25 January 2017).

Purpose of Tour: Educational Tour.

Courses Conducted

Postgraduate: MSc

Semester I

Classical Mechanics; Quantum Mechanics I; Mathematical Physics; Laboratory I.

Semester II

Electrodynamics; Electronics; Quantum Mechanics II; Laboratory II.

Semester III

Nuclear Physics I; Solid State Physics I; Atomic and Molecular Physics; Environmental Physics; Laboratory III.

Semester IV

Thermal Physics; Computational Techniques and Numerical Methods; Computational Techniques; Laboratory IV. *Optional Papers:* Solid State Physics II; High Energy Physics; Laser Physics; Nuclear Physics II.

Seminars/Conferences/Symposia/ Workshops

Organized

Prof. B. Jyrwa organised and was a local convener of the 7th DAE-BRNS workshop on *Compilation of Experimental Nuclear Data* held at NEHU (March 6-10, 2017). She also organized a programme to commemorate the birth anniversary of Madam Marie Curie and Sir C. V. Raman at NEHU, Shillong (November 7, 2017).

Attended

Prof. P. Nongkynrih

Presented a paper on “Natural Radioactivity Level in Soil Samples from Selected Locations in East Khasi Hills District, Meghalaya, India” at the Xth National Conference of Physics Academy of North East, November 10, 2016.

Prof. A. Saxena

Presented papers on “Structural, Electronic Properties of LaMnO₃ Compound: A First Principle Study Using Density Functional Theory” and “Measurement of Radon Activity in Nongkhlaw Town of West Khasi Hills District” at the *CPP-IPR Silver Jubilee Symposium* held at Guwahati (April 21–22, 2016).

Prof. M. C. Mahato

Delivered an invited talk on; (i) “Instability of Water Jet under Gravity: An Experiment” at the Physics Association of North East (PANE) Conference, St. Anthony’s College, Shillong, November 9-11, 2016, and (ii) “An Experiment on What Causes a Water Jet to Breakup” at the national conference on *Hard and Soft Condensed Matter*

Physics held at Tezpur University, Tezpur (March 2-4, 2017).

Dr. S. S. Pohlong

Presented papers on: (i) “Particles Dynamics in a Flat Potential but Frictionally Inhomogeneous System Driven by Periodic Force” at the Biennial National Conference of Physics Academy of North-East (PANE) held at St. Anthony’s College Shillong (November 10 -12, 2016), and (ii) “Particle Dynamics Driven by the Periodic Forces in an Asymmetric Frictionally Inhomogeneous Systems” at the national conference on *Hard and Soft Condensed Matter* held at Tezpur University, Tezpur (March 2-4, 2017).

Publications

Published in India

Khatri, S. S. (2016). Modes due to clusters of impurities in alkali halide crystals. *Asian Resonance*, 5(1): 46-48.

Sharma, Y., Maibam, D., Khardewsaw, A., Saxena, A. (2017). Spectral analysis of indoor radon time-series using frequency and time-frequency techniques. *International Journal of Engineering Technology, Science and Research*, 4(3): 358-363.

Published Abroad

Badwar, S., Jyrwa, B. *et al.* (2016). ¹⁵¹Eu(n,g)^{152m1}Eu reaction cross-section measurement at the neutron energies of 1.12, 2.12, 3.12 and 4.12 MeV. *Journal of Radioanalytical and Nuclear Chemistry*, 307: 1385-1390.

Bani, W. K., Mahato, M. C. (2016). Study of instability of liquid jets under gravity. *DAE Solid State Physics Symposium, AIP Conf. Proc.* 1832, doi: 10.1063/1.4980 413.

School of Physical Sciences

- Ghosh, R., Badwar, S., Lawriniang, B., Jyrwa, B. *et al.* (2017). Measurement of ^{58}Fe (p, n) ^{58}Co reaction cross section within the proton energy range of 3.38 to 19.63 MeV. *Nuclear Physics A*, 964: 86-92.
- Ghosh, R., Jyrwa, B. *et al.* (2016). Determination of $^{110}\text{Cd}(n,g)^{111}\text{mCd}$ and $^{111}\text{Cd}(n,n')^{111}\text{mCd}$ reaction cross-sections at the neutron energies of 1.12–4.12 MeV. *Journal of Radioanalytical and Nuclear Chemistry*, 307:1481-1487.
- Khardewsaw, A., Maibam, D., Sharma, Y., Saxena, A. (2017). Radon activity in Nongkhlaw village of West-Khasi Hills district, Meghalaya. *International Journal of Engineering Technology, Management and Applied Science*, 5(3): 380-386.
- Kharkongor, D., Reenbohn, W.L., Mahato, M. C. (2016). Particle dynamics in a symmetrically driven underdamped inhomogeneous periodic potential system. *Physical Review E*, 94: 022148-1:14.
- Kharkongor, D., Saikia, S., Jayannavar, A. M., Mahato, M. C., Reenbohn, W.L. (2016). Particle dynamics in a symmetrically driven underdamped inhomogeneous periodic potential system. *DAE Solid State Physics Symposium, 2016. AIP Conf. Proc.* 1832, doi: 10.1063/1.4980647.
- Sharma, Y., Maibam, D., Ghosh, S., Saxena, A. (2017). A Study on statistical correlation between indoor radon and meteorological parameters. *International Journal of Engineering Technology, Management and Applied Science*, 5(3): 387-391.

Research Projects

New: 1

Title of Project	PI/Co-PI	Funding Agency	Rupees in lakh
Measurement of Radon, Thoron and Gamma Radiation Level in Three Districts of Meghalaya	Prof. A. Saxena / Prof. D. Walia	Department of Atomic Energy (DAE) Board of Research in Nuclear Sciences (BRNS)	35.91

Ongoing: 1

Title of Project	PI/Co-PI	Funding Agency	Rupees in lakh
EXFOR Compilations and Participation in the Measurement of High Energy Photon and Neutron Nuclear Reaction Cross-Sections in Structural Materials (e.g., Fe, Co, Ni, Cr, Zr, etc.) and Materials Related to Medical Isotopes (e.g., Mo)	Prof. B. Jyrwa	Department of Atomic Energy (DAE) Board of Research in Nuclear Sciences (BRNS)	24.79

Department of Physics

Academic Collaborations

Prof. P. Shukla

Collaborated with Dr. Matteo Marsili of ICTP, Triesie, Italy, on *Theoretical Condensed Matter Physics*.

Prof. B. Jyrwa

Collaborated with BARC Nuclear Physics Division and RCD on *Experimental Work*.

Prof. P. Nongkynrih

Collaborated with Atomic Mineral Division, North-Eastern Region, Shillong, and Health Physics Division BARC, Trombay, Mumbai, on *Experimental Work*.

Prof. A. Saxena

Collaborated with: (i) Prof. R. J. Buenker and H. P. Liebermann (Bergische Universitaet – Gesamthochschule Wuppertal Fachbereich C-Theoretische Chemie, Gaussstr. 20-42097, Wuppertal, Germany) on *Theoretical Atomic and Molecular Physics*, (ii) Prof. K.K. Dwivedi, Vice Chancellor, ITM University, Gwalior, on *Particle Tracks*

in Solids, and with Various Groups for Irradiation Facilities at GSI, Darmstadt, Germany, and (iii) Prof. Devesh Walia of the Department of Environmental Studies on Radon Studies and Geophysics.

Other Activities

Prof. B. M. Jyrwa

Delivered talks at Synod College on “Application of Nuclear Data Science” on 6 October 2016.

Prof. M. C. Mahato

Delivered an invited talk on “Ohm’s Law and Related Problems” during the S.C. Dutta Memorial Lecture, Shillong College, Shillong (November 15, 2016). He was also a reviewer for the journals of *Physica A*, *Physical Review E*.

Dr. S. S. Khatri

Delivered an invited lecture on “Sir C.V. Raman and His Effect” during the commemoration of the birth anniversary of Madam Curie and Sir C.V. Raman on November 7, 2016.

DEPARTMENT OF STATISTICS

Head: Dr. R. Singh
Telephone: 0364-2722901
E-mail: hodsta@nehu.ac.in

Faculty: 6

Designation	Name and Qualification	Specialization
Professor (1)	G. Das, MA (Delhi), PhD (NEHU)	Survey Sampling
Associate Professor (3)	B. K. Gupta, MSc (AMU), PhD (Gauhati)	Survey Sampling
	R. Singh MSc & PhD (Patna)	Econometrics, Demography Poverty and Human Development
	T. K. Chakrabarty MSc (Agra), PhD (Manipur)	Time Series Modelling, Statistical Demography and Health Analytics
Assistant Professor (2)	S.K. Jha, MSc & PhD (Patna)	Probability Distribution, Correlated Data Analysis, Computation and Spatial Statistics
	B. Das MSc & PhD (Gauhati)	Distribution Theory, Environmental Statistics

Thrust Areas

Statistical Inference, Design of Experiments, Survey Sampling, Demography, Econometrics, Spatial Statistics, Probability Models and Distributions, Poverty & Human Development.

Brief Statement of Academic Activities

The Department is financially supported by the FIST programme of DST, Government of India. It offers the choice based credit system MSc as well as the PhD and MPhil programmes. Apart from giving adequate exposure in the

theoretical areas of the subject, it emphasizes on the practical training using latest software, such as STATA, SPSS, R, S-PLUS, SYSTAT, MINITAB and MS-EXCEL. The Department uses a quality and rigorous curriculum in Research Methodology as a compulsory paper in the MPhil/PhD research work. All the faculty members are actively engaged in research in the eminent fields, such as Econometrics, Demography, Spatial Statistics, Statistical Distribution Theory, Survey Sampling Theory, and Time Series.

Department of Statistics

Students' Profile

Enrolment Capacity: MSc – 25, MPhil/PhD – Variable

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MSc	06	09		14		01	09	06	15
MPhil	01	01				02		02	02
PhD	01	04		02		03		05	05

Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MSc	07	01		07		01	02	06	08
PhD	01	01		02				02	02

Students Awarded PhD Degree

Name of Students	Title of Thesis	Name of Supervisor
Bonoshree Saikia	A Study of Alternative Techniques in Multi-collinearity with Applications	Dr. R. Singh
R. Zoramthanga	Studies on Some Estimators in Successive Sampling	Prof. G. Das

Placement of Students

MSc Students passed during 2016-17 from the Department have been placed as UG and PG

teachers in different schools and one student is appointed as Lecturer in college located in Meghalaya.

Research Fellowships: 15

UGC Non-NET Fellowship	Inspire Fellowship	National Fellowship for Higher Education
12	02	01

Courses Conducted

Postgraduate: MSc

Semester I

Mathematical Analysis; Linear Algebra; Probability Theory; Distribution Theory I; Distribution Theory II; Distribution, Computing and Programming (Practical).

Semester II

Sample Survey; Statistical Inference I; Linear Models and Regression Analysis; Sample Survey(Practical); Statistical Inference I and Regression Analysis (Practical); Introduction to probability Theory and Distributions; Introduction to Sample Survey; Linear Programming.

Semester III

Design of Experiments; Statistical Inference II; Statistics for National Development & Environmental Statistics; Design of Experiments (Practical); Statistical Inference II (Practical); Introduction to Design and Analysis of Experiments; Introduction to Econometrics/Survival Analysis.

Semester IV

Applied Multivariate Analysis; Time Series Analysis and Forecasting; Stochastic Processes, Applied Multivariate Analysis (Practical); Time Series Analysis and Forecasting (Practical); Project Work; Statistical Computing; Population Dynamics and Demography; Population Dynamics and Demography (Practical).

MPhil/PhD Courses

Research Methodology in Statistics; Statistical Modeling; Econometrics; Survey Sampling Theory.

Seminars/Conferences/Symposia/Workshops

Attended

Dr. B. K. Gupt

Presented paper entitled “Allocation of Small Sample Size to Strata under Superpopulation Model” at the 70th Annual Conference of Indian Society of Agricultural Statistics organized by the International Crops Research Institute for the *Semi-Arid Tropics*, Hyderabad, during 21 to 23 November 2016.

Dr. T. K. Chakrabarty

Presented an invited lecture entitled “Assessment of Nutritional Status using Probability Models” at the Platinum Jubilee International Conference on *Application of*

Statistics organized by the Department of Statistics, Calcutta University, during 21 to 23 December 2016. He also delivered invited lectures as a lead resource person on subtheme “Application of Statistics in Engineering” on 10 February 2017 at the five-day workshop on *Current Development in Engineering* held at Civil Engineering Department, Tezpur University, Assam.

Publications

Published in India

Jha, S. K., Singh, N. V. (2016). Assessing the effects of socio-economic determinants on infant mortality in North-Eastern Indian states based on areal data: Modeling. *Assam Statistical Review*, 30 (1):na.

Satya, Y., Gupt, B. K. (2016). Financial technology trends under digital services with reference to bank functioning. *Spectrum - Humanities, Social Sciences and Management*, 3: 67-77.

Published Abroad

Deb, M., Chakrabarty, T. K. (2016). Functional time series analysis of age-specific fertility rates: Visualizing the change in the age-pattern of fertility in India. *International Journal of Advanced Statistics and Probability*, 4 (2): 79-89.

Deka, D., Das, B. (2017). Transmuted exponential gumbel distribution (TEGD) and its application to water quality data. *Pakistan Journal of Statistics & Operation Research*, XIII (1): 115-126.

Sharma, D., Chakrabarty, T. K. (2016). On size biased Kumaraswamy distribution. *Statistics, Optimization & Information Computing*, 4 (3):252-264.

Department of Statistics

Book Chapters

Jha, S. K. (2016). Computation of maximum likelihood estimates in three parameter Weibull for censored data. In: *Recent Advances in Mathematics, Statistics and Computer Science*. A. K. Sinha *et al.* (Eds.). World Scientific, Singapore, p. 93-102.

Jha, S. K., Singh, N. V. (2016). Estimation of risk surfaces and identification of district

boundaries for tuberculosis in north-eastern Indian states. In: *Recent Advances in Mathematics, Statistics & Computer Science*. A. K. Sinha *et al.* (Eds.). World Scientific, Singapore, p. 164-172.

Other Activities

Dr. R. Singh

Reviewer for the *International Journal of Social Economics* and *Assam Statistical Review*.

VII

SCHOOL OF SOCIAL SCIENCES

Dean: Prof. Cecile A. Mawlong
Phone: 0364-2723001
Fax: 0364-25511944
E-mail: deansss@nehu.ac.in, camawlong@hayoo.com

The School of Social Sciences consists of six departments, namely Cultural and Creative Studies, History and Archaeology (Tura), History, Law, Political Science, and Sociology. All Departments under the School offer the PhD and MPhil courses in addition to the MA Programme. The Department of Law also offers the five-year integrated BA LLB course and the Department of Cultural and Creative Studies offers the Diploma courses in Music and Painting. Some departments also have extension activities as part of their academic programmes. Educational tours to other parts of India were undertaken by the Departments of History, Cultural and Creative, Law, History and Archaeology. Field trips/works that are part of the academic programmes were undertaken under the supervision of faculty members in the Departments of History, Cultural and Creative Studies, Law, History and Archaeology.

All departments under the School regularly hold seminars/conferences/workshops where members of the faculty presented papers. Faculty members also attended regional, national

and international seminars held elsewhere, where they chaired academic sessions and presented keynote addresses, papers, etc. Faculty members are also engaged as resource persons in refresher courses and other types of academic programmes run by the UGC-HRDC, NEHU. Some of the faculty members also have academic collaboration with universities abroad. Others have also received recognition as members of the editorial boards of journals and several committees under the state and central Government.

The Departments of History, Political Science and Sociology have on-going projects under the UGC-SAP at various levels, which included all faculty members of the respective departments. In addition, some faculty members also have on-going individual projects funded by other agencies. Most faculty members of the departments under the School have publications published in reputed journals, and some have also published books during the year under review.

DEPARTMENT OF CULTURAL AND CREATIVE STUDIES

Head: Subrat Kumar Nanda
Telephone: 2723374, 2723371 and 2723372 (O) 09436702498 (M)
Email: nanda_subrat2@yahoo.com

Faculty: 4

Designation	Name and Qualification	Specialization
Professor (2)	Desmond L. Kharmawphlang, PhD (NEHU)	English
	Subrat Kumar Nanda, PhD (JNU)	Sociology
Associate Professor (1)	Lapynshai Syiem, PhD (NEHU)	Music
Assistant Professor (1)	Bedanta Kalita, MFA (MS University of Baroda)	Painting

Thrust Areas of Research

The major thrust area of research in the Department is studying various theoretical, conceptual and contextual issues relating to different aspects of folklore, performing arts and visual arts.

Brief Statement of Academic Activities

The Department runs a regular MA course in folkloristics and the PG Diploma courses in music and painting. In addition, the Department offers the PhD programme in folkloristics,

which covers studies primarily related to folklore and other related areas, such as folk music, traditional performing arts, folk theatre, etc. Candidates desirous of pursuing research work in these areas are provided with necessary facilities, technical and professional guidance. Both theoretical knowledge and practical training are provided to the students admitted to the postgraduate course in folkloristics and the diploma courses in music and painting. Besides teaching and research, the Department regularly engages in extension activities as part of its academic programmes.

Students' Profile

Enrolment Capacity: MA Folkloristics – 30, PG Diploma Music-20, PG Diploma Painting – 10, PhD -Variable

Degree	Male	Female	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MA								
Folkloristics	08	13	21			18	03	21
PG Diploma								
Music	05	03	08			06	02	08

School of Social Sciences

PG Diploma Painting	02	04	06		06			06
PhD	01	01	01	01	01	01		02

Degrees Awarded

Degree	Male	Female	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MA Folkloristics	02	15	17			17		17
PG Diploma Music	05	01	06			06		06
PG Diploma Painting	06	04	10			09	01	10
PhD	02	02	03		01*	03	01	04

*International student

Students Awarded PhD Degree

Name of Student	Title of Thesis	Name of Supervisor
Ms. Betty Laloo	Reconstructing the Early Jaintia State through Oral Traditions	Prof. Desmond L. Kharmawphlang
Ms. Monalisa Borgohain	The Phat Bihu of Bhakuakhana Assam	Prof. Desmond L. Kharmawphlang
Mr. Somengam Mawon	Traditional Tangkhul Naga Festivals: A Study of the Use of Music and Musical Instruments	Dr. (Mrs.) Lapynshai Syiem

Fieldwork/Educational Tour of Students

Fieldwork Teacher-in-Charge: Dr. (Mrs.) Lapynshai Syiem, Associate Professor

Mr. Donald V. Thabah, Research Scholar

Places Visited: Bangalore - Kerala

Duration of Tour: 15 days from 15 to 29 January 2017

Purpose of Tour: To enable the students to acquaint themselves with the folklore and other oral traditions and literature of different communities in this part of the country.

A field trip for the students of MA Folkloristics was conducted at Raid Tyrso, Ri-Bhoi District during 29-30 October 2016 to study the folk material culture of the region under the supervision of Prof. Desmond L. Kharmawphlang.

Course conducted

Postgraduate: MA (Folkloristics)

Semester I

Introduction to Folkloristics; History of Folklore Studies; Introduction to Semiotics; Folklore Theories I; Field Methods and Studies.

Department of Cultural and Creative Studies

Semester II

Folklore Theories II; Folk Literature I; Public Sector Folklore; Introduction to Visual Arts; Urban Folklore.

Semester III

Ethnomusicology; Folk Literature II; Introduction to Performing Arts; Folklore of Northeast India-I; Social Folk Custom.

Semester IV

Material Culture; Language, Culture and Society; Narratology, Folklore of Northeast India-II; Dissertation.

PG Diploma (Painting)

Semester I

Fundamentals of Visual Arts (Theory); Introduction to Indian and Chinese Art (Theory); Drawing and Colour Application (Practical); Sculpture (Practical); Introduction to Folk Art and Craft of Northeast India (Theory).

Semester II

Introduction to Western Art (Theory); Print Making (Practical); Creative Painting (Practical); Enamel Painting in Glazing Technique (Practical); Introduction to Indian and Western Aesthetics (Theory).

PG Diploma (Music)

Semester I

Brief History of Indian Classical Music (Theory); Introduction to General Musical Terms (Theory); Introduction to Indian Classical Music (Practical); Practical Training in Indian Classical music (Practical); Introduction to Western Musical (Staff) Notation (Practical).

Semester II

Study of Selected Musical Instruments (Theory); Songs of Meghalaya (Practical), Rhythmic

Pattern of Music of Meghalaya (Practical); Concept of Rhythmic Pattern of music of Meghalaya (Theory); Proficiency Western Musical Instruments (Practical).

PhD Courses

Research Methodology; Recent Trends in Folkloristics; Advanced Course in Performing Arts.

Seminars/Conferences/Symposia/Workshops

Organised

The Department organised the following:

- (i) Invited lecture by Dr. Kiran Seth, Founder-Chairman of SPICMACAY at the Department on 33 November 2016 with Dr. (Mrs.) Lapynshai Syiem as Coordinator of the programme, (ii) National seminar on *Verbal Art: Exploring the Ethnography of Speaking Strategies* on 23-24 February 2017 at NEHU, Shillong, with Prof. Desmond L. Kharmawphlang and Prof. S.K. Nanda as Coordinators, (iii) Refresher course in *Folkloristics and Semiotics* held at the Department during 18 April to 7 May 2016 with Prof. Desmond L. Kharmawphlang as Coordinator, and (iv) Two-day national conference on *Verbal Art: Exploring the Ethnography of Speaking Strategies* held on 23 and 24 February 2017 at the Department with Prof. Desmond L. Kharmawphlang as Convener, and (v) National seminar on *Verbal Art: Exploring the Ethnography of Speaking Strategies* on 23-24 February 2017 at the Department with Prof. S. K. Nanda as Joint Convener.

Dr. (Mrs.) Lapynshai Syiem

Organized a lecture programme by Dr. Kiran Seth, Founder Chairman of SPIC MACAY

on 3 November 2016 at the Department of Cultural and Creative Studies, Bhopal (21-22 March 2017).

Attended

Prof. Desmond L. Kharmawphlang

Delivered keynote addresses at: (i) National seminar on *Indian Fiction in English and the North-East: Comparative Texts, Theoretical Contexts, Translation and Folkloristics* organized by the Department of English, Nowgong College, on 5 August 2016, (ii) Two-day national seminar on *Exploring the Theory and Praxis of Cultural Poetics* organised by the Department of English, Kiang Nangbah Government College, Jowai, on 22 August 2016, (iii) National seminar on *Culture and Social Values: Quest for Sustainability in a Market Driven Society* at Sonapur College, Assam, on 23 September 2016; and also delivered a talk on “Historical-Cultural Links: India-South East Asia” at the capacity building workshop on *Understanding South-East Asia* organized by ASEAN Studies Centre and the ICSSR-NERC on 21 November 2016 at ICSSR-NERC, NEHU.

Presented papers entitled: (i) “Emic Perspectives in Vernacular Religion: Khasi Paradigms” at the two-day national seminar on *Culture and Religion in Northeast India: Retrospect and Prospect* on 2 November 2016 at Women’s College, Shillong, (ii) “Folklore, Fiction, Findings: Context(ing) Strategies” at the international seminar on *Understanding the Tribes of Asia* held at Synod College, Shillong (3 November 2016), and (iii) “Oral Tradition in Khasi, Jaintia and Garo Communities: Epistemes and Praxis” at the seminar on *North East India since 1947: Society, Polity and Economy in the State*

of Meghalaya organized by OKDISCD, Guwahati (16 March 2017).

Chaired sessions on: (i) “Reflections of the Past: Oral Narratives in Popular Fiction” at the Brahmaputra Literary Festival on 21 January 2017, (ii) “Languages Without Scripts” at the Gateway Literary Festival Third Edition on 26 February 2017 at the National Centre for Performing Arts, Mumbai, and (iii) of the North East and Northern Writers’ Meet held on 27-28 March 2017 at the Sahitya Akademi, New Delhi. He also chaired a plenary session and presented a paper on “Her Story: The Raconteur and Her Realm” at the national conference on *Many Patriarchies, Many Positionalities: Re-interrogating Gender in Narratives from North-East India* organised on 16 February 2017 by the Department of English, Shivaji College, University of Delhi.

Professor S. K. Nanda

Chaired a technical session on “Gender and Narratology” at the national seminar on *Verbal Art: Exploring the Ethnography of Speaking Strategies* organized by the Department of Cultural and Creative Studies during 23-24 February 2017.

Publications

Published in India

Kharmawphlang, D. L. (2015). Strategizing narratology: A case of select oral epics of North East India. *Anthropology Today: An International Peer Reviewed Neira Journal*, I(1):147.

Book Chapters

Nanda, S.K. (2016). Nationalism and ethnicity in Northeast India: A Northeast perspective.

Department of Cultural and Creative Studies

In: *Negotiating Subaltern Consciousness: A Northeast Perspective*. B.C. Dash (Ed.). Abhishek Prakashan, New Delhi, p. 1-29.

Nanda, S.K. (2017). Nationalism and ethnicity in Northeast India: A cultural perspective. In: *Narrating Northeast: A Cultural Perspective*. Sanjib Kumar Sarma (Ed.). Abhishek Prakashan, New Delhi, p. 44-69.

Fund Received from Agencies including NEHU/UGC

Non-Plan: Rs. 1.75 lakhs

Academic Collaborations

Prof. Desmond L. Kharmawphlang

Appointed Special Consultant and Collaborator on the Leverhulme Trust funded four-

year research project ‘Welsh and Khasi Cultural Dialogues: An Interdisciplinary Arts and Research Project’ (2016-2019), a collaborative project with Prof. Lisa Lewis, Director, Centre for Media and Culture in Small Nations, South Wales University, Cardiff and Dr. Aparna Sharma, World Arts and Cultures/Dance Department University of California, Los Angeles on June 1, 2016.

Other Activities

Prof. Desmond L. Kharmawphlang

Delivered a lecture on “Heritage and Folklore in Cultural Contexts” at UGC-HRDC, NEHU, on 10 February 2017.

DEPARTMENT OF HISTORY

Head: Prof. Amrendra Kr Thakur

Telephone: 0364-2723019

E-mail: akthakur13@gmail.com

Faculty: 11

Designation	Name and Qualification	Specialization
Professor (6)	M. Momin, MPhil & PhD (JNU)	Ancient Indian History and Early Northeast India
	F. A. Qadri, MPhil & PhD (Aligarh)	Medieval Indian History and Northeast India
	C. A. Mawlong, MA & PhD (NEHU)	Medieval Indian History and Northeast India
	A. K. Thakur, MA & PhD (BU)	Archaeology and Early Northeast India
	V. R. Rengsi, MPhil & PhD (NEHU)	History of Sciences and Non-Indian History
	Amena N. Passah, MPhil & PhD (NEHU)	History of South East Asia and Modern Northeast India
Associate Professor (3)	T. Gurung Nag, MPhil & PhD (NEHU)	Modern Indian History and Northeast India
	S. N. Lamare, MPhil & PhD (NEHU)	Modern Indian History and Modern Northeast India
	A. Mathur, MA & PhD (Rohilkhand)	Ancient Indian History, Culture and Archaeology
Assistant Professor (2)	M. S. N. Rahman, MA & PhD (Calcutta)	Medieval Indian History and Islamic History and Culture
	B. Dutta, MPhil & PhD (NEHU)	Modern Indian History

Thrust Areas of Research

The Department's thrust area is Northeast India.

Brief Statement of Academic Activities

During the period under report, faculty members of the Department were involved in several

academic programmes like organising seminars, field and study tours, conducting refresher course for college/university teachers, and holding dialogues with colleagues engaged in undergraduate teaching within the region.

Department of History

Students' Profile

Enrolment Capacity: MA-50, MPhil/PhD -Variable

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MA	13	37		49		01	27	23	50
PhD	07	07		12		02	08	06	14

Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MA	17	30		47			09	38	47
MPhil	01	01		02			01	01	02
PhD	03	02		04		01	03	02	05

Students Awarded PhD Degree

Name of Student	Title of Thesis	Name of Supervisor & Joint Supervisor
Ms. Hermina B. Lakiang	Religion in the Jaintia Society: A Historical Enquiry	Prof. M. Sharma, Supervisor & Prof. A. K. Thakur, Joint Supervisor
Ms. Aarti	Aspects of Economy and Society in Medieval Bihar, A.D. 1200-1556	Prof. F. A. Qadri
Mr. Rusievan Shangpliang	History of the Seventh-Day Adventist Church in Khasi Jaintia Hills	Prof. A. N. Passah
Mr. Tamdorlin Marbanian	Emergence and Growth of the Indigenous Churches in the Khasi Hills (1902-2002)	Dr. T. Gurung Nag
Mr. Rahul Pegu	Growth and Development of the Labour Force in Modern Assam: A Study of Oil, Coal & Railway Industries (1838-1964)	Prof. M. Sharma, Supervisor & Prof. A. K. Thakur, Joint Supervisor

Research Fellowships: 23

UGC-JRF	NEHU-NON-NET	National Fellowship for Higher Education	ICHR Fellowship	Maulana Azad Minority Fellowship
01	14	04	03	01

Educational Tour of Students

Duration of Tour: 15 days.

Teacher-in-Charge: Prof. V. R. Rengsi.

Purpose of Tour: The places have rich historical importance for the students of ancient,

Places/Institutions Visited: Delhi, Jaipur, Agra.

School of Social Sciences

medieval and modern histories including archaeology. The places will give first-hand experience and knowledge of the past developments preserved in architectural monuments and various museums located at the places. It is important for the students to see for themselves the historical heritage of India which they otherwise only read about in books.

Field Trip

Prof. C.A. Mawlong took the students on a field trip on 2 June 2016 to a Neolithic site at Nartiang as part of the course in *Archaeology: Methods and Approaches*.

Courses Conducted

Postgraduate: MA

Semester I

Historical Methods I; Prehistoric to Ancient Societies; Modern Indian Society; Economy and Society in Ancient India; British Expansion and Imperial Policy in India; Technology in the Making of Early China; Social Movement in USA; The Rise of Islam and the Early Caliphate; Economy and Society in Medieval India.

Semester II

Historical Methods II; Feudalism; Ancient Indian Polity and Society; Colonialism, Imperialism and Economic Change in India; History of the Graeco-Roman Civilization; Colonialism in South East Asia; (Open Course): Society, Technology and History: Prehistoric Age to Industrial Revolution; Polity and Society in Medieval India; The Umayyad and Abbasid Empires.

Semester III

Capitalism and Imperialism I; Religion and Society in Ancient India; Indian Nationalism;

Political Ideas and Institutions during the Sultanate Period; Ancient Indian Art and Architecture; History of Ideas in Modern India; Religion and Society in Medieval India; (Open Courses); Social Forces and Social Mobilization; Introduction to Gender History.

Semester IV

Capitalism and Imperialism II; Social and State Formations; Archaeology: Methods and Approaches; Colonialism, Communalism and Secularism; Political History of the Mughal Empire; Political History of the Delhi Sultanate; Contemporary India; The Rise of South Indian Civilization and Perspectives in the History of Northeast India: Sources, Tools and Techniques.

PhD Courses

Research Methodology; History and Theory; Oral Tradition.

Seminars/Conferences/Symposia/Workshops

Organized

Dr. T. Gurung Nag organized a Gender Sensitization Programme of Women's Cell, on March 8, 2017, Shillong.

Attended

Prof. F. A. Qadri

Participated as a resource person during a three-day Khasi-Urdu translation workshop organized by the Sahitya Akademi, New Delhi at NEHU, Shillong, from 22-24 October 2016, and presented an Urdu translation of three Khasi Short Stories in English. He was also a resource person at the international symposium on *Bahauddin Naqsband and Naqshbandiyya* organized by the Aziz Mahmud Hudayi Foundation and Istanbul

Department of History

Society for Sufi Studies at Istanbul, Turkey, on 2-4 December, 2016, and presented a paper on “Khawajani Principles: Addition and Interpretation by Indian Naqshbandis.”

Prof. C. A. Mawlong

Presented a paper on “Matriliney in Meghalaya: A Study of the Khasi-Jaintia in Historical Perspective” at the seminar on *North East India Since 1947: Society, Polity and Economy in the State of Meghalaya* organized by the Omeo Kumar Das Institute of Social Change and Development, NEHU, Shillong (16-17 March 2017).

Prof. A. K. Thakur

Delivered keynote addresses on: (i) “Cultural Heritage as a Source of History: Commonalities in North East India” during the ICSSR-sponsored national seminar on *Cultural Heritage of North East India* organized by the Department of English, Dera Natung Government College, Itanagar, Arunachal Pradesh, 10-11 March 2017, and (ii) “Buddhism in North East India: A Historiographic Account” during the UGC-sponsored-one-day national seminar on *Buddhism in North East India: Phase, Transformations and Histories* organized by the Buddhist Studies Centre, Department of History, Dibrugarh University, on 10 May 2016. He also was a resource person at the national workshop on *Research Methodology in Social Sciences* organized on 9 August 2016 by the Department of History, Madhya Kamrup College, Barpeta, Assam.

Presented papers on: (i) “Material Culture in/ and the Historical Reconstruction of the Past of Northeast India” during the 37th Session of the North East India History

Association at Sikkim Government College (10-12 November 2016), and (ii) “Colonial Ethnography and History of Assam: Some Issues” at the two-day national seminar on *Revisiting the Sources of the History of Assam Horizontal and Vertical Spaces* organized by the Department of History, Sibsagar College (9-10 January 2017), acted as a resource person and presided one academic session.

Prof Amena N. Passah

Presented papers on: (i) “Christianity in Meghalaya: A Post Independence Perspective” at a seminar organized by OKDISCD, Guwahati & ICSSR-NERC, NEHU, Shillong (16-17 March 2017), (ii) “Role of Khasi-Jaintia Man in Matrilineal Meghalaya: A Historical Perspective” at the 37th Annual Session of North East India History Association, Sikkim Government College, Tadong (10-12 November 2016), (iii) “Matriliney among the Khasi Jaintia and Garo: Then and Now” at the international seminar on *Understanding the Tribes of Asia* organized by Synod College, Shillong (3-4 November 2016), and (iv) “The Presbyterian Church in the Khasi-Jaintia Hills: A Historical Cultural Perspective” at the national seminar on *Culture and Religion in North East India: Retrospect & Prospect* organized by Women’s College, Shillong (2-3 November 2016).

Dr. Tejimala Gurung Nag

Presented a paper on “Role of the 8th Gurkha Fiffles in British Expansion in North-East India: A Preliminary Note” at the 37th Annual Session of North East India History Association, Sikkim Government College, Tadong (10-12 November 2016).

Dr. S. N. Lamare

Presented a paper on “Religious Influences and It’s Challenges: The Jaintia Experience” at the national seminar on *Culture and Religion in Northeast India: Retrospect and Prospect* organised by Women’s College, Shillong (2 March, 2016).

Dr. A. Mathur

Presented a paper “Buddhist Art: Locating Transformation” during the UGC-sponsored one-day national seminar on *Buddhism in North East India: Phase, Transformations and Histories* organized on 10 May 2016 by the Buddhist Studies Centre, Department of History, Dibrugarh University, Dibrugarh, Assam.

Dr. M. S. N. Rahman

Presented papers titled: (i) “Hindu-Muslim Relations in India (A.D.1206-2016)” at the national seminar on *Inter-Community Relations* organized by Murshidabad Itihas Charcha Kendra in collaboration with Union Christian Training College, Berhampur, West Bengal (15 January 2017), (ii) “The Mughals in Bengali Literature during Colonial Period” at the Section III, Modern India of the 77th Session of Indian History Congress, held at University of Kerala, Thiruvananthapuram (28-30 December 2016), (iii) “Pir Cult as a Syncretic Force in Medieval Bengal” at the international seminar on *Taqreeb Propagation of Harmonious Relations in Mughal, British and Independent India* organized by the Department of Arabic and Persian, University of Kolkata, in collaboration with Qutbi Jubilee Scholarship Program (QJSP), Mumbai (27-28 September 2016), (iv) “Hindu-Muslim Relations in Medieval Bengal as Reflected in Bengali Literature”

at Nikhil Bharat Banga Sahitya Sammelan held at Aurobindo Institute of Indian Culture, Shillong (10 September 2016), and (v) “Myths and Rituals in Sufism” at the national seminar on *Phenomenology of Myths and Rituals* organized by the Indian Council of Philosophical Research, Lucknow (7-9 April 2016).

Dr. Binayak Dutta

Presented the following papers: (i) “Regional Forces and Regional Politics in Meghalaya: A Study” at ICSSR-sponsored national seminar on *Identity Politics, Ethnic Movements and Regionalism in the Context of India’s North East* organized by OKDISCD, Guwahati (24-25 March 2017), (ii) “Recovering a Collapsed Cosmopolity: Post Partition Politics and Changing Community Relations in Shillong” at OKDISCD-sponsored seminar on *North East India since 1947: Society, Polity and Economy with Special Reference to Meghalaya* organized by OKDISCD, ICSSR-NERC, Shillong (16-17 March 2017), (iii) “Partition and Predicaments of Citizenship in Northeast India” at ICWA-sponsored national seminar on *India’s North Eastern States and Eastern Neighbours: Borderlands, People and Connectivity, Asian Confluence*, Shillong (9-10 March 2017), (iv) “Politicizing Partition: Decolonization, Displacement and the Predicaments of Citizenship in Post-colonial Assam” at the national seminar on *Revisiting Partition: Concepts, Dynamics and Manifestations with Special Focus on North East India* at IIT, Guwahati (9-10 February 2017), (v) “At the Stroke of Pen: The Predicament of Borderlands, Borders and the Politics of Peopleing in India’s North East” at the two-day national conference on

Department of History

Borders and Borderlands: Negotiating the 'Margins' under Globalization at the Institute of Development Studies, Kolkata (February 7- 8, 2017), (vi) "Remembering Partition: Decolonization. Displacement and Memories of Uprooting in Post-colonial Assam" at the two-day national seminar on *Doing Oral History: Folklore Memory and Tradition* organized by the Centre for Tribal Studies, Assam University, Diphu Campus, sponsored by ICHR and Sahitya Academy, New Delhi (11-12 November 2016) and chaired one technical session, (vii) "Lingering Legacy of a Divided Nation: Looking Beyond the Politics of Citizenship in Post-colonial Assam" at the two-day international seminar on *Reconciliation, Conflict Transformation and Peace Initiatives: Contemporary Challenges in South Asia* organized by the Department of Philosophy, Lady Keane College (28-29 November 2016), (viii) "Recovering a Forsaken Partition: Narratives of Partition and Displacement in North East India" at UGC-sponsored national seminar on *Impact on Partition on Society, Polity and Literature of Bengal* organised by the Departments of History, Bengali and Political Science, Mahadevananda Mahavidyalaya, Barrackpore, 25-26 November 2016, and chaired one technical session, (ix) "Fashioning India's Future Citizens: Education and the Construction of Citizenship in Colonial India" at the two-day national seminar on *Education of Marginalized People* organized by the Department of History, Assam University, Diphu campus, sponsored by ICSSR-NERC and UNHICEF on 9-10 November 2016 and acted as a resource person, and (x) "Pakistan Movement and Peasant Politics: A Study of Communalization of Peasant Politics

in Colonial India" at UGC-SAP-DSA-III two-day national seminar on *Peasant, Tribe, Country and Economy: Precolonial to Modern Times* at the Department of History, Visva-Bharati University, Shantineketan (26-27 September 2016).

Acted as a panelist in a panel discussion at: (i) ICSSR and ORF-sponsored conference on *India-Myanmar Bilateral Ties: Ethnicity, Security and Connectivity* at IIT, Guwahati (25-26 September 2016) and (ii) National seminar on *Reinterpretations of the Past: The Discourse of Cultural Identity in South Asia*, Department of English, NEHU, Shillong, (17-18 September 2016).

Publications

Published in India

Quadri, F.A. (2016). Book Review of Annemarie Schimmel's *Makers of Islamic Civilization RUMI* (translated from German by Paul Bergne), OUP, New Delhi, 2014. *Indian Historical Review*, 43(2):335-338.

Thakur, A. K. (2016). Book review of the book by B. B. Kumar, *India and Central Asia: A Shared Past*, Concept Publishing Company Pvt. Ltd., New Delhi, 2015. *NEHU Journal*, XIV(2):100.

Thakur, A. K. (2016). Technology and history of Arunachal Pradesh: A probe. *Resarun: Journal of the Directorate of Research, Government of Arunachal Pradesh*, 38:1-9.

Books

Thakur, A. K. (2016). *Pre-Colonial Arunachal Pradesh: Society, Technology and Trade*. Akansha Publishing House, New Delhi, Guwahati, ISBN: 978-81-8370-475-5.

Thakur, A. K., editor. (2016). *Proceedings of North East India History Association*, 36th

- Annual Session, Aizawl, 2015, Department of History, NEHU, Shillong, ISSN: 2349-753X.
- Thakur, A. K. (2017). *Technology of the Tribes of Northeast India*, Revised form of the INSA Project Report. DVS Publishers, Guwahati, New Delhi, ISBN: 978-93-85839-01-6.
- Book Chapters/Proceedings**
- Dutta, B. (2016). Of people, land and laws: Colonialism, immigration and history of land laws in Assam. In: *Ethnicity and Political Economy in Northeast India*. H. Srikanth and R. Borgohain (Eds.). DVS Publishers, Guwahati, p. 121-145.
- Dutta, B. (2016). Under the shadow of violence: Ethnicity, communalism and displacement in East Pakistan. In: *Globalization and Cultural Pluralism*. Saji Varghese (Ed.). Akansha Publishing House, New Delhi, p. 62-78.
- Dutta, B. (2017). Biswasta Dharmaunmad Musalman O Onabadi Bhumi: Assam E Bangali Krishak Proborjaner Purbo Itihas. In: *Char Katha: Brahmaputra Nodi Uppattaka*. Prosun Borman and Gorky Chakraborty (Eds.). Gangchil, Kolkata, p.141-160.
- Dutta, B. (2017). Challenging times, challenged body: Decolonization, displacement and disease among East Pakistani refugees in south Assam 1947-53. In: *Playing with Nature History and Politics of Environment in North-East India*. Sajal Nag (Ed.). Manohar Publishers, New Delhi, p. 255-72.
- Gurung, T. (2016). Autonomy demand of the Gorkhas in Assam: A preliminary note. In: *Ethnicity and Political Economy in Northeast India*. H. Srikanth and R. Borgohain (Eds.). DVS Publishers, Guwahati, p. 233-256.
- Gurung, T. (2016). Gurkha displacement from Burma in 1942: A historical perspective. In: *Nepali Diaspora in a Globalised Era*. Tanka B. Subba and A. C. Sinha (Eds.). Routledge India, New Delhi, p. 203-220.
- Mawlong, C.A. (2016). Exploring the issue of the “Khasi” identity: Some observations. In: *Ethnicity and Political Economy in Northeast India*. H. Srikanth and R. Borgohain (Eds.). DVS Publishers, Guwahati, p. 209-232.
- Passah, A.N. (2016). Khasi-Jaintia women and religion: Then and now. In: *Women, Religion and Liberation*. David Kharchandy et al. (Eds.). EBH Publishers, Guwahati, p. 91-104.
- Passah, A.N. (2016). The Second World War and Shillong: Some insights In: *Proceedings of North East India History Association, 36th Session 2015*. Mizoram University, Shillong, p. 406-415.
- Rahman, M.S.N. (2016). Imperial power in the periphery: The Mughals as reflected in medieval Bengali literature. In: *Proceedings of the Indian History Congress, 76th session*, University of Gaur Banga, Malda, 2015, p. 271-278.
- Rahman, M.S.N. (2017). Problems of studying Hindu-Muslim relations in pre-colonial and colonial India. In: *Challenges in Indian History Pre-Modern to Post Modern*. Ranjit Sen, Anjona Chattopadhyay and Mrinal Kanti Mali (Eds.). Rupali, Kolkata, 2017.
- Thakur, A. K. (2016). Cultural development in Buddhism of Arunachal Pradesh: Probing through arts. In: *Pre-Colonial History and*

Department of History

Traditions of Arunachal Pradesh. Sudhir Kumar Singh and Ashan Riddi (Eds.). DVS Publishers, Guwahati, p. 26-42.

Thakur, A. K. (2016). Ethnographic accounts and the reconstruction of the historical past of Northeast India. In: *Proceedings of North East India History Association*, 36th session, Aizawl, 2015 (published Shillong), p. 36-43.

Thakur, A. K. (2016). Technological progress in central Arunachal Pradesh: Some issues. In: *Pre-Colonial History and Traditions of Arunachal Pradesh*. Sudhir Kumar Singh and Ashan Riddi (Eds.). DVS Publishers, Guwahati, p. 260-274.

Funds Received from Agencies including NEHU/UGC:

NEHU- Rs.1,50,000

Research Projects

Ongoing: 1

Title of Project	PI/Co-PI	Funding Agency	Rupees in lakh
UGC-SAP-DSA II	Prof. F.A. Qadri	UGC	NA

Other Activities

Prof. C. A. Mawlong

Delivered two lectures at a refresher course organized by the Department of Cultural and Creative Studies, NEHU, on *Folkloristics and Semiotics* during 18 April to 8 May 2016.

Delivered two lectures at a refresher course organized by UGC-HRDC, NEHU, on *Tribal Studies* held on 9-29 May 2016.

Chief Guest at the national conference on *Verbal Art: Exploring the Ethnography of Speaking Strategies* organized by the Department of Cultural and Creative Studies, NEHU, Shillong, on 23-24 February 2017.

Prof. A. K. Thakur

Delivered the following lectures: (i) "The Idea of the Pre-Colonial Society" at the Department of History, Rajiv Gandhi University, Rono Hills, Itanagar on 11 April 2016, (ii) "Traditional Knowledge System in Northeastern India in the Pre-

Colonial Period" on 17 February 2017 at the Department of History, Gauhati University, Guwahati, (iii) Seventh Lakshmi Devi Lecture on "Iron and Social Change in Northeast India" organised by the Department of History, Cotton College, Guwahati on 1 October 2016, and (iv) "Nationalism, National Integration in India and Northeast India" during Orientation Courses organized by UGC-HRDC, NEHU, Shillong.

Prof. Amena N. Passah

Delivered lectures on "Trends in Historiography" at Thomas Jones College, Jowai (12 April 2017), and titled "Gender History and Meghalaya" at IFLU, NEHU (8 April 2016).

Dr. M. S. N. Rahman

Delivered special lectures on: (i) "Role of Maulana Abul Kalam Azad (1888-1958) in Communal Harmony and National Integration" at D.L. College, Krishnanagar, West Bengal on 10 January 2017, (ii) Maulana Azad Memorial Lecture on

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“Maulana Abul Kalam Azad: A Historical Re-evaluation” organized by the Ministry of Minority Affairs, Government of West Bengal and West Bengal Madrasah Board

(23 December 2016), and (iii) “Universalism of Islam” at the Department of Philosophy, NEHU (26 October 2016).

DEPARTMENT OF HISTORY AND ARCHAEOLOGY (TURA CAMPUS)

Teacher-In-Charge: Dr. Tilok Thakuria
Telephone : 8575133962
E-mail : tilokthakuria@rediffmail.com

Faculty: 3

Designation	Name and Qualification	Specialization
Assistant Professor (3)	Amit Kumar Upadhyay,* MA & PhD (BHU)	Ancient Indian History, History of Early Northeast, Epigraphy and Numismatics
	Tilok Thakuria, MA & PhD (Deccan College PGRI)	Archaeology, Ethno-Archaeology, Archaeology and Culture of Northeast India
	Doneti Sivaji, MPhil & PhD (HCU)	Business History, Studies on Entrepreneurship, Studies on Cast

*On lien from July 2016.

Thrust Areas of Research

The foremost concentration of the Department is on research in history and archaeology. The goal is to promote research in history of ancient India and archaeology of India and South-East Asia. The Department gives particular interest to encourage research in history, archaeology, ethno-archaeology and culture studies of North-East India. Besides these, it also aims to explore the research areas like business history, studies on entrepreneurship, studies on intellectual history, Caste system of India in general and North-East India in particular.

Brief Statement of Academic Activities

The Department offers both theoretical and practical training to the postgraduate students as part of teaching and research within the stipulated time. Exposure to students in areas related to field archaeology is also provided. In addition to these, the Department also arranges field trips to archaeological and historical sites for training in documentation of archaeological and historical records along with other field based studies. In addition, the faculty members often make visits to local historical and archaeology places to gather information on related areas.

Students' Profile

Enrolment Capacity: MA - 24, PhD - Variable

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MA	12	12		24			12	12	24
MPhil	01	01		01	01		01	01	02
PhD	02	02		03		01	03	01	04

Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MA	06	15		20		01	19	02	21

Research Fellowships: 1

CSIR-UGC-NET - 1

Fieldwork/Educational Tour of Students

Teacher In-Charge: Dr. Doneti Sivaji

Places Visited: Visakhapatnam and Hyderabad

Duration: 11-21 February 2017

Purpose: To cover all the places which are historically and archaeological significant from the above mentioned cities.

In addition, Dr. Tilok Thakuria conducted field trips with students as per the syllabus to Ambari, Surya Pahar and Nartiang.

Courses Conducted

Postgraduate: MA

Semester I

History Methods 1; Pre-Historic society; Ancient Society; Archaeology: An Introduction, Social and Polity Formation in North-East India.

Semester II

Historical Methods II; Pre-Industrial Society; Polity and Society in Early India; Making of

Modern India Society in Early North-east India; The Neolithic Age in India.

Semester III

Capitalism and Colonialism I; Practical's in Archaeology; Economy and Society in Early India; Making of Modern India Society.

Semester IV

Capitalism and Colonialism II; the Chalcolithic Age in India; Christianity in North-East India; Economy and Society in Early North-East India; Economy and Society in Early North-East India; Perspectives in History and Culture of North-East India.

Classes were also taken for UGC-NET examination in History and Archaeology. Provision for tutorial classes is also available for benefit of the students.

MPhil/PhD Courses

Research Methodology; Text, Tool and Technique; History and Theory.

Seminars/Conferences/Symposia/Workshops

Organized

Dr. Tilok Thakuria organised a national seminar on *Rock Art of Northeast India*:

Department of History and Archaeology (Tura Campus)

Methodological and Technical Issues on 5-6 October 2016 at NEHU, Tura Campus.

Attended

Dr. Tilok Thakuria

Presented papers on: (i) “Archaeology of the Stone Jars: Recent Archaeological Research in North Cachar District of Assam, India” at the *Annual Conference of European Association for South Asian Archaeology and Art*, Cardiff University, Wales, UK (4-8 July 2016), (ii) “Megaliths of India with Special Reference to Stone Jars of Assam” at the *UNESCO Review Meeting of Outstanding Universal Value of Stone Jars of Laos PDR* organised by UNISCO-Bangkok and Government of Lao PDR in June 2016, (iii) “Stone Jars of Assam: Unique Archaeological Evidence” at the national seminar on *Recent Trends in Archaeology of Assam, from Prehistory Period onwards* organized by the Directorate of Archaeology, Government of Assam, November 2016, and (iv) “Beads from Megalithic Vidarbha: Social and Cultural Symbolism” and “Ornaments of Garo: Social and Cultural Symbolism” at the national workshop on *Bead: Beyond an Ornament* organised by the Department of Archaeology, Kerala University (May 2016).

Publications

Published in India

Thakuria, T., Jamir, T., Chauley, M. (2016). Report on archaeological investigation

in North Cachar, Assam. *Man and Environment*, 41:34-45.

Books

Mohanty, R. K., Thakuria, T. (2016). *Indian beads: History and Technology*. Indus-Infinity Foundation, New Delhi, ISBN: 9788182748699.

Sivaji, D. (2016). *Reformation Nationalism and Hegemony in India with Reference to Colonial Andhra Pradesh*. Vikas Publications, Visakapatnam, ISBN: 978-81-932358-0-5.

Book Chapters/Proceedings

Sivaji, D. (2016). Business history: Apprehensions in promoting entrepreneurship with reference to North Eastern India - A historical analysis. In: *Entrepreneurship: A Drive towards Socio Economic Development*. K. D. Singh (Ed.). Manas Publishers Distributors, Jaipur, p. 25-30.

Thakuria, T. (2017). Rock engravings of Dima Hasao, Assam. In: *Cultural Ecology Prehistory and Ethno-archaeological Context of Indian Rock Art*. B. L. Malla and D. Bezbaruah (Eds.). IGNCA and Aryan Book International, Chapter 6.

Fund Received from Agencies including NEHU/UGC

Non-Plan: Rs. 5.80 lakhs

Plan (2012-17): Rs.15.00 lakhs

Research Projects

Ongoing: 3

Title of Project	PI/Co-PI	Funding Agency	Rupees in lakh
Automatic Recognition of Patterns in Numismatic Data	Dr. A.K. Upadhyay	UGC, New Delhi	11.25
Excavation in Misimagre, West Garo Hills	Dr. Tilok Thakuria	UCL	3.50
Ornaments of Garo: Social and Cultural Symbolism	Dr. Tilok Thakuria	NTICVAM	0.30

Completed: 2

Title of Project	PI/Co-PI	Funding Agency	Rupees in lakh
Tribal Entrepreneurship: Self Employment, Promotion of Livelihood of Educated Unemployed Youth with Special Reference to Agency Areas of West Godavary and Khammam Districts from Andra, Telangana Regions	Dr. D. Sivaji	ICSSR- New Delhi	5.00
Archaeological Investigation and Scientific Clearance at Dubungling, North Cachar, Assam	Dr. Tilok Thakuria	ASI, Guwahati	Fund held with ASI, Guwahati

Other Activities

Dr. Tilok Thakuria

Delivered lectures on: (i) “Archaeology of Eastern Odisha” at the Department of Archaeology, Cotton College State University in November 2016, (ii) “Recent Archaeological Research in Assam special reference to Dima Hasao” at special winter school in *Cultural Heritage and Studies on NE India* organised by UGC-HRDC, Gauhati University (23 January to 12 February 2017), and (iii) “Indian Beads:

History, Technology and Symbolism” special winter school in *Cultural Heritage and Studies on NE India*, UGC-HRDC, Gauhati University, 23 January to 12 February 2017, and (iv) “Archaeological Approach to History: Recent Archaeological Survey on the Stone Jars of North Cachar, Religion and Culture of in Northeast India” organized by Guahati University (November 2016).

Reviewers for the journals of *Nagaland University Research Journal* and *Man and Environment*.

Department of Law

DEPARTMENT OF LAW

Head: Dr. Chintamani Rout
Telephone: 9436336103/0364-2723801
E-mail: drchintamanirout@gmail.com

Faculty: 8

Designation	Name and Qualification	Specialization
Associate Professor (2)	J. J. Mozika, LLM & PhD (NBU)	Administrative Law, Jurisprudence, Women and Law
	Chintamani Rout, LLM & PhD (Utkal)	Commercial Law and Constitutional Law
	R. K. Mishra, LLM & PhD (BHU)	Intellectual Property Right and Criminal Law
Assistant Professor (6)	A. K. Singh, LLM (BHU), PhD	Criminal Law, Human Rights and Private International Law
	N. Kumar, LLM (JM Islamia), PhD	Corporate Laws, Public Health Law and Human Rights
	R. Sil, LLM & PhD (Burdwan)	Public Laws
	Mr. S. Tiwari, LLM (BHU), MPhil (JNU)	International Law, International Environmental Law, International Humanitarian Law
	P. Gupta, LLM, (ILI, New Delhi), PhD	Law and Medicine, Environmental Law, Gender Studies

Thrust Areas of Research

1. To advance and disseminate knowledge of law and legal processes in the overall context of national and global developments.
2. The Department focuses on Constitutional Law, Environmental Law, Cyber Law, Patent Law, Industrial Law, Family Law, Commercial Law, Criminal Law and International Law.

Brief Statement of Academic Activities

A national seminar on *e-Governance, Cyber Crimes, Cyber Security & Cyber Law*:

Contemporary Issues and Challenges was organized by the Department in collaboration with the North Eastern Council (NEC), Ministry of Development of North Eastern Region on 29 April 2016.

The Department conducted a two-day programme on *Dissemination on International Humanitarian Law* for research scholars in social sciences in collaboration with the Indian Council of Red Cross (ICRC), New Delhi, on 11-12 May 2016. The Department also conducted its 1st National Moot-Court Competition during 5-7 October 2016, and as

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many as 31 teams from different law colleges and universities participated in the competition. In addition, a three-day workshop for teachers

on *Humanitarian Issues in Emergencies* organized jointly by the Department and the Indian Council of Red Cross (ICRC), New Delhi, during 25-27 April 2017.

Students' Profile

Enrolment Capacity: BA LLB – 60, LLM – 10, PhD -Variable

Degree	Male	Female	SC	ST	GEN	Meghalaya	Non-Meghalaya	Total
BA LLB (Hons)	40	20	01	57	02	55	05	60
LLM	02	08		10		08	02	10
PhD	06	05		08	03	04	07	11

Degree Awarded

Degree	Male	Female	SC	ST	GEN	Meghalaya	Non-Meghalaya	Total
BA LLB (Hons)	16	35	01	49	01	48	03	51
LLM	02	06	01	05	02	04	04	08

Placement of Students

The students completed BA LLB (Hons) Course in July, 2016 enrolled themselves under the Bar Council of India and are practicing as advocate in Subordinate Courts in the State of Meghalaya, and some are also practicing in the High Court of Meghalaya. A few numbers of students were admitted to LLM Course for their Master's Degree in the Department of Law and other National Law Universities.

Courses Conducted

Five year Integrated BA LLB (Hons)

Semester I

English I; Political Science I; Sociology I; Micro Economics; Law of Tort.

Semester II

English II; Political Science II; Sociology II; Macro Economics; Law of Contract.

Semester III

English III; Political Science III; Political Science IV; Sociology III; Special Contract.

Semester IV

Indian Economy; Political Science V; Political Science VI; Family Law I; Law of Crimes I (Indian Penal Code).

Semester V

Constitutional Law I; Jurisprudence; Law of Crimes II (CrPC); Family Law II; Property Law.

Semester VI

Administrative Law; Constitutional Law II; Human Rights Law and Practice; Labour Law I; Public International Law.

Semester VII

Company Law; Labour Law II; Copyright; Interpretation of Statutes and Principles of Legislation; Drafting, Pleading and Conveyance.

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Semester VIII

Civil Procedure Code and Limitation Act; Law of Evidence; Honours II Patent Law; International Environmental Law; Professional Ethics and Professional Accounting System.

Semester IX

Honours III Women and Criminal Law; Honours IV Trademark and Design; Honours V Health Law; Information Technology Law; Alternate Dispute Resolution.

Semester X

Honours VI Forensic Science; Honours VII Private International Law; Honours VIII Offences against Child and Juvenile Offences; Legislative Drafting; Banking Law; Moot Court, Exercise and Internship.

Two Year LLM Programme (4 semesters)

Semester I

Compulsory: Indian Constitutional Law

Specializations: One group comprising three courses to be offered at any given time to be decided by the Department:

Constitutional Law: Constitutionalism and Constitutional Development in India and England; Comparative Study of Federalism; Civil and Political Rights: Comparative Study of Selected Constitutions.

Jurisprudence: Theories of Law; Theories of Justice; Theories of Rights.

Law of Crimes: Criminology and Penology; Criminal Law in India; Cyber Crimes.

Semester II

Compulsory: Legal Education and Research Methodology.

Specializations: One group comprising three courses to be offered at any given time to be decided by the Department:

Human Rights: International Law of Human Rights.

Corporate Law: Business Organization.

Alternate Dispute Resolution System: Domestic and International Commercial Arbitration.

Open Courses: Any two courses to be offered during the second semester:

Copy Right: National and International Perspective; Trade Marks, Design and Geographical Indications; International Environmental Law; Natural Resource and the Law in India; Development and Regulation of International Trade; Legal Regulation of Economic Enterprises.

Semester III

Compulsory: Law and Social Transformation in India.

Specializations: Two courses to be offered from the group selected during the second semester:

Human Rights: Human Rights and the Refugees; Human Rights in India.

Corporate Law: Business Management (Company Management & Administration); Law Relating to Multinational Corporation.

Alternative Dispute Resolution: Enforcement of Foreign Award and Conciliation in India; Mediation, Lok Adalats and Consumer Forums, etc.

Open Courses: Any one course to be offered during the third semester:

Patents and Protection of Plant Varieties and Farmers' Rights; Pollution Control Laws in India; Legal Regulation of International Trade.

Semester IV

Judicial Process; Dissertation; General Proficiency; Viva-voce.

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PhD Courses

Legal Research Methodology; Judicial Process; Comparative Constitutional Law.

Educational Tour of Students

Teacher-in-Charge: Mrs. Meba Rani and Mrs. Sweet Mary Dohtdong.

Places/Institutions Visited: New Delhi, Supreme Court & High Court.

Duration of Tour: 15 days

Purpose of Tour: Court Visit (learning court proceedings).

Seminars/Conferences/Symposia/Workshops

Organised

The Department organised: (i) One-day national seminar on *E-Governance, Cyber Crimes, Cyber Security and Cyber Laws: Contemporary Issues and Challenges* at the Department on 29 April 2016 with Dr. Chintamani Rout as Convener and Mr. S. Tiwari as Organising Secretary, and (ii) 1st NEHU National Moot Court Competition at the Department on 5-7 October 2016 with Dr. Chintamani Rout as Chairperson and Dr. R.K. Mishra as Convener, (iii) Two-day programme on *Dissemination on Humanitarian Law* on 11 & 12 May 2016 at the Department in collaboration with ICRC with Dr. Chintamani Rout as Convener.

Attended

Dr. J. J. Mozika

Presented a paper titled “A Victim-Centric Approach towards Combating Human Trafficking” at the national seminar on *Trafficking in Persons: Prevention, Control and Rehabilitation* organized by the

Department of Law, University of North Bengal, on 26-27 November 2016.

Dr. Chintamani Rout

Acted as a resource person at the national workshop on *Legal Research Methodology* and delivered a lecture on “Plagiarism in Legal Research: Problems and Solutions” organized by the University School of Law and Research under the University of Science and Technology, Meghalaya on August 27, 2016.

Presented papers on: (i) “E-Governance, Cyber Crimes, Cyber Security: Issues, Challenges and Its Preventive Measures” at the national seminar on *E-Governance, Cyber Crimes, Cyber Security and Cyber Laws: Contemporary Issues and Challenges* on 29 April 2016 at the Department, (ii) “Community Policing in North Eastern India: Benefits, Challenges and Action Plan for Better Policing to Effective Access to Justice” and chaired two technical sessions of a one-day conference organized by the Department of Justice, Government of India at New Guest House, NEHU (31 July 2016), (iii) “Accountability and Transparency in Governance of the Judiciary” at the international conference on *Transparency and Accountability in Justice Administration System: Challenges and Solutions* organized by the Centre for Transparency and Accountability in Governance, National Law University and Common Wealth Human Right Initiatives, New Delhi, and also chaired a technical session on 25 September 2016, (iv) “Indigenous People and Their Development: Legal and Constitutional Safeguards” at the two-day international seminar on *Understanding the Tribal of Asia* organized by the Department of

Department of Law

Education and History in collaboration with P.A. Sangma Foundation at Synod College, Shillong during 3-4 November 2016, and (v) “Child Trafficking in North East India and Its Prevention and Control” and chaired a technical session on “Combating Trans border Trafficking: Challenges” at the national seminar on *Trafficking Persons: Prevention, Control and Rehabilitation* at the Department of Law, University of North Bengal, on 26-27 November 2016.

Dr. R. K. Mishra

Presented papers on: (i) “E-Governance in India: Issues and Challenges” at the national seminar on *E-Governance, Cyber Crimes, Cyber Security and Cyber Laws: Contemporary Issues and Challenges* organised by the Department and NEC, Shillong (April 29, 2016), and (ii) “Plant Variety: Need and Protection in India” at the national seminar on *Intellectual Property Rights in Media and Entertainment: Issues and Challenges* organised by the Amity School of Communication, Amity University, Gwalior (February 10, 2017).

Dr. A. K. Singh

Presented papers on: (i) “Cyber Bullying and the Law: An Analysis with Special Reference to India” at the national seminar on *E-Governance, Cyber Crimes, Cyber Security and Cyber Laws: Contemporary Issues and Challenges* organised by the Department and NEC, Shillong (April 29, 2016), (ii) “Corporate Criminal Liability and Its Relevancy in India” at the national conference on *Contemporary Issues in Accounting and Finance* organized by the Department of Commerce, NEHU, Shillong (21-22 October 2016), (iii) “Government Policies and Social Reforms: An Analysis”

at the national seminar on *Maximum Happiness for the Greatest Number: The Moto of the Government Policies* organized by the Chotanagpur Law College, Ranchi (19 November 2016), (iv) “Law Concerning the Establishment of Hospital, Nursing Homes and Nursing Practices” at the national seminar on *Medical, Tourism and Unabated Medical Negligence in India: A Legal Holistic Perspective* organized by NEF Law College, Guwahati (5 December 2016), and (vi) “Meghalaya Land Transfer Act” at the national seminar on *Land Law and the State of Meghalaya* organized by the Meghalaya State Judicial Academy on 25 February 2017.

Dr. N. Kumar

Presented the following papers: (i) “Better Health: Laws VS Reality in Northeast India” at the national seminar on *Transforming Rural Areas in North East India: Vision for Future* held at NIRDPR-NERC, Guwahati, during March 8-9 2017, (ii) “Corporate Fraud and Offences under Companies Act, 2013” and “Offences Relating to Intellectual Property and Role of Police” at the workshop on *Investigation of Financial Fraud and Corporate Offences* organised by the North Eastern Police Academy, Shillong (24-29 October, 2016), and (iii) “The Adjudication of Cyber Crimes in India: Some Issues and Concerns” at the national seminar on *E-Governance, Cyber Crimes, Cyber Security and Cyber Laws: Contemporary Issues and Challenges* organised by the Department and NEC, Shillong (April 29, 2016).

Mr. S. Tiwari

Presented a paper on “Human Trafficking in Conflict and Post-Conflict Situations:

International Legal Response” at the national seminar on *Trafficking in Persons: Prevention, Control and Rehabilitation* organised by the Department of Law, University of North Bengal, West Bengal (26- 27 November 2016).

Publications

Published in India

- Mishra, R. K. (2016). Access and benefit sharing and Nagoya protocol: The myth and reality. *Chotanagpur Law Journal*, 10:151-158.
- Mozika, J.J. (2016). The right to silence: Is there a need for change? *Indian Human Rights Law Review*, 7(2): 229-247.
- Rout, C. (2016). Accountability and transparency in the governance of the judiciary. *Orient Journal of Law & Social Sciences*, X(XII): 23-28.
- Rout, C. (2016). Reforms in legal education, profession and the judiciary. *AINE*, p.54-57.
- Rout, C. (2016). Sixth Schedule catering the needs of the tribal people. *Yojana*, p.44-46.
- Rout, C. (2017). Right to education: Historical background and constitutional mandate. *Orient Journal of Law & Social Sciences*, XI(IV): 38-44.
- Singh, A.K. (2016). Electronic evidence and the Indian Evidence Act: Analysis. *Law Review*, p. 84-93.
- Singh, A.K. (2016). From Environment to sustainable development: An Analysis with special reference to indigenous people in India. *Sri Ji Socio Legal Journal: A Research Journal*, 8:1-10.

Book chapters/Proceedings

- Kumar, N. (2016). Trafficking of children: A study of Northeast India. In: *Proceedings of North East India History Association*, 2015, Vol. 36, ISSN: 2349753X.
- Mishra, R. K. (2017). Plant variety: Need and protection in India. In: *Intellectual Property Rights in Media and Entertainment: Issues and Challenges*. Sumit Narula (Ed.). Utkarsh Prakashan, Meerut, Chapter 14, p. 111-128.
- Mozika, J.J. (2016). Legal issues of mental health. In: *Mental Health*. Yodida Bhutia (Ed.). Overseas Press India Private Limited, New Delhi, Chapter 7, p. 61-67.
- Singh, A.K. (2016). Government policies and social reform: An analysis. In: *Maximum Happiness for the Greatest Number-the Moto of the Government Policies*. P. K. Chaturvedi *et al* (Eds.). Chotanagpur Law College, Ranchi, p. 27-36.

Honours/Awards/Recognitions

- Dr. J.J. Mozika is Associate Editor of the *Indian Human Rights Law Review*, and member of the Editorial Board of the *International Journal of Jurisprudence and Philosophy of Law*.
- Mr. S. Tiwari is member, Editorial Board, *National Journal of Comparative Law*.

Other Activities

Dr. J. J. Mozika

Member, Board of Post Graduate Studies in Law, Assam University, and Board of Studies in Law, Sikkim University. She is also Editor of *NEHU Law Journal* (forthcoming) and Reviewer for *NEHU Journal*.

Department of Law

Delivered lectures on: (i) “Socio-economic Awareness in East Jaintia Hills District Meghalaya” at the symposium on *Socio-economic Awareness, Upliftment and Sustainability in East Jaintia Hills* organised by St. Anthony’s Extension College, Byndihati Campus (on 14 December 2016), and (ii) “Right to a Healthy Environment: A Constitutional Perspective” at UGC-HRDC-short-term course in *Environmental Sciences* at UGC-HRDC, NEHU (30 September 2016).

Dr. Chintamani Rout

Member, Academic Council ICFAI University Tripura, and Chief Editor, NEHU Law Journal (forthcoming).

Acted as a resource person at: (i) Seminar extension lecture on *Independence of Judiciary in India* at the Department of Philosophy, NEHU (19 October 2016), (ii) Training for promotion of legal literacy activities for the states of Meghalaya, Manipur and Nagaland on *The Indian Constitution, Rights, Duties and Entitlements* organized by the State Resource Centre, NEHU, and the Department of Justice, Ministry of Law and Justice, during 19-21 April 2016, (iii) Training of the Trainee Judges on the subject “Arbitration and Conciliation Process as the Means to Resolve the Disputes” on 29 September 2016, and (iv) Refresher training course of resource persons/field officers of Manipur, Meghalaya and Nagaland on legal literacy at Hotel Assembly, Shillong (29 & 30 September 2016). He also acted as a judge in the Preliminary Round on 5 October 2016 and in the Semi-final round on 7 October 2016 of the 1st National Law Moot-Court Competition organised by the Department.

Dr. R. K. Mishra

Member, School Board of Social Sciences, Tripura University, Tripura, and member of the Editorial Board, NEHU Law Journal.

Dr. A. K. Singh

Delivered lectures on “Transfer of Property Act” and “SARFASI Act” held on 8 & 10 August 2016 at Meghalaya Judicial Academy.

Dr. N. Kumar

Delivered lecture on “Research Methodology” during the 42nd Basic Course Trainees in North Eastern Police Academy, Shillong (16-19 April 2016).

Dr. R. Sil

Delivered lecture as resource person on “The Aspect of Human Rights Issue: International and National Perspective” held at Shillong Law College on 17 August 2016, and participated in the capacity development programme on *Advanced Labour and Industrial Laws* at National Law University, Delhi (December 12-18, 2016)

Mr. S. Tiwari

Acted as resource person at: (i) Five-day basic course on *Cyber Crime Investigation* at the Central Forensic Training Facility, Office of the Additional Director General of Police, Shillong (18-22 July 2016), (ii) Two-day certificate course on *Child Rights and Child Protection* at National Law University and Judicial Academy, Guwahati (27-28 February 2017), and (iii) One-day orientation training on *Pre-Conception and Pre-Natal Diagnostic Technique (Prohibition of Sex Selection) Act, 1994* at the Department of Health and Family Welfare, Government of Meghalaya, Shillong (28 March 2017). He

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also judged the 1st NEHU National Moot Court Competition at the Department on 5-7 October 2016.

Delivered lectures on: (i) “Role of Equity in Justice Delivery System” on the 4th Establishment Day Celebration of the

High Court of Meghalaya, Shillong (23 March 2017), (ii) “Concept of Justice in a Globalized World” Meghalaya State Judicial Academy, Shillong (4 October 2016), and (iii) Keynote address at *DPS Guwahati Model United Nations Conference* at DPS Guwahati (3 June 2016).

Department of Political Science

DEPARTMENT OF POLITICAL SCIENCE

Head: Prof. K. Debbarma

Telephone: 0364-272-3035 (O)/9436102359(M)

E-mail: kdebbarma@rediffmail.com, hodpolsc@nehu.ac.in

Faculty: 10

Designation	Name and Qualification	Specialization
Professor (6)	R. Borgohain, MPhil (JNU), PhD (Gauhati)	Gender Studies, Indian Government and Politics
	L. S. Gassah, * MPhil & PhD (NEHU)	Government and Politics in North East India
	K. Debbarma, MPhil & PhD (NEHU)	Human Rights, Development Administration and Politics of Migration in North East India
	H. Srikanth, MPhil & PhD (NEHU) (Hyderabad)	Political Theory, Political Economy, Social Movements
	R. K. Satapathy, MPhil (Sambalpur), PhD (NEHU)	International Politics, Political Theory and Electoral Politics
	T. T. Haokip, MPhil & PhD (NEHU)	Foreign Policy, Public Administration, Government and Politics in North East India
Associate Professor (2)	Susmita Sen Gupta MPhil & PhD (NEHU)	Politics of North East India
	Munmun Majumdar, MPhil & PhD (JNU)	South East Asian Studies
Assistant Professor (2)	Biswajit Mohapatra, MPhil & PhD (JNU)	India South and South East Asia, Look/Act East Policy, North East Politics
	Suparna Bhattacharjee MPhil & PhD (JNU)	International Politics and Trade

*Retired in December, 2016.

Thrust Areas of Research

Contemporary Issues in Indian Politics and Politics of North East India.

Brief Statement of Academic Activities

The Department of Political Science, established in 1974, aims at building an academic community of students, researchers and teachers devoted to

School of Social Sciences

an open, critical and analytical study of the discipline with an emphasis on inter-disciplinary approach. It also aims at making courses and research work that are socially relevant and developing an awareness of the basic issues and problems in the discipline so as to equip the students intellectually to fulfil these needs.

With the strength of nine faculty members, the Department has 104 students on its roll at the

MA level. The Department admits MPhil and PhD scholars who undergo course work for one semester followed by dissertation/thesis writing on proposals approved by the School Board of Social Sciences. At present, there are 50 research scholars who are engaged in the MPhil and PhD programmes of the Department. The Department is in SAP-DRS-II. And the thrust area of SAP is “Political Processes and Economic Changes in Northeast India.”

Students’ Profile

Enrolment Capacity: MA– 52, MPhil/PhD -Variable

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MA	33	19		48	02	02	22	30	52
MPhil	03	05		05	01	02	03	05	08
PhD	06	02		04	01	03	03	05	08

Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MA	27	20		47			22	25	47
MPhil	02	05		04	01	02		07	07
PhD	06	02		07		01	02	06	08

Students Awarded PhD Degree

Name of Student	Title of Thesis	Name of Supervisor & Joint Supervisor
Rimmei Longmei	Role of United Naga Council in Manipur Politics	Prof. R. K. Satpathy
Joplin Hek	Youth Activism, Women in a Democracy: A Study of the Khasi Students Union in Meghalaya	Prof. A. K. Baruah Jt. Supervisor: Prof. L. S. Gassah,
Nabin Hakhrari	National Democratic Front of Bodoland in Bodo Politics	Dr. S. Sengupta
Pallavi Hazarika	Internal Displacement: A Study of the Lower Subansiri Hydro-Electric Project	Dr. S. Sengupta
Chintu Brahma	Human Security in Conflict Situation: A Study of Personal Security in Kokrajhar District of Assam	Dr. S. Bhattacharjee

Department of Political Science

Shonreiphy Longvah	Peace Process in Nagaland and the Role of Naga People's Front	Prof. R.K. Satpathy
Haokam Vaiphei	Indian-Myanmar Relations (1997-2007)	Dr. M. Majumdar
Baniateilang Majaw	Climate Change and Regional Cooperation: South Asian Association for Regional Cooperation (SAARC)	Dr. M. Majumdar

Placement of Students: 9

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| <ol style="list-style-type: none"> 1. Rimmei Longmei, Assistant Professor, St. Anthony's College Extension Byndihati, Khliehriat, Meghalaya. 2. Baniateilang Majaw, Assistant Professor, Seng Khasi College, Shillong. 3. Seikhogin Haokip, Assistant Professor, Women's College, Dimapur, Nagaland. 4. Haokam Vaiphei, Research Assistant, Observer Research Foundation, New Delhi. | <ol style="list-style-type: none"> 5. Rimki Patgiri, Research Assistant, Institute of Rural Development, Hyderabad. 6. Zhoto Tunyi, Assistant Professor, Patkai Christian College, Nagaland. 7. Joplin Hek, Assistant Professor, Synod College, Shillong. 8. Imnazenla Longkumer, Assistant Professor, Sao Chang Government College, 9. Tuensang, Nagaland. |
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Research Fellowships: 38

CSIR-UGC-NET	UGC Non-Net	National Fellowship for Higher Education	ICPR Fellowship	Malana Azad Minority Fellowship
04	22	04	07	01

Courses Conducted

Postgraduate: MA

Semester I

Compulsory Core Courses: Liberal Political Theory; Theory of International Politics; Major Concepts and Issues in Public Administration; Indian Political System; State Politics in India with Special Reference to North-East India (I).

Semester II

Compulsory Core Courses: Marxist Political Theory; Problems of International Politics; State Politics in India with Special Reference to North-East India (II).

Optional Core Courses (Any one): Third World Political Theory; Administrative Theory; East & South East Asian Political Systems; West Asian Political Systems.

Open Courses (Any one): Government and Politics in N.E. India; Democracy in India; Modern Indian Political Ideas.

Semester III

Compulsory Core Courses: Contemporary Political Theory; Research Methodology I.

Optional Core Courses (Any one): Issues in Women's Studies; International Law and International Organisation; South Asian Political

School of Social Sciences

Systems; South Asian Political Systems; African Political Systems.

Open Courses (Any two): Globalisation; Politics of Social Movements in India; Women and Political Theory; Development Administration; Issues in Environmental Politics.

Semester IV

Compulsory Core Courses: Major Debates in Political Theory; Comparative Politics; Research Methodology II.

Optional Courses (Any two): Political Ideology; Political Sociology; Foreign Policy of Major Powers; Indian Political Economy; Human Rights.

PhD Courses

Compulsory Courses: Research Methodology; Seminar Paper on Frontier of Knowledge in the concerned Field.

Optional Courses (Any one): Issues and Processes in the Politics of North East India; Issues in Indian Politics; Women and Politics in North East India; Critical Perspectives on Knowledge and Power; Advanced Studies in International Politics; Environmental Politics.

Seminars/Conferences/Symposia/Workshops

Organised

The Department collaborated with ASEAN Study Center in organizing a capacity building course on November 21-24, 2016, and a panel discussion on *India-ASEAN: Security and Strategic Links* on November 25, 2016. *Coordinator:* Prof. K. Debbarma. The Department also organized the SAP-national seminar on *Political Economy of Border Areas in Northeast India* on March 22-23, 2017. *Coordinator:* Prof. T. T. Haokip.

Prof. K. Debbarma organized and coordinated the OKDISC seminar on *North East India Since 1947: Society, Economy and Polity with Special Reference to the State of Meghalaya* on March 16-17, 2017, ICSSR-NERC Conference Hall, NEHU Campus, Shillong.

Attended

Prof. K. Debbarma

Chaired the inaugural session of the UGC-SAP national seminar on *Political Economy of Border Areas in North East India* organized by the Department on 22-23 March 2017. He also chaired a session of the OKDISC seminar on *Northeast India Since 1947: Society, Polity and Economy in the State of Meghalaya* at ICSSR-NERC Conference Hall, NEHU (16 March 2017).

Delivered a keynote address on *Human Rights* at the inaugural session on Human Rights workshop on 7 March 2017 organised by Nongstoin College, Nongstoin, Meghalaya. He also presented a paper on “Greatness of Tripura” at the regional seminar on *Greatness of North East* held on 9 December 2016 at ICSSR-NERC Conference Hall, ICSSR-NERC, Shillong.

Prof. H. Srikanth

Presented a paper titled “Building Bridges across the Communities: Thinking outside the Box” at the international seminar on *Conflict Transformation and Dharma of Peace Building: Contemporary Relevance in North-East India* organized by Lady Keane College, Shillong, on May 16-18, 2017. He also presented a paper at the national seminar on *ASEAN Calling: Development of India's North-East through Sub-Regional Cooperation* organized by NIT, Silchar (April 18-19, 2017).

Department of Political Science

Delivered lectures on: (i) “Structure of Academic Writing,” “Review of Literature” and “Book Review” at a capacity building workshop organized by NEHU and ICSSR-NERC in Tura on May 5-6, 2017, (ii) “India-ASEAN Connectivity Projects” at the four-day capacity building workshop on *Understanding India and South-East Asia* organized by the Department and ASEAN Studies Centre (21-24 November 2016), and (iii) “Dalit Question” and “Women’s Movement in India” at the national workshop organized by Nongstoin College and Rajiv Gandhi National Institute of Youth Development on 15 March 2017.

Prof. R. K. Satpathy

Chief Speaker at the seminar on *Interrogating Development and Development in India* at Alarnath College, Brahmagiri, Puri, on 6 January 2017. Presented a paper on “Border People of Contentious State: Issues and Worries” at the SAP-national seminar on *Political Economy of Border Areas in North-East India* held on March 22, 2017. Chaired a session on “Border History, Society and Trade” at the SAP-national seminar on *Political Economy of Border Areas in North-East India* held on March 23, 2017.

Delivered the following talks and keynote addresses: (i) “Democracy and Development and Good Governance” at the Odisha national seminar at Neelamadhab College, Kantilo (19 November 2016), (ii) Keynote address at the Odisha national seminar on *Gandhi’s Ethics of Non-violence is the Key Stone to Nation building in Twenty-First Century* at MS College, Badamba, Cuttack (29 October 2016), and (iii) “Understanding the Constitution of India and Responsibilities

of Citizens” at the NSS-State Level Conference in Shillong on 4 August 2016.

Prof. T. T. Haokip

Presented papers on: (i) “Border Communities of India-Myanmar Border: A Study of the Kukis” at the UGC-SAP-national seminar on *Political Economy of Border Areas in North East India* organized by the Department on 22-23 March, 2017, (ii) “North-East India and South-East Asia: Cultural Relations” at the regional seminar on *North-East India and South-East Asia: Historical and Cultural Relations* at Manipur University on February 18, 2017. He also chaired a session on “Northeast India Since 1947: Society, Polity and Economy in the State of Meghalaya” at ICSSR-NERC Conference Hall, NEHU (16 March 2017).

Delivered keynote addresses on (i) “Anglo-Kuki War-1917-1919” at a regional workshop on *Anglo-Kuki War Centenary Celebration* jointly organized by Kuki Research Forum and Kuki Students’ Organisation, General Headquarters, at Kuki Inn, Imphal, on January 8, 2017, and (ii) “Identity Politics in Northeast India” at UGC-sponsored national seminar on *Bridging the Gap: Mainstream Politics and Identity Movement in Northeast India* organized by the Department of Political Science in collaboration with the Arts Academic Forum, Haflong Government College, Haflong, on September 29-30, 2016.

Dr. S. Sen Gupta

Presented papers on: (i) “Economic Reform Policy and Tribal Economy: Exploring the Paradoxes in the Context of Meghalaya” at the national seminar on *25 Years of Economic Reforms in India and Its Impact*

on North East India, North-East India Council for Social Science Research, Shillong, December 9-10, 2016, (ii) “The Seng Khasi Movement of Meghalaya: Exploring Contemporary Discourses” at the national seminar on *Culture and Religion in Northeast India: Retrospect and Prospect* organised by Women’s College, Shillong (November 2-3, 2016), (iii) “Border Trade in North-East India: Exploring Socio-Cultural and Political Implications” at the international seminar on *Border Trade in North-East India: A Politico-Economic Perspective* organised by Women’s College, Shillong (October 21-22, 2016).

Dr. Munmun Majumdar

Delivered the following lectures on: (i) “Implications of China’s Militarization of the South China Sea” at the panel discussion on “Brain Storming Session on Security and Strategic Links” and “Understanding Southeast Asia” during the capacity building workshop on *Understanding India and South-East Asia* organised by the Department and ASEAN Centre, Shillong (21-24 November 2016), (ii) “Engaging Myanmar in India’s Act East Policy” under the ASEAN Distinguished Lecture Series on 21 October 2016 at Sikkim University, Sikkim, and (iv) “From India’s Look-East to Act-East Policy” at Yangon University on 27 July 2016. She also delivered a keynote address at the UGC-sponsored national seminar on *Ethnicity Violence in Northeast India: Issues and Challenges*, Karmashree Hiteshwar Saikia College, Guwahati (24 October 2016), and chaired a valedictory session of the conference on “India-Myanmar Bilateral Ties: Ethnicity and Connectivity” organized by IIT, Guwahati (26 September 2016).

Dr. Biswajit Mohapatra

Presented papers on: (i) “Ethnic Communities and Conflicts in North East India: Building up a Framework for Conflict Resolution” at the international seminar on *Reconciliation, Conflict Transformation and Peace Initiative: Contemporary Challenges in South Asia* at Lady Keane College, Shillong (28-29 November 2016).

Dr. Suparna Bhattacharjee

Presented papers on: (i) “Border Haat: Boosting Bi-lateral Ties?” at a national seminar organised by the Indian Council of World Affairs, New Delhi, in collaboration with the Asian Confluence, Shillong (20 March 2017), (ii) “Censorship and Pornography through the Feminist Lens” at a national seminar, Assam University (18 November 2016), and (iii) “Border Haat: Potential and Prospects” at an international seminar held at Women College, Shillong (22 October 2016).

Delivered a lecture on “India and ASEAN Relations: Contextualising India’s Engagement with Singapore” during the capacity building workshop on *Understanding India and South-East Asia* organised by the Department on 21 November 2016.

Publications

Published in India

- Mohapatra, B. (2016). Europe and the international security - Getting to the roots. *Diplomatist*, 4(6): 14-15.
- Mohapatra, B. (2016). Panchayati Raj institutions: Financial inclusion and convergence. *KILA Journal of Local Governance*, 3(1):19-27.

- Bhattacharjee, S. (2016). Meant to be good but going to be chaotic: The corporate social responsibility in India. *The Heritage: Journal of Indology*, VII(1):48-70.
- Bhattacharjee, S., Nongkynrih, D. (2016). Geography as an opportunity: North-East connecting with ASEAN. *Man and Society*, XIII: 37-52.
- Majumdar, M. (2016). China, ASEAN and the South China Sea. *Journal of Indian Ocean Studies*, 24(3): 358-377.
- Majumdar, M. (2016). India and South China Sea. *Spectrum*, 3: 48-56.
- Majumdar, M. (2016). Policies, calculations and approaches of India and China towards Myanmar. *South Asian Journal of Socio-Political Studies*, 17(1):19-22.
- Mohapatra, B. (2016). Bodo accord: Perspectives and challenges for good governance and inclusive development in Assam. *Spectrum*, 3:112-116.
- Mohapatra, B. (2016). Fundamental principles concerning rights at work and the problem of forced labour. *RDWU Journal of Social Sciences and Humanities*, 1(1): 124-133.
- Mohapatra, B. (2016). India Afghanistan relations: Catalyzing Afghanistan's transformation through education cooperation. *Diplomatist, Special Report, INDIA-Afghanistan Relations*, p. 14-16.
- Mohapatra, B. (2016). India and Gulf Cooperation Council (GCC) relations – New horizons. *Diplomatist, Special Report, INDIA-GCC: Partners in Growth*, p. 8-9.
- Satpathy, R.K. (2017). Complex ethnic equations in Manipur elections. *E-Journal Wion* on March 7, 2017, <http://www.wionews.com/south-asia/complex-ethnic-equations-in-manipur-elections-13138>.
- Srikanth, H. (2016). Interrogating the studies on regionalism in Northeast India. *Northeast Researches*, 7(1): 62-78.
- Srikanth, H. (2016). Look East Policy, sub-regional connectivity projects and Northeast India. *Economic and Political Weekly*, LI(47): 45-51.
- Srikanth, H. (2016). Security and development of border areas: Management of Meghalaya border with Bangladesh. *Indian Journal of Public Administration*, LXII(2):581-592.
- Srikanth, H. (2016). State, ethnicity and nation building in South Asia. *Man and Society: A Journal of Northeast Studies*, XIII: 7-32.
- Published Abroad**
- Majumdar, M. (2016). Indonesia's role in South China Sea dispute. *Indonesian Quarterly*, 44(3): 224-238.
- Sen Gupta, S. (2016). Language as a catalyst to identity assertion among the tribes of North East India. *Journal of Socialomics*, 5(3), doi: 10.4172/2167-0358.1000170.
- Sen Gupta, S. (2016). Global ambitions and local compulsions: Exploring the paradoxes confronting Meghalaya in North East India. *International Journal of Economics and Management Sciences*, 5(4), <http://dx.doi.org/10.4172/2162-6359.1000353>.
- Books/Book Chapters/Proceedings**
- Gassah, L.S., editor. (2016). *Constraints and Challenges to Social Challenges to Social Sciences Research in North-East India*. Astra, New Delhi.

- Haokip, T.T. (2016). Language politics and ethnic relations in Mizoram. In: *Ethnicity and Political Economy in Northeast India*. H. Srikanth and R. Borgohain (Eds.). DVS Publishers, Guwahati, p. 255-270.
- Majumdar, M. (2016). China as a factor in India - Myanmar relations. In: *Dynamics of India and China Relations Implications for New World Order*. G. Jayachandra Reddy (Ed.). Sri Venkateshwara University, Tirupati, ISBN: 978-81-926904.
- Majumdar, M. (2016). Indonesia-Australia relations and the Indo-Pacific developments. In: *Indo-Pacific Emerging Powers, Evolving Regions and Challenges to Global Governance*. D. Gopal and Dalbir Ahlawat (Eds.). AAKAR Books, Delhi, ISBN: 978-93-5002-401-0.
- Mohapatra, B. (2016). North East India and its neighbourhood – Perspectives on India's Look East Policy. In: *Agartala Doctrine: A Proactive Northeast in India's Foreign Policy*. Subir Bhaumik (Ed.). Oxford University Press, New Delhi, p. 93-100.
- Mohapatra, B. (2016). PESA and people-centric governance. In: *Tribal Self-Governance: PESA and Its Implementation*. Nupur Tiwary (Ed.). Rawat Publications, Jaipur & Delhi, p.157-164.
- Sen Gupta, S. (2016). State politics in Meghalaya - A regionalism that poses no threat to nationalism. In: *State Politics in India*. H. Roy, M. P. Singh and A. P. S. Chauhan (Eds.). Primus Books, New Delhi, Chapter 17, p. 526-565.
- Srikanth, H. (2016). Agrarian relations in Khasi Villages: A Study of select villages in West Khasi Hills. In: *Ethnicity and Political Economy in Northeast India*. H. Srikanth R. Borgohain (Eds.). DVS Publishers, Guwahati, Chapter 7, 2016, p. 146-162.
- Srikanth, H. (2016). Status of research on politics in Northeast India. In: *Constraints and Challenges to Social Science Research in Northeast India*. L.S. Gassah and C. Joshua Thomas (Eds.). Astra, New Delhi, Chapter 4, 49-54.
- Srikanth, H. (2017). India-ASEAN economic integration: Need to address political and security concerns. In: *Act East and India's Northeast*. C. Joshua Thomas and K. Sarda (Eds.). Pentagon Press, p. 93-98.

Research Projects

Ongoing: 1

Title of Project	PI/Co-PI	Funding Agency	Rupees in lakh
Problems and Perceptions of Indigenous Communities along International Border: A Study of Kuki Community in Moreh & Tamu	Prof. T. T. Haokip	ASEAN Study Centre, Ministry of Home Affairs, GoI	5.00

Academic Collaboration

Dr. S. Sengupta collaborated with the Global Science and Technology Forum (GSTF),

Singapore and a member of the Programme Committee of the International Conference on Political Science, Sociology and

Department of Political Science

International Relations (PSSIR) organized by GSTF in 2016 and 2017.

Recognition

Dr. Munmun Majumdar was a Visiting Teacher Fellow to the University of Yangon, Myanmar, 16-31 July, 2016.

Other Activities

Prof. H. Srikanth

Delivered lectures on “Agrarian Crisis in India” during the 38th and 39th Orientation Program (General) organized by UGC-HRDC, NEHU, on 18 February 2017 and 14 March 2017, respectively. He also submitted a paper in the brainstorming session on “Act East and India’s Northeast: How to Reap the Dividend” organized by ASEAN Studies Centre, NEHU Campus (August 9, 2016), and chaired a panel session on *Northeast India and ASEAN: Security Concerns* in the brainstorming session on *India-ASEAN: Security and Strategic Links* organized by the Department and ASEAN studies Centre on 25 November 2016.

Prof. R. K. Satpathy

Delivered lectures on: (i) “Evolving Nature of Indian Constitution” at NTPC, Power Grid, Shillong (December 1, 2016), (ii) “The Constitution of India: Then and Now” on the Constitution Day at Indian Space Application Centre, Shillong (26 November 2016), and (iii) “Ambedkar’s Socio-Political Ideas” on 14 April 2016 in the VC’s Conference Hall, NEHU.

Dr. S. Sen Gupta

Delivered two lectures on: (i) “Global Ambitions and Local Compulsions in Meghalaya”

and (ii) “Language and Identity Politics in Northeast India” at the 37th Orientation Programme organized by UGC-HRDC, NEHU (29-30 August 2016).

Dr. Biswajit Mohapatra

Delivered four lectures, namely “Governance and Inclusiveness in North-East India: Emerging Challenges,” Concepts in Research: Variables and Attributes,” Hypotheses: Concept and Types of Hypotheses, Formulation of Hypothesis, Testing of Hypothesis” and “Observation, Case Study Method, Focused Group Discussion” at the seven-day research methodology course organized by Sikkim Government College, Directorate of Higher Education, Gyalshing West Sikkim (22-23 November 2016). He also delivered lectures on: (i) “Environmental Hazards and Disasters in India: Evaluating the State of Preparedness” during the refresher course in Earth Sciences and Geography on *Perspectives on Hazards and Their Management* on 1 December 2016 at UGC-NEHU, Shillong, and (ii) “India’s Act East Policy and the Challenges of Development of North Eastern India” at the brainstorming session on *Act East and India’s North-East: How to Reap the Dividend* organised by NEHU and Ministry of External Affairs and ICSSR-NERC. Shillong (8-9 August 2016).

Dr. Suparna Bhattacharjee

Delivered a lecture on “Security Issues in South-East Asia from the Lens of Donald Trump’s Proposed Changes in Foreign Policy Issues” at the brainstorming session on *Security and Strategic Links in South-East Asia* organised by the Department on 24 November 2016.

DEPARTMENT OF SOCIOLOGY

Head: Prof. A.K. Nongkynrih

Telephone: 0364-2723040 (O)

E-mail: hodsoc@nehu.ac.in

Faculty: 7

Designation	Name and Qualification	Specialization
Professor (4)	C. L. Imchen, MPhil & PhD (JNU)	Political Sociology, Polity Formation and Indigenous Peoples
	I. L. Aier, MPhil & PhD (NEHU)	Political Sociology, Sociology of Religion, Ethnic Relations
	A. K. Nongkynrih, MPhil & PhD (NEHU)	Sociology of Kinship, Sociology of Organisations, Sociology of Rural Development
	D. V. Kumar, MPhil & PhD (JNU)	Modernization, Ethnicity and Social Change
Associate Professor (1)	B. Panda, MPhil (Hyderabad), PhD (IIT Kanpur)	Sociology of Third Sector, Sociology of Development
Assistant Professor (2)	Rekha M. Shangpliang, MPhil & PhD (NEHU)	Sociology of Environment, Sociology of Gender, Sociology of Family and Kinship
	Md. Yusuf Khan, MA (AMU), MPhil (DU)	Migration, Urbanization, Ethnicity

Thrust Area of Research

“Social Change” is the main thrust area of the Department. It is concentrating on understanding the changes taking place in the societies of the North-Eastern region.

Brief Statement of Academic Activities

The Department is concentrating on understanding changes taking place in the societies of the region. The Department began instructions at the MA, MPhil and PhD Levels in 1976. Besides teaching and supervising research, the faculty engages in individual research activities as well. With the existing

faculty expertise, the Department has developed research excellence in the studies of political dynamics and social movements, emerging accommodation between native systems and the nation state, ethnic identity, globalization and its impact on the North-Eastern Region, land and privatization of communal lands, rural developmental schemes and policies and traditional political institutions, modern organizations. Moreover, faculty members have been involved in their own capacities in community extension programmes, development of evaluation tools, documentation of Khasi indigenous forest management with reference to environment, evaluative research on community approach to development.

Department of Sociology

Students' Profile

Enrolment Capacity: MA – 50, PhD - variable

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MA	09	41		47		03	18	32	50
PhD									

Degree Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MA	11	37		46		02	22	26	48
PhD	02	01		03				03	03

Students Awarded PhD

Name of the student	Title of Thesis	Name of Supervisor
Mr. Chiete Mero	A Sociological Study of the Village Development Board in Nagaland	Prof. A. K. Nongkynrih
Mr. Timothy L. Singson	A Sociological Study of the Biate in Meghalaya	Prof. A. K. Nongkynrih
Ms. P.R. Dimchuilu	A Study of the Implementation of Mahatma Gandhi National Rural Employment Guarantee Programme in Tamenglong District, Manipur: A Sociological Study	Prof. D. V. Kumar

Research Fellowships: 8

CSIR-UGC-NET	UGC Non-Net	National Fellowship for Higher Education	Maulana Azad Minority Fellowship
03	02	02	01

Courses Conducted

Postgraduate: MA

Semester I

Sociological Theories I; Methodology of Social Research I; Sociology of Family and Kinship; Indian Society I; Indian Society II.

Semester II

Sociological Theories II; Methodology of Social Research II; Sociology of Religion; Indian Society III; Ethnic Relations (Open Course).

Semester III

Economy and Society; Political Sociology; Sociology of Development; Tribal Movements in India; Sociology of Gender (Open Course); Urban Sociology (Open Course).

Semester IV

Social Change; Sociology of Environment; Anthropological Theories; Industrial Sociology.

PhD Courses

Designing Sociological Research; Sociological Concepts; Advanced Sociological Theory.

Seminars/Conferences/Symposia/ Workshops

Organised

Dr. R. M. Shangpliang organised a national seminar on *Environment and Society: The Context of North East India* at the Department on 14-15 March 2016.

Attended

Prof. A. K. Nongkynrih

Presented a paper at the international seminar on *Understanding the Tribes of Asia* organised by Synod College on 3 & 4 November 2016. He also presented a paper titled "Land and Development in North East India: Societal Versus Nation State Perspective" at a seminar on 30 March 2017 organised by the Department of Sociology, Tezpur University, and also delivered a keynote address at the national seminar on *Alcohol and Drug Abuse: Issues and Challenges of Contemporary Societies of NEI* organised by IQAC of Bengtoli College, Assam (20 September 2016).

Dr. R. M. Shangpliang

Presented papers on: (i) "Livelihood and Gender: Marginalization of Khasi Rural Women in Land and Forest Rights" at the national seminar on *Identity and Marginality in North East India: Challenges for Social Science Research* held at Hyderabad University on 16- 17 January 2017, (ii) "Forest and Tribal Life with Special Reference to the Khasi of Meghalaya" at the international seminar on *Understanding Tribes of Asia* at Synod College, Shillong (3-4 November 2016), (iii) "Kinship, Marriage and Gender among the Khasi of Meghalaya" at the national seminar on

Socio-Economic and Cultural Challenges for Holistic Development at William Carey University, Shillong (24-25 October 2016), and (iv) "Ki Lum Ki Wah: Rivers and Ecospirituality among the Khasi" at a seminar on *Infusing Life into Umshyrpi River* on 9 August 2016.

Md. Yusuf Khan

Presented a paper entitled "Migrants and Self-employment in Imphal" at the national seminar on *Development and Change in India: Retrospect and Prospects* organised by the Department of Sociology, Sikkim University (4-5 November 2016).

Publications

Published in India

Nongkynrih, A. K. (2016). Male selection: A sociological exploration. *NEHU Journal*, XIV(1): 19-39.

Panda, B. (2016). Social capital formation and community development: Role of third sector organizations. *Eastern Anthropologist*, 69 (3-4): 263-278.

Shangpliang, R. M. (2016). Matriliney: The cultural cradle of Khasi kinship system. *Anthropology Today: An International Peer Reviewed NEIRA Journal*, 2(1): 37-43.

Singson, T. L., Nongkynrih, A.K. (2016). A sociological view on Dong of Biate society. *Journal of Northeast India Cultures*, 3(1): 11-31.

Singson, T. L., Nongkynrih, A. K. (2016). Marriage in Biate society: A sociological exploration. *Anthropology Today: An International Peer Reviewed NEIRA Journal*, 2(1): 1-25.

Department of Sociology

Books/Book Chapters

Kumar, D. V. (2017). *Modernity, Ethnicity and Development*. Rawat Publications, Jaipur, ISBN: 978-81-316-0846-3.

sociological reflections. In: *Globalisation and Cultural Pluralism: Challenges and Possibilities*. S. Vergese (Ed.). Akansha, New Delhi, Chapter 4, p. 50-61.

Panda, B. (2016). Community and identity formation in the era of globalization: Some

Research Projects

Completed: 6

Title of the Project	PI/Co-PI	Funding Agency	Rupees in lakh
Associations and Matrilineal Clans: A Sociological Perspective	A. K. Nongkynrih	UGC, SAP-DSA	0.80
Kinship and Gender Roles: A Case Study of Mawsynram Village	R. M. Shangpliang	UGC, SAP-DSA	0.54
Exploring Inter-Community Relations in Bengaluru	Prof. D. V. Kumar	UGC, SAP-DSA	1.10
Ethnicity in the Spectrum of Development of Eastern Nagaland Tribes	Prof. I. L. Aier	UGC, SAP-DSA	0.80
Problems and Prospects of Handicrafts in the Era of Globalization: A Study of Handicrafts in Odisha,	Dr. B. Panda	UGC, SAP-DSA	1.10
Factors of Migration: A Sociological Study of Pangals in Delhi	Md. Yusuf Khan	UGC, SAP-DSA	0.45

Academic Collaboration

Prof. A. K. Nongkynrih is a local supervisor of Ms. Minakshi Keeni from Tohoku University, Japan.

for a mid-term review of projects of teachers of the Department of Sociology of some Universities during February 2017.

Prof. A. K. Nongkynrih

Honours/Awards/Recognitions

Prof. D. V. Kumar

Member of an Expert Committee for the UGC to review SAP related proposals of the Department of Sociology of some Universities during January 2017 and a member of Expert Committee for the UGC

Member of: (i) State ASHA Monitoring Group, Department of Health Services, Government of Meghalaya, (ii) Advisory Committee on Codification of Customary Laws, Khasi Hills Autonomous District Council, Shillong, (iii) Khasi Traditional Medicine Commission, Khasi Hills Autonomous District Council, Shillong,

(iv) State Advisory Group on Community Action of National Rural Health Mission, Department of Health and Family Welfare, Government of Meghalaya, (v) Social Welfare Department, Government of Meghalaya, and (vi) Editorial Committee, *India Sociological Bulletin* (e-Journal), *Indian Sociological Society*.

Dr. R. M. Shangpliang

Member of the State Monitoring Committee at the State level on enforcing the Cable Television Networks (Regulation Act, 1995) by the Department of Information and Public Relations, Government of Meghalaya.

Other Activities

Prof. A. K. Nongkynrih

Delivered the following lectures on: (i) "Methodology in Tribal Studies" organised by UGC-HRDC, NEHU (12 May 2016), (ii) "Civil Society" organised by UGC-HRDC, NEHU, on 6 June 2016, (iii) "Participation" organised by EFL University, on 30 May 2016, (iv) "Portable Water, Current Status, Issues and Approaches, Policies, with Reference to North East and the State of Meghalaya in Particular" organised by Lady Keane College, on 28-29 July 2016, (v) "After Sociology; What Next?" organised by the Department of Sociology, St. Mary's College, on 18 July 2016, (vi) "Concepts in Research Design" organised by UGC-RDC, NEHU, on 29 June 2016, (vii) "Ki Tyllong Um and the Role of ki Shnong ki Thaw and Agencies of Modern State" organised by Lady Keane College, on 28 July 2016, (viii) "Concepts in Research Design" organised by UGC-HRDC, NEHU, on 18 July 2016, (ix) "Gender Sensitisation from Sociological Perspective" organised

by PGT, Shillong, on 12 August 2016, (x) "Civil Society" organised by UGC-HRDC, NEHU, on 2 September 2016, (xi) "Customary Laws of the Khasi and Jaintia People" on 3 September 2016 organised by the High Court of Meghalaya, Shillong, (xii) "Social Responsibilities of Service Sectors with Special Reference to NEI" on 1 October 2016 organised by the Sanchar Nigam Executive Association, Shillong, (xiii) "Sociological Aspects of Psychological First Aid" on 10 October 2016 organised by SAN-KER, Shillong, (xiv) "Sixth Schedule in Meghalaya: An Overview with a Focus on Interface with the District Administration" organised by MATI, Shillong, on 17 October 2016, (xv) "Understanding Sociology: Its Scope and Relevance" organised by Sankardev College, Shillong, on 23-27 January 2017, (xvi) "Concepts in Research Design" organised by UGC-HRDC, NEHU, on 31 January 2017, and (xvii) "Organisations and Society" organised by UGC-HRDC, NEHU, on 25 February 2017, (xviii) "Concepts in Research Design" organised by UGC-HRDC, NEHU, on 25 February 2017, and (xix) "Violence Against Women: An Analysis" organised by NEPA, Umsaw, on 26 April 2017.

Resource person for: (i) "Ka History jong ka Jaitbynriew Khasi" organised by HSPDP Pynursla Constituency Unit, Pynursla, on 24 September 2016, (ii) "Role of Media and Civil Society in Development and Good Governance" organised by the Government of Meghalaya, Political Department, Shillong, on 3 November 2016, (iii) "Value Based Approach to Sustainable Development" organised by Synod College, Shillong, on 15-17 November 2016,

Department of Sociology

(iv) “Dynamics of Indian Society and Cultural Mobility in Youth Development Process” organised by NYK, Shillong on 12 November 2016, (v) “Teaching, Technology and Research” organised by IQAC Sngap Syiem College, Mawkyrwat, on 23-27 January 2017, and (vi) “Introduction to Leadership and Motivation” organised by the Nongkrem Youth Development Association, Nongkrem, on 14 February 2017. He was also a panelist on “Reducing Wild Is a Threat to Environment and Sustainable Development” organised by NSS, NEHU unit, on 3 June 2016.

Dr. B. Panda

Delivered two lectures on “Social Inequality and Economic Development” during the refresher course in *Economics* at UGC-HRDC, NEHU, on 10 October 2016.

Dr. R. M. Shangpliang

Delivered a lecture on “Nature, Culture and the Tribes with Special Reference to the Khasi” during the refresher course in *Environmental Sciences* organised by the UGC-HRDC, NEHU, on 30 September 2016.

VIII

SCHOOL OF TECHNOLOGY

Dean: Prof. Gautam Saha
Telephone: 0364- 2723601(O)/7980904316(M)
Email: deanst@nehu.ac.in, dr.goutamsaha@gmail.com

The School of Technology consists of the Departments of Architecture, Basic Sciences and Social Sciences (BSSS), Biomedical Engineering (BME), Computer Applications (Tura), Electronics and Communication Engineering (ECE), Energy Engineering, Information Technology (IT), and Nanotechnology. These departments are relatively new entities, but vibrant with academic activities, performing well with several newer ideas and thoughts. The departments are carrying out several projects including major projects, such as state of art initiative on Internet of Things (IOT), design of Neural Network Based Pacemaker, design for Relief of Muscle Spasticity in CP Kids, etc. Recently our Defense Organizations have shared some of the previous research experience developed in this School. A lot of research works are also being executed in the Computational Biological and Cryptographic areas in the form of PhDs. The School has been awarded with the “Visvesvaraya PhD” fellowship of about Rs. 35,000 per month for each student on merit. Six students are doing PhDs under this scheme with the aim to develop products for industry from the Departments of IT, ECE and BME.

The departments have produced many research articles that are published in top grade journals of the area. Two of the faculty members’ research articles (one from IT and the other from BME)

were accepted in the World Congresses of the area. One of the faculty members has published a book from the international publication (Taylor & Francis) on the area of bioprocess engineering. Many faculty members of the School are invited for delivering lectures in different universities across the country, and many departments have research collaboration within and outside the University.

Many departments are actively engaged in good research projects. A lot of works are initiated in the areas of biomedical engineering, communication, microwave and signal processing by the Departments of BME and ECE. One patent has been filed from this School with regards to production of bio-diesel from pine tree extracts. Several research works are also under execution with the help of NEIGRIHMS, Shillong. One Doctor of NEIGRIHMS is doing his PhD work in the Department of BME.

The School also has the Department of BSSS, which comprises experts from different streams like physics, chemistry, mathematics, biology, humanities and management studies, as a hub of teaching and research. Apart from providing lesson for foundation subjects to the engineering students, the Department has also developed basic Sciences Research Laboratories to raise the standard of teaching and research in the School.

Department of Architecture

DEPARTMENT OF ARCHITECTURE

Head: Ar. Banbhalang Swer
Telephone: 0364-2724101/8794741771
E-mail: banbha13@gmail.com, bswer@nehu.ac.in

Faculty: 3

Designation	Name and Qualification	Specialization
Assistant Professor (3)	Banbhalang Swer, Master in Architecture (SPA, Delhi)	Urban Design
	Ibynta B. Tiewsoh, Master in Design (IIT Bombay)	Industrial Design
	Rameez Gazi, Master in Landscape Architecture (SPA, Delhi)	Landscape Design

Thrust Areas of Research

- Urban Geography, Urban Studies and Planning.
- Product Design and Landscaping.

Brief Statement of Academic Activities

The five-year BArch programme started its 1st batch in 2014-15. The Department had set up

a Test Centre in May 2015 for conducting the National Aptitude Test in Architecture (NATA) with the approval of the Council of Architecture for admission to the five-year BArch programme. Ar. Shubhrajit Das (Convener) and Ar. Chandran Rekha Jetty, members of the Third Inspection Team of the Council of Architecture, visited the Department during March 22-23, 2016.

Students' Profile

Enrolment Capacity: BArch - 40

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
BArch 1 st year	19	20	02	16		21	13	26	39
BArch 2 nd year	19	14	02	12		19	09	24	33
BArch 3 rd year	16	12		11		17	09	19	28

Educational Tour of Students

The 2nd year students of Architecture had visited Delhi, Agra and Fatehpur Sikri from 15 to 23 February 2016 as part of the study

tour curriculum. The study tour had focused on documentation, measured drawing, and analysis of structures and materials, which were used in ancient structures. Students were asked to use these data for preparing their presentation on the

School of Technology

historical monuments and structures of the three places during a one-day seminar organised by the Department on 24 May 2016.

Teacher-in-Charge: Ar. Banbhalang Swer

Places/Institutions Visited: Delhi, Agra and Fatehpur Sikri

Duration of Tour: 8 days

Purpose of Tour: Measured Drawing and Analysis of Historical Structures and monuments as per curriculum.

Courses Conducted

Undergraduate: Bachelor of Architecture (BArch)

Semester I

Structural Design I (Applied Mechanics); Building Materials I; Introduction to Architecture; Communication Skills; Architectural Design; Building Construction and Technology I; Architectural Graphics I; Workshop I.

Semester II

Structural Design II; Building Materials II; History of Architecture I; Communication Skills II; Architectural Design II; Building Construction and Technology II; Architectural Graphics II; Workshop II.

Semester III

Structural Design III; Building Materials III; History of Architecture II; Climatology I; Surveying and Levelling; Architectural Design II; Building Construction and Technology III.

Semester IV

Structural Design IV; Theory of Design I; History of Architecture III; Building Services I; Climatology I; Architectural Design III; Building Construction and Technology II; Computer Application I.

Semester V

Structural Design V; Theory of Design II; Modern Architecture; Building Services II; Elective I: (i) Interior Design, (ii) Art in Architecture and History of Meghalaya's Art and Culture; Architectural Design IV; Building Construction and Technology V; Computer Application II.

Semester VI

Structural Design VI; Estimation, Costing and Specifications; Building Bye-Laws and Codes of Practices; Advanced Building Services III (Acoustics); Elective II: (i) Design for Disabled, (ii) Sustainable Architecture; Architectural Design VI; Building Construction and Technology VI; Working Drawing 1.

Semester VII to Semester-X: *Not yet applicable*

Seminars/Conferences/Symposia/Workshops

Organized

Ar. Banbhalang Swer organised a one-day seminar on *Historical Architecture of Shillong and the Constancy of Khasi House Forms* in collaboration with Bharati Vidyapeeth College of Architecture, Navi, Mumbai, on 24 May 2016.

Attended

Ar. Rameez Gazi presented a poster and paper entitled "Passive Heating Ventilation and Air Conditioning (HVAC) System for an Energy Efficient and Sustainable Housing in Rural Areas" at the national conference on *Renewable Energy Technology Utilisation for Rural Development* at the Department of Energy Engineering, NEHU, Shillong (March 01, 2017).

Department of Architecture

Academic Collaborations

Ar. Rameez Gazi collaborated with Dr. Manoj Kumar Singh, JSPS Post-Doctoral Member, University of Tokyo, for research entitled *Estimation of Thermal Comfort Status in Offices of Shillong*.

Other Activities

Ar. Banbhalang Swer was an External Jury on 11 June 2016 in Royal School of Architecture, Royal Group of Institution, Betkuchi, Guwahati. He was also involved in the preparation of comprehensive concept note of the proposed projects under NLCPR:

(i) Archery Stadium-cum-Academy at Pomlakrai, capacity 2000 approx., (ii) Mini Football Stadium with synthetic turf at Alotgre, West Garo Hills, capacity of 7000 approx., (iii) Hockey Training Ground at Asibra, West Garo Hills, capacity of 10000 approx., and (iv) Football Training ground at Dikki Bandi.

Ar. Rameez Gazi completed the refresher course in *Built Environment and Sustainable Technologies* held at the Department of Architecture, Jadavpur University (2-21 January 2017).

DEPARTMENT OF BASIC SCIENCES AND SOCIAL SCIENCES

Head: Dr. M. M. Singh (Till 27 November 2016)
Dr. A. Sinha (Since 28 November 2016)

Telephone: 0364-2723641/42

E-mail: hodbsss@gmail.com

Faculty: 15

Designation	Name and Qualification	Specialization
Professor (1)	P. V. Koparkar, MSc & PhD (NU)	Physics (Instrumentation, Atmospheric Sciences, Nanomaterials)
	A. Sinha, MSc (LU), PhD (NEHU)	Chemistry (Physical and Analytical)
Associate Professor (2)	M. M. Singh, MSc (BHU), PhD (PU)	Mathematics (Number Theory, Algebraic Number Theory, Numerical Analysis, Discrete Mathematics)
	M. D. Kushwaha, MA & PhD (BHU)	Mathematics
Assistant Professor (12)	Hiranjit Choudhury, MSc & PhD (NEHU)	Botany (Plant Biotechnology)
	Regenel S. Kharwanlang, MSc & PhD (NEHU)	Physics (Theoretical Physics)
	Phrangstone Khongjee, MSc & PhD (NEHU)	Statistics (Sampling Theory and Demography)
	Krishna Upadhaya, MSc & PhD (NEHU)	Botany (Plant Ecology)
	Jyoti Narayan, MPhil & PhD (KU)	Chemistry (Physical, Analytical, Nanoscience and Nanomaterials)
	Jibitesh Dutta, MSc & PhD (NEHU)	Mathematics
	Sainkumar M. N. Mawiong, MSc & MPhil (NEHU)	Mathematics
	Evapynhun Giri, MA & MPhil (NEHU)	English
	R. S. Singh, MSc (Jadappur), PhD (CSIR-IICT, Osmania Univ)	Chemistry (Organic, Bio-organic, Soft Materials)
	M. Mahato, MSc (Burdwan), PhD (Calcutta)	Physics (Thin Film, Molecular Spectroscopy, Nanobiotechnology)
	Munshi Ram, M Com (VBSPU), PhD (BHU)	Commerce- HRM (Human Resource Management)

Department of Basic Sciences and Social Sciences

Thrust Areas of Research

The thrust areas of research of the Department are the fields of Basic and Applied Mathematics, Basic and Applied Physics, Atmospheric Sciences, Chemical Sciences, Nanoscience and Nanotechnology, Basic Environmental Sciences, Biotechnology, Basic and Applied Economics, Applied Statistics, and Communicative English, with emphasis on interdisciplinary and multidisciplinary studies.

Students' Profile

Enrolment Capacity: PhD - 60

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
PhD	12	09		11	03	07	05	16	21*

*Out of 21, 13 students are admitted to other departments, while 8 are admitted to BSSS.

Research Fellowships: 21

CSIR-UGC-NET	UGC Non-NET	NFHE	DBT-JRF (Non-NET)	MoEF & CC (Non-NET)
02	12	05	01	01

Courses Conducted

The core courses pertaining to basic sciences, humanities and commerce are taught for the BTech programme of the departments/disciplines of Electronics and Communication Engineering, Information Technology, Bio-medical Engineering, and Energy Engineering, in the School of Technology. The details of the courses are as below:

Semester I & II

Professional Communication Skills; Digital English Language Laboratory; Engineering Mathematics I; Engineering Physics; Engineering Physics Laboratory; Engineering Mechanics; Basic Electrical Engineering; Basic Electrical Laboratory; Workshop Practice; Elements

Brief Statement of Academic Activities

The Department of BSSS is not offering any course of study as such. However, the teachers of the Department are teaching the core courses of Basic Sciences, Humanities and Social Sciences which appear in the BTech curricula of ECE, IT, BME and EE of the School of Technology. In addition, the members of the faculty have engaged themselves in research activity in their respective core fields of interest as well as in the interdisciplinary and multidisciplinary areas.

of Environmental Sciences; Engineering Mathematics II; Engineering Chemistry; and Engineering Chemistry Laboratory for ECE, IT, BME and EE.

Semester III

Engineering Mathematics III for ECE; IT & BME Engineering Economics and Financial Accounting for IT only; Discrete Mathematics for IT only.

Semester IV

Statistics and Random Processes for both ECE and IT.

Semester V

Industrial Economics and Management for ECE only; Management Information System for IT only.

Seminars/Conferences/Symposia/Workshops

Organized

The Department organized the science academies' lecture workshop on *Hyperbolic Partial Differential Equation and Conservation Laws (HPDECL-2017)* jointly with the Department of Mathematics, NEHU (February 22-25, 2017). Coordinator: Dr. Jibitesh Dutta.

Organized a short-term course in *Life Sciences with Special References to Nanosciences* from 1 to 6 August 2016 at UGC- HRDC, NEHU. Coordinator: Dr. Jyoti Narayan.

Dr. M. Mahato organized the national conference on *Recent Advances in Nanoscience and Nanotechnology* in collaboration with the Department of Nanotechnology, NEHU (8-9 September 2016).

Attended

Prof. Koparkar

Delivered invited lectures on: (i) "Nanoelectronics: Next Generation Industrial Revolution" at the national seminar on *Nanotechnology* held on 9 September 2016 at the Department of Nanotechnology, NEHU, Shillong, (ii) "Design of Prototype Meteor Radar for Atmospheric Studies" at the national seminar on *Advances in Electronics and Allied Science and Technology* (NaSAEAST-2016) organized by the Department of Physics, Guwahati University, Guwahati (5 November 2016), and (iii) "Smart Grid Applications in India" at the national seminar on *Renewable Energy Technology and Its Utilization for Rural Development* organized by the Department of Energy Engineering, SOT, NEHU (March 1, 2017).

Dr. K. Upadhaya

Presented a paper titled "Role of Forests in Mitigating Climate Change" at the national conference on *Renewable Energy Technology Utilization for Rural Development and Trade Show* (NCRETURD-2017) held at NEHU, Shillong (27 February to 1 March 2017).

Dr. P. Khongji

Presented a paper on "Ranking of Districts in North East States of India by the Use of Standard of Living Index Using 2001 and 2011 Census" at the Annual IASP conference held at IEG, Delhi University during December 7-9, 2016.

Dr. J. Dutta

Presented a paper on "Dynamical Systems in Dark Energy Models from the Centre Manifold Theory Perspective" during the UGC-SAP-sponsored national seminar on *Current Trends in Mathematics* at the Department of Mathematics, NEHU (March 14-16, 2017), and delivered two invited lectures on "First Order Partial Differential Equations" at the science academies' lecture workshop on *Hyperbolic Partial Differential Equation and Conservation Laws* (HPECL-2017) organised jointly by the Departments of BSSS and Mathematics, NEHU (February 22-25, 2017).

Dr. Jyoti Narayan

Presented papers on: (i) "Comparative Study of Surface Plasmon of Functionalized Green Synthesised Silver Nanoparticles" at the international conferences on *Nanotechnology for Better Living* held at NIT, Srinagar (May 25-29, 2016), (ii) "Development of Greener Methodology for the Synthesis of CdSe Quantum

Dots and Characterization of Their Thin Film” at the international conference on *Light and Light Based Technology* 2016, Tezpur University, Assam (November 26-28, 2016), and (iii) delivered two lectures entitled “Tools and Processes in the Preparation of Nanoparticles” and “Microscopy - As a Tool in Characterization of Nanoparticles” during a five-day hands on training workshop on *Synthesis and Characterization of Nanomaterials for Biotechnological Applications* sponsored by the Department of Biotechnology, Government of India, at the Department (March 28 - April 1, 2016).

Dr. R. S. Singh

Presented a paper on “Molecular Gels from Triphenylmethyl Derivatives of Simple Primary Alcohols” at the national conference on *Recent Advances in Nanoscience and Nanotechnology* organized by the Department of Nanotechnology, NEHU (September 8- 9, 2016).

Dr. M. Mahato

Presented papers on: (i) “Nano-Assembly of Metal Nanoparticles Using Langmuir Blodgett Film Deposition Technique” at the international conference on *Multifunctional Materials for Device Application* (ICMDA), NIT, Patna, Bihar (October 26-28, 2016), and (ii) “Protein-Alkali Halide Bio-Nanocomposite Preparation in Langmuir Blodgett Monolayer” at the national conference on *Recent Advances in Nanoscience and Nanotechnology*, Department of Nanotechnology, NEHU (September 8-9, 2016).

Publications

Published in India

Chaudhury, G., Upadhaya, K. (2016). Biomass and carbon stock in subtropical broad-leaved forest ecosystem of Meghalaya, Northeast India. *International Journal of Ecology and Environmental Sciences*, 42 (2): 125-133.

Khongji, P. (2017). Extrapolation of life expectation at birth up to year 2051 through distribution fitting of age specific death rates and using life table for the states in North East India. *SMU Medical Journal*, 4(1): 95-117.

Khongji, P. (2016). Socio economic and demographic differentials in the prevalence of chronic diseases across states in North East India (Evidences from DLHS 4). *SMU Medical Journal*, 3(2): 162-185.

Published Abroad

Dutta, J., Mitra, S., Chetry, B. (2016). Modified Bekenstein-Hawking system in $f(R)$ gravity. *Int. J. Theor. Phys.*, 55(10): 4272, <https://doi.org/10.1007/s10773-016-3052-5>.

Dutta, J., Khylllep, W., Tamanini, N. (2017). Scalar-fluid interacting dark energy: Cosmological dynamics beyond the exponential potential. *Phys. Rev. D*, 95(2): 023515, <https://doi.org/10.1103/PhysRevD.95.023515>.

Gogoi, M., Layek, R., Vuorinen, J., Mahato, M. (2017). Conversion of solid waste into functional carbon materials: A review. *Environment and Energy Focus*, 6: 1-17.

Goswami, P., Singh, M.M., Bhuyan, B. (2016). A new public key scheme based on DRSA and generalized GDLP. *Discrete Mathematics*,

- Algorithms and Applications*, 8(4), <https://doi.org/10.1142/S1793830916500579>.
- Goswami, P., Singh, M.M., Bhuyan, B. (2017). A new public key scheme based on integer factorization and discrete logarithm. *Palestine journal of Mathematics*, 6(2): 580-584.
- Gupta, A., Jamatia, R., Mahato, M., Pal, A. (2017). Metalloprotein inspired ruthenium polymeric complex: A highly efficient catalyst in ppm level for 1, 3-dipolar Huisgen's reaction in aqueous medium at room temperature. *Industrial Eng. Chem. Res.*, 56: 2375-2382.
- Iralu, V., Upadhaya, K. (2016). Dormancy, storability, and germination of seeds in *Magnolia punduana* (Magnoliaceae). *Botany*, 94(10): 967-973.
- Jamatia, R., Gupta, A., Mahato, M., Patil, R.A., Ma, Y-R., Pal, A.K. (2016). A metalloprotein inspired ruthenium complex as an efficient and reusable catalyst for selective oxidation of alcohols to their corresponding carbonyl compounds. *ChemistrySelect*, 1: 1-8.
- Jamir, A., Mahato, M. (2016). A review on protein based nanobiocomposite for biosensor application. *Reviews in Advanced Sciences and Engineering*, 5: 1-14.
- Mawiong, S.K., Mukherjee, H.K. (2016). Strong Conley index over a phase space. *Topology and Its Applications*, 210:216-245.
- Mir, A.H., Upadhaya, K., Khonglah, C.G. (2016). A note on *Mitrastemon yamamotoi* (Mitrastemonaceae): A root parasite of rare occurrence in North East India. *The Journal of Japanese Botany*, 91:179-183.
- Mir, A.H., Upadhaya, K., Odyuo, N., Tiwari, B.K. (2017). Rediscovery of *Magnolia rabaniana* (Magnoliaceae): A threatened tree species of Meghalaya, Northeast India. *Journal of Asia-Pacific Biodiversity*, 10(1):127-131.
- Singh, W.P., Singh, R.S. (2017). A new class of organogelators based on triphenylmethyl derivatives of primary alcohols: Hydrophobic interactions alone can mediate gelation. *Beilstein J. Org. Chem.*, 13: 138-149.
- Upadhaya, K., Mir, A.H., Roy, D.K., Odyuo, N. (2017). A new species of *Pyrenaria* (Theaceae-Theoideae) from Northeast India. *Telopea*, 20: 35-40.
- Book Chapters/Proceedings**
- Baruah-Maheswari, J., Narayan, J. (2016). A novel method to synthesize ZnSe/CdSe core shell quantum dot nanoparticles: A green approach. In: *Proceedings of International Conference on Nanotechnology for Better Living*, 3(1), doi: 10.3850/978-981-09-7519-7nbl16-rps-226.
- Upadhaya, K., Mir, A.H., Iralu, V. (2017). Reproductive phenology and germination behavior of some important tree species of Northeast India. In: *Proceedings of the National Academy of Sciences, India, Section B, Biological Sciences*, doi:10.1007/s40011-017-0841-4.
- Warjri, M., Narayan, J. (2016). Template assisted synthetic method for preparation of arrays of metallic nanowires. In: *Proceedings of International Conference on Nanotechnology for Better Living*, 3(1), doi: 10.3850/978-981-09-7519-7nbl16-rps-226.

Department of Basic Sciences and Social Sciences

Research Projects

New: 3

Title of the Project	PI/Co-PI	Funding Agency	Rupees in lakh
Phytochemical Examination, Molecular Characterization and Propagation of <i>Illicium Griffithii</i> Hook. F. & Thoms.: A Medicinally Important RET Plant of Northeast India for Improving Economic and Conservation Status	PI: Dr. H. Choudhury Co-PI: Prof. S. R. Rao and Dr. A. Bhattacharjee	DBT, GoI, New Delhi	39.28
Bottom-up Nanobiocomposite Film of Protein, Polymer and Nanoparticles by Langmuir Bldgett/Layer by Layer Technique for Pesticide Sensing Application	PI: Dr. M. Mahato Co-PI: Dr. M. Gogoi, BME, NEHU	SERB, DST, GoI	32.15
Conversion of Waste Plastic into Value Added Products	PI: Dr. M. Mahato Co-PI: Dr. M. Gogoi	SERB, DST, GoI	7.24

Ongoing: 6

Title of Project	PI/Co-PI	Funding Agency	Rupees in lakh
Orchid Bioresources of the North-east India-Conservation, Database Development and Information Networking	PI: Dr. H. Choudhury CI: Dr. K. Upadhaya & Dr. A. Bhattacharjee	DBT, GoI, New Delhi	29.38
Fragmentation of Humid Subtropical Broad-Leaved Forest and Its Impact on Plant Diversity and Ecosystem Function in Meghalaya, Northeast India	PI: Dr. K. Upadhaya	MoEF, GoI, New Delhi	35.58
Phytodiversity and Phytosociological Characterization of Sacred Groves in Meghalaya	PI: Prof. B.K. Tiwari Co-PI: Dr. K. Upadhaya	DEF, Govt. of Meghalaya	20.00
Molecular Characterization and Chemoprofiling of Two Pharmacologically Relevant Species of <i>Dendrobium</i> Found in Northeast India	PIs: Prof. S. Kumaria & Dr. S. Sailajan, Co-PIs: Dr. H. Choudhury, Dr. S. Pednekar and Dr. S. Menon	DBT, GoI, New Delhi	26. 25

School of Technology

Preventing Extinction and Improving Conservation Status of Threatened Plants Through Application of Biotechnological Tools	PI: Prof. S. K. Barik <i>et al.</i> ; Co-PIs: Dr. H. Choudhury, Prof. N. Venugopal and Dr. M. C. Das	DBT, GoI, New Delhi	103.30
Preventing Extinction and Improving Conservation Status of Threatened Plants Through Application of Biotechnological Tools	PI: Prof. N. K. Chrungoo Co-PIs: Dr. K. Upadhaya and Prof. S. Kumaria	DBT, GoI, New Delhi	82.58

Academic Collaborations

Dr. H. Choudhury has collaborative research with: (i) Dr. V. Kumar, Forest Research Institute, Dehra Dun, Prof. S. R. Rao and Dr. A. Bhattacharjee, Department of Biotechnology and Bioinformatics, NEHU, Shillong, on *Phytochemical Examination, Molecular Characterization and Propagation of Illiciumgriffithii Hook. F. And Thoms.: A Medicinally Important RET Plant of Northeast India for Improving Economic- and Conservation-Status*, (ii) Dr. K. Upadhaya, NEHU, Dr. S.S. Thorat, Regional Centre of Institute of Bioresources and Sustainable Development, Gangtok, Dr. C. Deb, Department of Botany, Nagaland University, Dr. Rajiv Kumar Singh, Rajiv Gandhi University, Mr. B.G. Somkuwar, Institute of Bioresources and Sustainable Development, Imphal, Dr. Swapan Kumar Sinha, TERI-Northeastern Regional Centre, Guwahati, Prof. B. K. Datta, Tripura University, Tripura, Dr. K. Upadhyaya, Mizoram University and Dr. Dhanaraj Singh Thokchom, Centre for Orchid Gene Conservation of Eastern Himalayan Region Manipur, on *Orchid Bioresources of the North-East India – Conservation, Database Development and Information Networking*, (iii) Prof. S. K. Barik, Prof. N.

Venugopal and Dr. M. C. Das of Department of Botany, NEHU, and Dr. A. Chettri, Sikkim University, Gangtok, and Dr. K. K. Singh, GBPIHED, Sikkim on *Preventing Extinction and Improving Conservation Status of Threatened Plants through Application of Biotechnological Tools*, and (iv) Dr. S. Kumaria of Department of Botany, NEHU, and Dr. S. Shailajan, Dr. S. Pednekar and Dr. S. Menon of Herbal Research Lab., Ramnarain Ruia College, Mumbai, on *Molecular Characterization and Chemoprofiling of Two Pharmacologically Relevant Species of Dendrobium Found in Northeast India*.

Dr. K. Upadhaya has collaborative research with: (i) Prof. S. K. Barik, Prof. N. K. Chrungoo and Dr. S. Kumaria of the Department of Botany, NEHU, and Dr. P. Kumari of BSI, Howrah, on *Preventing Extinction and Improving Conservation Status of Threatened Plants through Application of Biotechnological Tools*, (ii) Prof. B. K. Tiwari of the Department of Environmental Studies, NEHU, on *Phytodiversity and Phytosociological Characterization of Sacred Groves in Meghalaya*, and (iii) Dr. H. Choudhury of the Department of Basic Sciences and Social Sciences, NEHU, Shillong

Department of Basic Sciences and Social Sciences

and Dr. A. Bhattacharjee, Department of Biotechnology and Bioinformatics, NEHU, Shillong, on *Orchid Bioresources of the North-east India- Conservation, Database Development and Information Networking*.

Dr. M. Mahato has academic collaboration with: (i) Dr. A. K. Pal, Department of Chemistry, NEHU, Shillong, on *Nanomaterial Synthesis, Characterization and Their Novel Applications*, and (ii) Dr. Manashjit Gogoi, Department of Biomedical Engineering, NEHU, Shillong, on (a) *Langmuir Blodgett Film Preparation and Biosensor Application* and (b) *Waste Conversion into Value Added Products*.

Honours/Awards/Recognitions

Dr. J. Dutta was selected as Associate of Inter-University Centre for Astronomy and Astrophysics (IUCAA), Pune, India, with effect from August 1, 2015 till July 31, 2018.

Other Activities

Prof. P. V. Koparkar

Arranged the Remedial Coaching facility for the SC/ST/OBC and Minority students at the UG level in the School of Technology for the subjects of Engineering Physics, Engineering Chemistry and Engineering Mathematics, under the XIIth Plan merged scheme being the University Coordinator of the Scheme. She also coordinated the lecture-tour of INSA Emeritus Scientist, Professor E.S. Raja Gopal held at NEHU, titled “Leap-years, Leap-Centuries, Leap-Second: Interesting but Less Known Facts” on 14 September 2016 and at Nongstoin College, Nongstoin, titled “Insecticides and Pesticides: From Boon to Bane” on

13 September 2016 as part of the INSA initiative to popularize science among the young students. She also served as Chairperson of the BVoc programme of the UGC’s Scheme under XIIth Plan.

Delivered a lecture on: (i) “Biosensors: Applications in Life Sciences” given during a short-term course organized by UGC-HRDC, NEHU, jointly with Dr. Jyoti Narayan, Department of BSSS on 5 August 2016, (ii) “BVOC Programme for Skill Generation with Special Reference to Rural Youth” on 13 September 2016 at Nongstoin College, Nongstoin, and (iii) ‘Biosensors: Applications in Environmental Sciences during a short-term course on 4 October 2016 organized by UGC-HRDC, NEHU.

Dr. A. Sinha

Organised the event of: (i) Run for unity on the National Unity Day on 31 October 2016 along with the Sports Department of NEHU, (ii) Essay Writing Competition at NEHU along with Prof. D. V. Kumar, Department of Sociology, NEHU, commemorating the occasion of the National Unity Day (Rashtriya Ekta Divas) on 3 November 2016, (iii) Birth Anniversaries of Sir C.V. Raman and Madam Marie Curie on 7 November 2016 at NEHU with the HSLC and HSSLC students of schools from Shillong.

Dr. M. M. Singh

Acted as a resource person during the UGC-Sponsored service level coaching classes for Civil Services/Banking/SSS held at Women’s College, Shillong (July 01 to November 30, 2016).

Co-author of: (i) “A Survey on Hurwitz Complex Continued Fraction” presented at UGC-

School of Technology

SAP-sponsored national seminar on *Current Trends in Mathematics and Mathematical Sciences* held at the Department of Mathematics, NEHU (14-16 March 2017, and (ii) “Signed Quadratic Residues and Its Applications to Cryptography” presented during the UGC-SAP-sponsored national seminar on *Current Trends in Mathematics and Mathematical Sciences* organised by the Department of Mathematics, NEHU (14-16 March 2017).

Reviewer for the *Mathematical Review*, *American Mathematical Society*, USA, and member of the Editorial Board of the in-house Magazine NEHU JYOTI.

Dr. H. Choudhury

Delivered three lectures invited by the Institutional Biotech Hub, Lady Keane College, Shillong, under the aegis of the Department of Biotechnology, Government of India, on: (i) “Biotechnology-An Application of Technology in Biological Sciences” at St. Margaret’s Higher Secondary School, Shillong, on 28 July 2016, (ii) Biotechnology-Its Relevance in Today’s Time” at Seven Set Higher Secondary School, Shillong, on 17

November 2016, and (iii) “Biotechnology and Its Role in Agricultural Development” at Army Public School, Shillong (24 November 2016).

Dr. K. Upadhaya

Attended a training on *Basics of Plant Identification and Nomenclature* organized by the Eastern Regional Centre, Botanical Survey of India, Shillong (7- 9 November 2016).

Delivered a talk on “Community Reserved Forest/Sacred Groves as Instruments for Preservation of Forest Cover” on the occasion of Van Mahotsav Week Celebration 2016 organized by Sohra Government College, Sohra.

Dr Jyoti Narayan

Delivered two lectures entitled “Design of Biocompatible Nanomaterials Using Greener Materials (*Murraya koenigi*) and Anionic Organometallic Sulphate Surfactants” and “Study on Physicochemical Characteristics of Nanomaterials” during the short-term course in *Life Sciences with Special References to Nanosciences* at UGC-HRDC, NEHU (August 1-6, 2016).

DEPARTMENT OF BIOMEDICAL ENGINEERING

Head: Dr. Dinesh Bhatia
Telephone: 03642723851(R), 03642723853(O)
E-mail: hodbme@nehu.ac.in

Faculty: 6

Designation	Name and Qualification	Specialization
Associate Professor (1)	Dinesh Bhatia, ME (Mumbai), PhD (MNNIT Allahabad)	Biomechanics and Rehabilitation Engineering, Biomedical Devices and Signal Processing, Medical Informatics and Telemedicine
	Nitin Sahai, BTech (UPTU), MTech (MNNIT Allahabad)	Computer Aided Tissue Engineering, Biomechanics and Biomaterials
	Sudip Paul, MTech & PhD (IIT-BHU)	Electrophysiology, Biomedical Instrumentation, Artificial Organ and Rehabilitation System, Biomedical Signal Processing
Assistant Professor (5)	Manashjit Gogoi, MTech (Tezpur), PhD (IIT Bombay)	Bio-nanotechnology, Nano-medicine, Cancer Drug Delivery
	Gajendra Kumar Mourya MTech (IIT-BHU), MBA (Pondicherry Univ)	Medical Image Processing, Signal Processing and Biomedical Instrumentation
	Shyamal Mandal, BTech (WBUT), MTech (IIT Kharagpur)	Medical Image Processing, Nanotechnology, Biomaterials

Thrust Areas of Research

Biomechanics and Rehabilitation Engineering; Biomedical Devices and Signal Processing; Tissue Engineering; Biomechanics; Electrophysiology and medical Instrumentation; Bio-nanotechnology, Nano-Medicine and Cancer Drug Delivery; Medical Image Analysis and Processing; Biomaterials and Artificial Organs; Medical Informatics and Telemedicine.

Brief Statement of Academic Activities

The Department of Biomedical Engineering (BME) was established in the year 2012 under the School of Technology, NEHU, Shillong funded by MHRD, Government of India, with the purpose to promote studies in new emerging areas of medical sciences employing advancements in technology for the benefit of masses. The Department intends to provide education to the young minds for achievement

School of Technology

of better health care solutions with emphasis on learning new techniques, developing innovative ideas through learning, skill development, research and development (R&D), and industry-institution interaction in the field.

The Department organised two national conferences and two workshops in 2016-17.

Faculty members and students published 19 papers in journals of national and international repute, one book, and four book chapters and proceedings. They were also given four best paper awards at the national and international conferences.

Students' Profile

Enrolment Capacity: BTech (BME) - 60 Vertical and 6 Lateral; PhD - Variable

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
1 st year	16	16	03	15		14	03	29	32
2 nd year	15	18	03	08		22	07	26	33
3 rd year	18	23	02	17		22	09	32	41
4 th year	37	20	03	38		16	07	50	57
PhD	02	02				04		04	04

Placement of Students: 10

Ten students got placements in Pamtron Pvt Ltd, Mumbai, namely, Shrimanta Sundar Ramchiary,

Neha Kumari, Monir Uddin Khandokar, Bhagyashree Sarma, Mohd Aurif Shergujri, Mohsina Afrooz, Heerok Jyoti Sonowal, Jinty Dutta, Uzini Devi Daimary, and Jadu Doley.

Research Fellowships: 51

Merit-cum-means Scholarship	UGC Ishan Uday Scholarship	Post Metric Scholarship	NEC Scholarship
21	05	24	01

Fieldwork/Educational Tour of Students

Teacher-in-Charge: Dr. Manashjit Gogoi and Mr. Nitin Sahai.

Places/Institutions Visited: Advance Training Institute for Electronics and Process Instrumentation Ramanthapur, Hyderabad.

Duration of Tour: Three weeks (22 March 2017 to 11 April 2017).

Courses Conducted

Undergraduate: BTech

Semester I

Elements of Environmental Science; Engineering Mathematics I; Engineering Chemistry; Computer Systems and Programming; Basic Electronics; Engineering Chemistry Laboratory; Computer Programming Laboratory; Basic Electronics Laboratory; Engineering Graphics.

Department of Biomedical Engineering

Semester II

Professional Communication Skills; Engineering Mathematics II; Engineering Physics; Engineering Mechanics; Basic Electrical Engineering; Digital English Language Laboratory; Engineering Physics Laboratory; Basic Electrical Engineering Laboratory; Workshop Practice; General Proficiency I.

Semester III

Engineering Mathematics III; Biomaterials Signals and Systems; Human Anatomy and Physiology-I; Data Structures and Algorithms; Human Anatomy and Physiology Laboratory I; Data Structure Laboratory.

Semester IV

Statistics and Random Processes; Biomedical Instrumentation I; Biomechanics; Medical Biochemistry; Human Anatomy and Physiology II; Biomedical Instrumentation Laboratory I; Medical Biochemistry Laboratory; Human Anatomy and Physiology Laboratory II; General Proficiency II.

Semester V

Bio-Transport Process; Microprocessor; Biomedical Signal Processing; Biomedical Instrumentations-II; Tissue Engineering; Microprocessor Laboratory; Biomedical Signal Processing Laboratory; Biomedical Instrumentation Laboratory II.

Semester VI

Medical Imaging Techniques; Modelling of Physiological Systems; Artificial organ and Rehabilitation Engineering. ***Elective I:*** Fundamental of Bio-Mems; Nuclear Medicine; Radiation and Safety; Modelling of Physiological Systems Laboratory; Hardware Design Project Laboratory; Seminar and Group Discussion; General Proficiency III.

Semester VII

Bio-Nanotechnology; Hospital Management; Medical Image Processing; Industrial Economics and Management. ***Elective-II (Open):*** Telemedicine; Bionanotechnology Laboratory; Medical Image Processing Laboratory.

Semester VIII

Major Project; General Proficiency IV.

PhD Courses

Research Methodology; Advance Biomedical Instrumentation; Advances in Nanomedicine.

Seminars/Conferences/Symposia/Workshops

Organized

The Department organised the following: (i) National conference on *Biomechanics and Rehabilitation Engineering (BIOREHAB -2016)* from 15-16 September 2016 at Old Guest House, NEHU, Shillong, with Dr. Dinesh Bhatia as Convener, (ii) *MIMICS Innovation Suite Workshop* from 19 to 20 September 2016 at the Department with Mr. Gajendra Kumar Mourya as Convener, (iii) Workshop on *Advanced Tool in the MATLAB* in collaboration with ELMAX, Kolkata, on 27 September 2016 at NEHU, Shillong, Convener: Mr. Gajendra Kumar Mourya, (iv) Virtual Laboratory Workshop (*Nodal Centre for North Eastern Region*) from 26 to 28 October 2016 at the Department with Mr. Gajendra Kumar Mourya as Organising Secretary, and (v) National Conference on *Recent Advances in Nanoscience and Nanotechnology* from 8-9 September 2016.

Attended

Dr. Dinesh Bhatia

Presented jointly with: (i) Meena Gupta a paper on “Comparative Study of Alpha and Theta

Waves between Normal and Cerebral Palsy Patients” which was awarded First Prize at the national conference on *Biomechanics and Rehabilitation Engineering* (BIOREHAB-2016) organized by the Department of Biomedical Engineering, NEHU, Shillong (15-16 September 2016), (ii) Sateesh Reddy Avutu and B.V. Reddy the best paper on “Design of Low-cost Manual-cum-Electric-powered Wheelchair for Disabled Person’s to Use in Indoor” at the 2nd International IEEE Next Generation Computing Technologies (NGCT-2016) organized by UPES, Dehradun (14-16 October 2016), and (iii) Bijeet Bardoloi, Sateesh Reddy Avutu and Sunny Khawash the first runner-up paper on “Ergonomic Design of Chair from Biomechanics Perspective” at the 14th Annual International Ergonomics Conference on *Humanizing Work and Work Environment* (HWWE-2016) organized by Dr. BR Ambedkar National Institute of Technology, Jalandhar, Punjab (8-11 December 2016).

Delivered invited lectures on: (i) “Growth and Development of Medical Devices in India” at the international conference on *Biomedical Engineering and Supportive Technologies* (BEST-2016) organized by BIET, Jhansi, on 2 and 3 September 2016, (ii) “Growth and Development of Innovative Low Cost Medical Devices in India” at the 2nd International Conference on *Harnessing Engineering, Technology, and Innovation for Sustainable Growth* organized by SSB University Institute of Chemical Engineering and Technology, Panjab University (September 30 and October 1, 2016), (iii) “Biotechnology, Biomedical Instrumentation and Bioinformatics” at the international conference on *Industry Interactive Innovations in Science,*

Engineering and Technology (I3SET) 2016 at JISCE, Kalyani (25-26 October 2016), and (iv) “Modern Interventional Tools for Children with Disability” at the 30th Annual Meeting of Society for Neurochemistry, India, and national workshop and conference on *Neurological and Psychiatric Research* organized by the CSIR-CCMB, Hyderabad (9-14 December 2016).

Mr. Shyamal Mandal

Presented a paper on “Growth of CNT in a Stainless Steel Surface by Using Gold Nanoparticle as a Catalyst for Corrosion Less” which was awarded as the first runner-up paper at the national conference on *Biomechanics and Rehabilitation Engineering* (BIOREHAB-2016) organized by the Department on 15-16 September 2016.

Publications

Published in India

Ahmad, N., Rizvi, S.M.D., Sahai, N., Dutta, R. (2016). Biosynthesis, characterization of gold nanoparticles using *M. indica* leaf extract and their anticancer activity. *International Journal of Nanobiotechnology*, 2(2):1-4.

Das, A., Ramchiary, S., Paul, S., Sinha, T.K., Bhatia, D. (2016). Studying the impact of alcohol consumption and its cultural understanding using embedding dimension in young healthy adults from Shillong, Meghalaya. *International Journal of Biomedical Engineering and Science*, 3(4):19-25.

Gupta, M., Bhatia, D. (2016). Comparative study of alpha and theta waves between normal and cerebral palsy patients. *International*

- Journal of Bionics and Biomaterials*, 2(2):12-15.
- Gupta, M., Rajak, B.L., Bhatia, D., Mukherjee, A. (2016). Effect on functional performance of upper extremity in spastic cerebral palsy children employing varying rTMS pulses. *International Journal of Biotechnology and Biomedical Sciences*, 2(3): 216-219.
- Kaur, M., Nara, S., Avutu, S.R., Bhatia, D., Shaw, D. (2016). Effect of gender and performance on EMG activity of selected knee extensor muscles during isometric contractions of fully extended knee in athletes. *International Journal of Computational Biology and Bioinformatics*, 2(2):1-6.
- Mandal, S. (2016). Growth of CNT in a stainless steel surface by using gold nanoparticle as a catalyst for corrosion less implants. *International Journal of Nanomaterials and Nanostructures*, 2(2):1-5.
- Moirangthem, J., Priya A., Bhatia, D. (2016). A comparative short-term study for efficiency in similar dance routines of different dance forms for different groups. *International Journal of Biomedical Engineering*, 2(2):36-40.
- Rajak, B. L., Gupta, M., Bhatia, D., Mukherjee, A., Paul, S., Sinha, T.K. (2016). Power spectral analysis of EEG as a potential marker in the diagnosis of spastic cerebral palsy cases. *International Journal of Biomedical Engineering and Science*, 3(3): 23-29.
- Rohilla, P.K., Verma, S., Sahai, N., Bhatia, D., Paul, D., Saikia, A., Mazumdar, S. (2017). Material selection for the prosthetic hand. *International Journal of Biomedical Engineering*, 3(1):1-5.
- Published Abroad**
- Bardoloi, B., Bhutia, C., Bhatia, D., Paul, S. (2017). Knee osteoarthritis: An overview of recent interventions. *Journal of Biomedical Engineering and Biosciences*, 4:1-18.
- Gogoi, M., Jaiswal, M. K., Sarma, H. D., Banerjee, R., Bahadur, D. (2017). Biocompatibility and therapeutic evaluation of magnetic liposomes designed for self-controlled cancer hyperthermia and chemotherapy. *Integrative Biology*, doi: 10.1039/c6ib00234j.
- Gupta, M., Rajak, B.L., Bhatia, D., Mukherjee, A. (2016). Transcranial magnetic stimulation therapy in spastic cerebral palsy children improves motor activity. *Journal of Neuroinfectious Diseases*, 7(4):1-4.
- Kaur, M., Nara, S., Shaw, D., Bhatia, D. (2016). EMG Asymetricity of selected knee extensor muscles in sustained squat posture (a yogic posture) of athletes in relation to their gender and performance. *Journal of Novel Physiotherapies*, 7(1):1-6.
- Nara S., Kaur M., Shaw D., Bhatia, D. (2016). Significance of bilateral coactivation ratio for analysis of neuromuscular fatigue of selected knee extensor muscles during isometric contractions at 0° in sportspersons. *Biomedical Science and Engineering, SciEP*, 4 (2):31-36.
- Nara, S., Kaur, M., Bhatia, D., Shaw, D. (2016). Co-contraction of knee stabilizer muscles during sustained squat posture (A Yogic Posture) in athletes. *Journal of Yoga and Physical Therapy*, 6(4):1-5.
- Paul S., Sinha, T. (2017). Effect of cerebral stroke on collective neural oscillations in rat brain. *International Journal of Stroke*, 11(Supp 3): 203-204.

- Rajak, B.L., Gupta, M., Bhatia, D., Mukherjee, A., Paul, S., Sinha, T. K. (2017). Power spectrum density analysis of EEG signals in spastic cerebral palsy patients by inducing r-TMS therapy. *Journal of Biomedical Engineering and Technology, SciEP*, 4(1): 7-11.
- Rajak, B.L., Gupta, M., Bhatia, D., Mukherjee, A. (2017). Effect of repetitive transcranial magnetic stimulation on hand function of spastic cerebral palsy children. *Journal of Neurological Disorders, SciEP*, 5(1):1-5.
- Saikia, A., Mazumdar, S., Sahai, N., Paul, S., Bhatia, D., Verma, S., Rohilla, P.K. (2016). Recent advancements in prosthetic hand technology. *Journal of Medical Engineering and Technology*, 40 (5):255-264.
- Book**
- Bhatia, D. (2016). *Stroke Rehabilitation*. ABS Books Limited, Delhi, ISBN: 978-93-86088-05-5.
- Book Chapters/Proceedings**
- Avutu, S.R., Bhatia, D., Reddy, B.V. (2016). Design of low-cost manual-cum-electric-powered wheelchair for disabled person's to use in indoor. In: *Proceedings of the 2nd International IEEE Next Generation Computing Technologies* (NGCT-2016). IEEE, USA, p.178-184.
- Chabukdhara, M., Gupta, S. K., Gogoi, M. (2017). Phycoremediation of heavy metals and biofuel production from algal biomass. In: *Algal Biofuels: Recent Advances and Future Prospects*. S. K. Gupta, A. Malik and F. Bux (Eds.). Springer Publication, Gewerbestrasse, Switzerland, Chapter 9, p. 163-188.
- Gogoi, M., Kumar N., Patra S. (2016). Multifunctional magnetic liposomes for cancer imaging and therapeutic applications. In: *Nanoarchitectonics for Smart Delivery and Drug Targeting*. A. M. Holban and A. M. Grumezescu (Eds.). Elsevier, Amsterdam, Netherlands, Chapter 27, p. 743-772.
- Saikia, A., Mazumdar, S., Sahai, N., Paul, S., Bhatia, D. (2016). Comparative study and feature extraction of muscle activity patterns in healthy subjects. In: *Proceedings of IEEE International Conference on Signal Processing and Integrated Networks*. SPIN 2016, p. 147-151.

Research Projects

New: 5

Title of Project	PI/Co-PI	Funding Agency	Rupees in lakh
Design of Neural Network Based Pacemaker	Dr. Dinesh Bhatia, PI; Sh. Nitin Sahai, Co-PI, Dr. Sudip Paul, Co-PI	Twinning Programme, DBT, GoI	69.64
Modeling, Simulation and Development of Smart Active Ankle Foot Orthotic Device for Gait Rehabilitation	Sh. Nitin Sahai, PI Dr. Dinesh Bhatia, Co-PI	Twinning Programme, DBT, GoI	53.70

Department of Biomedical Engineering

Automatic Segmentation of Abdominal Organs from 3D Medical Data Sets for Diagnosis and Treatment Planning	Sh. Gajendra Kumar Mourya, PI	SERB, DST, GoI	11.00
Bottom-Up Nanobiocomposite Film of Protein, Polymer and Nanoparticles by Langmuir Bldgett/ Layer by Layer Technique for Pesticide Sensing Application	Dr. Mrityunjoy Mahato/ Dr.Manashjit Gogoi	SERB, DST, GoI	32.15
Conversion of Waste Plastic into Value Added Products	Dr. Mrityunjoy Mahato/ Dr.Manashjit Gogoi	SERB, DST, GoI	7.24

Ongoing: 3

Title of Project	PI/Co-PI	Funding Agency	Rupees in lakh
To Study Relief of Muscle Spasticity in CP Kids by Employing r-TMS in Collaboration with NGO, UDAAN Working for Disabled and Elderly	Dr. Dinesh Bhatia, PI	DST, GoI	57.00
Design of Artificial Hand with Artificial Fingers	Sh. Nitin Sahai, PI; Dr. Dinesh Bhatia, Co-PI	Twinning programme, DBT, GoI	32.78
Design of Pulsed Electrical Knee Stimulator for Osteoarthritis (OA) Patients	Dr. Dinesh Bhatia, PI; Dr. Sudip Paul, Co-PI	DST, GoI	46.77

Academic Collaborations

The Department has collaborated with: (i) Dr. Manish Kapoor of NEIGRIHMS, Shillong, on *Design of Neural Network Based Pacemaker*, (ii) Dr. Bhaskar Borgohain of NEIGRIHMS, Shillong, on *Modeling, Simulation and Development of Smart Active Ankle Foot Orthotic Device for Gait Rehabilitation*, (iii) Virtual, Laboratory, Department of Electrical Engineering of IIT, Roorkee, on *Virtual Laboratory*, (iv) Indian Society of Biomechanics of IIT,

Roorkee, on *Eastern Region of ISB*, (v) Dr. Akash Handique of NEIGRIHMS, Shillong, on *Automatic Segmentation of Abdominal Organs from 3D Medical Data Sets for Diagnosis and Treatment Planning* and (vi) Dr. Sanjib Handique of GNRC, Assam, on *Study Tour and Expert Talk*.

Honours/Awards/Recognitions

Dr. Dinesh Bhatia

Associate Editor, *Journal of Biomedical Engineering and Biosciences*, and

member of the Editorial Board of the *Indian Journal of Medical Informatics* (IJMI), (ii) Ambassador, Asian Council of Science Editors (ACSE), Dubai, UAE, (iii) Coordinator, Virtual Laboratory Nodal Centre for the North Eastern Region under NMEICT initiative MHRD, GoI, (iv) Expert member for the Vidwan UGC Expert Database, NME-ICT, UGC, MHRD, GoI, (v) Convener, Local Chapter, Eastern Region, Indian Society of Biomechanics (ISB, since February 2016), and (vi) Funded study titled “To Study Relief of Muscle Spasticity in CP Kids by Employing Transmagnetic Stimulation (rTMS)” was selected in Accessible India Campaign (*Sugamya Bharat Abhiyan*) under the “Technology Interventions for Disabled and Elderly Programme” of DST, Delhi, for release of Compendium by the Hon’ble Prime Minister of India 2017.

Mr. Nitin Sahai

Member of the Editorial Boards of: (i) *International Journal of Scientific Research and Biotechnology* (IJSRB), (ii) *International Journal of Biomedical Engineering*, and (iii) *International Journal of Bionics and Bio-Materials*.

Dr. Sudip Paul

Awarded: (i) Science and Engineering Research Board Travel Award 2016 for participation in Society for Neuroscience 2016 Conference, San Diego, USA; (ii) World Federation of Neurology Junior Travelling Fellowship 2016 Award for participation in Society for Neuroscience 2016 Conference, San Diego, USA, and (iii) Young Investigator Award 2016 during the 10th World Stroke Congress, Hyderabad, 2016. He is also a member of the Editorial Board of the

International Journal of Biomedical Engineering and Science.

Dr. Manashjit Gogoi

Member of the Editorial Boards of the *International Journal of Bio-Materials and Biomedical Engineering* (Journals Pub), and *International Journal of Bionics and Bio-Materials* (Journals Pub).

Other Activities

Dr. Dinesh Bhatia

Delivered an invited talk on “Signal and Image Processing” during a faculty development programme organized by the Department of Electronics and Communication Engineering, Bundelkhand Institute of Engineering and Technology, Jhansi, U.P. (18-22 July 2016). He also delivered lectures as a resource person on: (i) “Biomedical Engineering: Its Scope and Growth and Biosensors with Applications” during the UGC-short-term course on *Life Sciences with Special Reference to the Nano-Science* held at UGC-HRDC, NEHU (1-6 August 2016), and (ii) “Biomedical Engineering: Its Growth and Applications” on 19 August 2016 at the Department of Zoology, Synod College, Shillong.

Reviewer for the journals of: (i) *Musculoskeletal and Neuronal Interactions* (JMNI), USA, (ii) *BMJ Open Access Journals*, London, UK, and (iii) *American Journal of Electrical and Electronic Engineering*, SciEP, USA.

Dr. Sudip Paul

Delivered different lectures as resource person for students seminar on 20 April 2016 at JIS College of Engineering, Kolkata, (ii) 2nd IBRO/APRC Chandigarh Neuroscience School at Panjab University, Chandigarh,

Department of Biomedical Engineering

India, from December 14 to 22, 2016, and (iii) TEQIP-sponsored invited lecture at JIS College of Engineering on 29 July 2016.

Reviewer for: (i) *International Journal of Biomedical Engineering and Science*, (ii) *International Journal of Bionics and Biomaterial*, (iii) *International Journal of Biomedical Engineering*, (iv) *Journal of the Institution of Engineers (India): Series B*, Springer, and (v) *Neural Computing and Applications*, Springer.

Dr. Manashjit Gogoi

Reviewer for the journals of: (i) *Nanoscience and Nanoengineering Journal* (Horizon Research Publishing, USA), (ii) *Universal Journal of Medical Science* (Horizon Research Publishing, USA), and (iii) *Biomedical Research Journal*.

Delivered an invited talk on “Nanomedicines for Cancer Drug Delivery” at *Guest Lecture Series -2016* on 26 August 2016 organized by St. Edmund’s College, Shillong. He also delivered a lecture on this topic and another titled “Multifunctional Magnetic

Liposomes for Hyperthermia Cancer and Imaging Applications” during the short-term course in *Life Sciences with Special Reference to the Nano Science* organized by UGC-HRDC, NEHU (1-2 August 2016).

Mr. Gajendra Kumar Mourya

Delivered an invited talk on “Medical Imaging and Image Processing” during the 37th Orientation Program (General) organized by UGC-HRDC, NEHU (8 August 2016 to 6 September 2016), (ii) on “Instrumentation and Measurement Society” organized by the Department of Electrical Engineering at NIT, Shillong, on 29 August 2016.

Attended a course on (i) “Biomedical Engineering: Insight and Signal Processing” conducted by the Global Initiative for Academic Networks from 26 to 30 December 2016 at Aligarh Muslim University sponsored by MHRD, Government of India, and (ii) “Biomedical Image Analysis” conducted by GIAN organized by IIT Roorkee and sponsored by MHRD, Government of India (9-13 January 2017).

DEPARTMENT OF COMPUTER APPLICATIONS (TURA CAMPUS)

Head: Dr. Anindya Halder
Telephone: 919774471479 (M)/919477025103 (M)
E-mail: computerapplication.nehu@gmail.com, anindya.halder@gmail.com

Faculty: 3

Designation	Name and Qualification	Specialization
Assistant Professor (3)	Anindya Halder, MCA, PhD	Pattern Recognition, Soft Computing
	Ansuman Kumar, MCA, MTech	Computer Networks, Web Services
	Rubul Kumar Bania, MCA, MTech	Datamining, Artificial Intelligence

Thrust Areas of Research

Machine Learning, Pattern Recognition, Data mining, Bioinformatics, Medical Image Analysis, and Remote Sensing Image Analysis.

Brief Statement of Academic Activities

The Department of Computer Applications was established in the year of 2012 under the School of Technology. The Department offers the Three-Year Master's programme in Computer Applications (MCA) since 2013 and the PhD programme in Computer Applications from

2016. The core part of the MCA curriculum embodies theoretical and practical knowledge basic to the industry/academic/research with special reference to emerging technologies relevant to the field of computer applications. During the year under report, the Department undertook an industrial study tour for the students of MCA final year to Delhi, Noida and Chandigarh. Seven students were awarded their MCA degree. The Department also organised a national workshop on *Networking, NNSC-2016* in collaboration with the E-Cell IIT, Kanpur, at the Department of Computer Applications, NEHU, Tura Campus (26-27 May, 2016).

Students' Profile

Enrolment Capacity: MCA – 20, PhD - Variable

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
1 st Sem	13	07	01	10		09	10	10	20
2 nd Sem	09	05	01	07		06	07	07	14
3 rd Sem	09	04		08		05	08	05	13
PhD	02					02		02	02

Department of Computer Applications (Tura Campus)

Degree Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MCA	04	03		06		01	05	02	07

Courses Conducted

Postgraduate: MCA

Semester I

Digital Logic Design; Programming and Problem Solving through C; Organisational Behaviour, Accounting and Financial Management; Discrete Mathematics and Probability Theory.

Semester II

Theory of Computation; Data Structures Using C++; Object Oriented Programming and Design; Computer Graphics; Computer Organisation and Architecture.

Semester III

Database Management System-I; Data Communication and Networks I; Operating System, Design and Analysis of Algorithms; GUI Programming Using VB.NET.

Semester IV

Software Engineering; Data Communication and Networks II and Network Programming using Linux, Oracle, Database Management System II; Internet Technology and Applications; Artificial Intelligence.

Semester V

Compiler Design; Programming through Java; System Programming; Data Mining; Minor Project.

Semester VI

Major Project.

PhD Course Work

Research Methodology; Design Analysis of Algorithm; and Soft Computing.

Educational Tour of Students

The Department organised an industrial study tour for the students of MCA final year under the guidance of Mr. Ansuman Kumar, Assistant Professor. The tour started on 23 January 2017 and ended on 4 February 2017. The places visited were Delhi, Noida and Chandigarh. This study tour aimed to inspire and motivate the students through industrial visits, and to also create an opportunity for them to visit new places to boost their zest for knowledge and future endeavours.

Seminars/Conferences/Symposia/Workshops

Organized

Mr. Rubul Kumar Bania organised a national workshop on *Networking, NNSC-2016* in collaboration with the E-Cell IIT, Kanpur, at the Department of Computer Applications, NEHU, Tura Campus (26-27 May 2016).

Publications

Published Abroad

Halder, A., Upadhyay, A. K., Das, S.K. (2017). Numismatic image segmentation: An empirical study. *International Journal of Computer Applications*, 160(4):36-39.

Research Projects

Ongoing

Title of the Project	PI/Co-PI	Funding Agency	Rupees in lakh
Automatic Recognition of the Patterns in Numismatic Data	Dr. Anindya Halder	UGC	11.50

Other Activities

Dr. Anindya Halder

Completed a refresher course in *Electronics and Computer Science* organized by UGC-HRDC, Jadavpur University, during 28 November 2016 to 17 December 2016, and the short-term training program on *Introduction to DBMS* organized by NITTTR, Kolkata (6 - 17 March 2017).

Acted as a resource person in: (i) DBT-sponsored short-term training programme on *Bioinformatics-Bridging In Vivo to Sillico* organized by the Bioinformatics Center, Department of RDAP, NEHU,

Tura Campus (21-23 March 2017), and (ii) ICSSR-sponsored training course on *Research Methodology for Researchers in Social Sciences and Humanities* organized by the Department of Education, NEHU, Tura Campus during 9 to 19 March 2016. He was also a reviewer for the *IET Computer Vision Journal*, *Journal IEEE Access*, and *IET Image Processing Journal*.

Mr. Rubul Kumar Bania

Participated in ISI-ADBU summer school on *Soft Computing Paradigm and Machine Intelligence Techniques*, during 07-11 July 2016, at the Department of CSE and IT, Don Bosco University, Assam (July 7-11, 2016).

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Head: Dr. Rupaban Subadar

Telephone: 0364-2723661

E-mail: hodece@nehu.ac.in, rupaban.subadar@gmail.com

Faculty: 11

Designation	Name and Qualification	Specialization
Associate Professor (4)	Lairenlakpam Joyprakash Singh, MTech (Tezpur), PhD (Jadavpur)	Signal Processing
	Sushanta Kabir Dutta, BE (JEC), MTech (Manipal)	Speech Signal Processing, Image Processing
	Subhash C. Arya, BTech (GGSIPU), PhD (ISM)	Opto-Electronics Devices, Silicon Photonics, Optical modulators and Amplifiers, Optical Communication
	Rupaban Subadar, MTech (Tezpur Univ), PhD (IIT Guwahati)	Theory of Wireless Communication
Assistant Professor (7)	Juwesh Binong, BE (Bhavnagar), MSc (SMU)	Robotics and context-aware systems
	Rajkishur Mudoi, BE (Dibru), MTech (Tezpur)	Wireless Communication, Embedded System
	Jaydeep Swarnakar, ME (Jadavpur)	Control System
	Fidalizia Pyrtuh, BTech (SJCE), MTech (IIIT, Allahabad)	Speech Processing
	Asif Ahmed, BTech (Kalyani), M. Tech. (NIT, Durgapur)	Mixed Signal CAD tool Development
	Pankaj Sarkar, PhD (Jadavpur)	RF/Microwave filters, Antenna
	Nipanka Bora, MTech (Tezpur)	Nano electronics Device Modelling, VLSI Design

Thrust Areas of Research

Signal Processing: Speech, Language and Speaker Recognition, Digital Image Processing, Quantized Semiconductor Structures, Microwave passive and active circuit design,

Telecommunication Engineering, Optical Fiber Communication and Opto-Electronics Devices, Theory of Wireless communication, Mixed Signal CAD tool and VLSI Design, Qualitative Reasoning and Context Awareness.

Brief Statement of Academic Activities

The Department is currently running three programmes, namely BTech, MTech and PhD in ECE Engineering. As for BTech Electronics and Communication Engineering, the Department admitted 60 students by vertical entry and six students by lateral entry. Eighteen students were admitted to the MTech programme and five candidates got admission to the PhD programme. A total of 63 and 15 students have completed their BTech and MTech degrees in Electronics and Communication Engineering, respectively. Faculty and students have published five papers in national and international journals and three

chapters in edited books and proceedings. One paper entitled “Design and Analysis of Silicon Optical Modulator based on Two-Core Hybrid Plasmonic Directional Coupler” by B. Kaur and S.C. Arya was given the best paper award at the international conference on *Opto-Electronics and Applied Optics* in Kolkata (August 18-20, 2016), and the other one titled “Mode Analysis of Multicore Few-Mode Erbium Doped Fiber Amplifier” by B. Kaur S.C. Arya, and was awarded the best paper award at the research conclave on *Recent Innovation in Science and Engineering*, at NIT, Silchar (March 24-26, 2017).

Students’ Profile

Enrolment Capacity: BTech – 60/6 (Vertical/Lateral), MTech – 18, PhD - Variable

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
BTech	52	07	05	26		28	15	44	59
MTech	10	05		07		08	03	12	15
PhD	04	01		02		03	01	04	05

Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
BTech	57	06	10	24		29	13	50	63
MTech	12	03		05		10	01	14	15

Placement of Students in different companies: 8

1. Mr. Shivaji Roy, Phronesis Partners.
2. Ms. Pooja Nath, InfoAnalytica Consulting Pvt Ltd.
3. Ms. Anisha Kandoi, Tech Mahindra.
4. Ms. Pooja Nath, Tech Mahindra.
5. Ms. Ananya Bordoloi, Robert Bosch (International Company).

6. Amit Deb, Professional Assistance for Development Action (PRADAN).
7. Avinash Kumar Prasad, Amazon India.
8. Sawan Sarkar, Amazon India.

Research Fellowships: 7

UGC Non-Net: 7

Courses Conducted

Undergraduate: BTech (Electronics and Communication Engineering)

Department of Electronics and Communication Engineering

Semester II

Basic Electronics; Basic Electronics Laboratory.

Semester III

Electronic Devices and Circuits; Signals and Systems; Electrical Network Theory; Data Structures and Algorithms; Electronic Devices and Circuits Laboratory; PCB Design Laboratory.

Semester IV

Electromagnetic Theory; Digital Electronics; Linear Integrated Circuits and Systems; Electronics Measurements and Instrumentation; Digital Electronics Laboratory; Linear Integrated Circuits Laboratory; Electronics Measurements and Instrumentation Laboratory.

Semester V

Microprocessor; Principles of Communication Systems; Power Electronics; Basic Control Engineering; Microprocessor Laboratory; Communication Systems Laboratory; Simulation using MATLAB.

Semester VI

Embedded Systems and Microcontrollers; Digital Signal Processing; Microwave Engineering; Computer Communications and Networks; Antenna, Embedded Systems and Microcontrollers Laboratory; Digital Signal Processing Laboratory; Microwave Engineering Laboratory; GP III.

Semester VII

Introduction VLSI Design; Digital Communication, Data Communication Systems; Information Theory and Coding; VLSI Design Laboratory; Digital Communication Laboratory.

Semester VIII

Major Project.

Postgraduate: MTech (Electronics and Communication Engineering)

Semester I

Mathematical and Statistical Techniques; Advanced Communication Engineering; Elective I (Speech Processing; Advanced Wireless Communication; Microwave Theory and Techniques; VLSI Devices and Modelling; Lightwave Communication System); Elective II (Spoken Language Identification Techniques, Speaker Recognition, Machine Learning, Advanced Fiber Optic Communication, Communication Network) RF and Communication Lab.

Semester II

Mobile Communication; Advanced Digital Signal Processing; Open Course I (Analog IC Design, Advanced Embedded Systems, High Speed Digital Design, Advanced Control Engineering, Antenna Theory and Design); Open Course II (Advanced Image Processing, Computational Electromagnetics, Optical Communication Networks, Processor Architectures for VLSI, Digital IC Design); Advanced Digital Signal Proc. Lab.

Semester III

Dissertation - Part I

Semester IV

Dissertation - Part II

PhD Courses

Course work Research Methodology; Mathematical Methods; Speech Processing; Advanced Wireless Communication; Microwave Theory and Techniques; VLSI Devices and Modelling, Lightwave Communication System; Spoken Language Identification Techniques; Speaker Recognition; Machine Learning; Advanced Fiber Optic Communication; Mobile Communication; Analog IC Design; Advanced Embedded Systems; High Speed Digital Design; Advanced Control Engineering;

Antenna Theory and Design; Advanced Image Processing; Computational Electromagnetics; Communication Networks; Processor Architectures for VLSI; Digital IC Design.

Seminars/Conferences/Symposia/Workshops

Attended

Susanta Kabir Dutta

Presented papers titled: (i) “A Comparative Evaluation of Language Identification by Phonetic Engine and GMM-UBM Based Classifier” at the 5th International Conference on *Computing, Communication and Sensor Network*, CCSN2016, Kolkata, December 24-25, 2016, (ii) “Some Issues Related to Phone Recognition and Language Identification Using Phonetic Engine” at the 2nd International Conference on *Computing and Communication Systems (I3CS'16)*, NEHU, November 11-13, 2016.

Dr. S. C. Arya

Presented three research papers entitled: (i) “Full-duplex 20 Gbit/s Fiber-Optic Link Design Based on Dual-Polarization Differential Quaternary Phase-Shift Keying,” (ii) “Spectrally Efficient SSB Optical OFDM Signal Using Balanced Detection,” and (iii) “A Novel Design Approach of Optical DP-MSK Transmitter” at the international conference on *Optronix-2016* during 18 to 20 August 2016 organized by the University of Engineering and Management (UEM), Kolkata.

Publications

Published in India

Mudoi, R., Subadar, R. (2016). Outage probability of TAS/MRC systems over Nakagami-m

fading channels with correlation. *Journal of Electronic Design Technology*, 7(1):39-45.

Mudoi, R., Subadar, R. (2017). Performance analysis of TAS/MRC systems over η - μ fading channels with equal correlation. *Advances in Wireless and Mobile Communications*, 10(2):239-250.

Published Abroad

Bora, N., Das, P., Subadar, R. (2016). An analytical universal model for symmetric double gate junction-less transistors. *Journal of Nano- and Electronic Physics, Ukraine*, 8(2):2003-2007.

Sarkar, P., Pal, M., Ghatak, R. (2016). A compact dual stopband bandstop filter using defected SIR and Hilbert shape fractal structure. *Microwave and Optical Technology Letters*, 58(6):1345-1347.

Pal, M., Ghatak, R., Sarkar, P. (2016). Perturbed Sierpinski carpet resonator and its usage in compact dual and triple band bandpass filters. *International Journal of RF and Microwave Computer-Aided Engineering*, 26(5): 418-425.

Books/Book Chapters/Proceedings

Boro, G., Arya, S.C., (2017). Spectrally efficient SSB optical OFDM signal using balanced detection. In: *Proceedings of the Third International Conference, OPTRONIX 2016*. I. Bhattacharya, S. Chakrabarti, H.S. Reehal and V. Lakshminarayanan (Eds.). Springer, Singapore, p.10-17.

Boro, U. C., Bora, N., Pegu, P. A., Subadar, R. (2016). Impact of temperature on the performance of sub-35nm symmetric Double Gate Junctionless Transistor based inverter using High-K gate dielectric, a TCAD simulation study. In: *2016 IEEE*

Department of Electronics and Communication Engineering

1st International Conference on Power Electronics, Intelligent Control and Energy Systems (ICPEICES), Delhi, 2016, p. 1-4, doi: 10.1109/ICPEICES.2016.7853735.

Kakati, D., Arya, S.C. (2017). Full-duplex 20 Gbit/s fiber-optic link design based on dual-

polarization differential quaternary phase-shift keying. In: *Proceedings of the Third International Conference, OPTRONIX 2016*. I. Bhattacharya, S. Chakrabarti, H.S. Reehal, V. Lakshminarayanan (Eds.). Springer, Singapore, p.502-507.

Research Projects

New: 1

Title of Project	PI/Co-PI	Funding Agency	Rupees in lakh
Modeling and Design of Silicon Based Optical Modulator for High Speed Optical Communication System	Dr. S. C. Arya	SERB	30.015

Other Activities

Dr. L. J. Singh

Member of (i) Advisory Committee, Shillong Engineering College, Government of Meghalaya, Shillong, (ii) Board of Management, NERIST, Arunachal Pradesh, (iii) Doctoral Committee, NIT, Nagaland, (iv) Technical Programme Committee Member of the national conference on *Innovativations in Science and Technology 2017 (NCIST-17)* held on 20-21 March 2017 at Manipur Institute of Technology, Manipur, and (iii) Reviewer of the *Proceedings of the National Academy of Sciences, India (NASI), Section A: Physical Sciences*, Published by Springer India, Pvt Ltd.

Dr. S. C. Arya

Member of (i) Departmental Research Committee for Doctoral in NIT Meghalaya, (ii) Reviewer for the *Journal of The Institution of Engineers (India): Series B* published by Springer and the *Journal of Trends in Opto-Electro and Optical*

Communication published by STM, India, (iii) Mentor for a group of 10 Researchers in *NESAC-Academic and Students Interaction Workshop* held on 24 June 2016 at NESAC, Umiam, where about 10 Electronics Projects were demonstrated by the ECE Department students, (iv) Attended a national course on *Sophisticated Instruments in Interdisciplinary Research* conducted under the TEQUIP held from 29 March to 1 April 2016 at CET, IIT Guwahati.

Dr. Rupaban Subadar

Reviewer for the journals of *International Journal of Electronics Letters*, and *Journal of IET Communication*. He was also a member of the Academic Committee, AICTE-NEQIP Project, Shillong Polytechnic.

F. Pyrtuh

Attended the MHRD-sponsored Global Initiative of Academic Networks (GIAN) on *Advanced Sinusoidal Modeling of Speech and Applications* at IIT, Guwahati, during 26-30 December 2016.

DEPARTMENT OF ENERGY ENGINEERING

Head: Dr. Samrat Paul
Telephone: + 91 9485043421
E-mail: paulsamrat17@gmail.com

Faculty: 4

Designation	Name and Qualification	Specialization
Assistant Professor (4)	Dr. Samrat Paul, MTech, PhD (Physics)	Solar Energy, Energy Nanomaterials
	Mr. Manmit Saikia, MTech (ET, Tezpur)	Bio-Energy, Solid Bio-Fuel
	Mr. Sanat Das, MTech (IIT, Kanpur)	Propulsion Thermal Energy Storage System
	Mr. Samar Jyoti Hazarika, MTech (ET)	Energy Management and Accounting

Thrust Areas of Research

Energy Nanomaterials

Brief Statement of Academic Activities

The Department is offering the Bachelor of Technology in Energy Engineering and PhD in Energy Engineering. The Department started functioning from the academic year 2013-14. It has a total enrolment of 214 with the annual-enrolment capacity of 60 students. During the year under report, the Department organized a national conference on *Renewable Energy Technology Utilization*

for Rural Development and Trade Show, one Entrepreneurship Awareness Camp and a one-day awareness programme on *Renewable Energy*. Faculty and students have published two papers in international journals and 11 chapters in edited books and proceedings. A paper entitled “Synthesis of Heterogeneous Nanocatalysts for Sustainable Biofuel Production” was given the best paper award at the international conference on *Electrical Energy and Renewable Energy* in Sikkim, and a poster presentation on “Production of Biodiesel from Pine Oil Using Heterogeneous Nanocatalyst” was awarded the Third Best Poster Award in NCRETURD 2017.

Students’ Profile

Enrolment Capacity: BTech - 60, PhD – Variable

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
BTech	187	27	23	86	14	91	27	187	214
PhD	001					01		001	001

Department of Energy Engineering

Fellowships: 133

NHP Fellowship	Merit Scholarships	Aid Fund Scheme	Special Scholarship SA-III Section	Minorities Fellowship
04	01	07	35	86

Courses Conducted

Undergraduate: BTech (Energy Engineering)

Semester I

Elements of Environment Science; Engineering Mathematics I; Engineering Chemistry; Computer Systems and Programming; Basic Electronics; Engineering Chemistry Laboratory; Computer Programming; Basic Electronics Laboratory; Engineering Graphics.

Semester II

Professional Communication Skills; Engineering Mathematics II; Engineering Physics; Engineering Mechanics; Basic Electrical Engineering; Digital English Language Laboratory; Engineering Physics Laboratory; Basic Electrical Laboratory; Workshop Practice; General Proficiency I.

Semester III

Energy Resources; Electrical Systems and Automatic Control; Elements of Nanoscience; Engineering Thermodynamics; Fluid Mechanics; Fluid Mechanics Laboratory; Thermal Laboratory; Electrical Measurement and Instrumentation Laboratory.

Semester IV

Basics of Renewable Energy Technology; Measurement and Control Instrumentation; Heat and Mass Transfer; Fuel and Combustion Technology; Basics of Solar Energy Technology; Heat and Mass Transfer Laboratory; Fuel and Combustion Laboratory; Solar Energy Laboratory; General Proficiency II.

Semester V

Solar Thermal Technology, Biomass and Bio-fuel Technology; Energy Economics and Planning; Energy Auditing; Nuclear Energy; Solar Thermal Laboratory; Biomass and Bio-fuel Laboratory; Energy Auditing Laboratory; Seminar.

Semester VI

Photovoltaic Conversion Technology; Internal Combustion Engine and Gas Turbine; Hydro, Wind, Ocean and Tidal Energy Technology; Industrial Economics and Energy Management; Climate change and Carbon Trade; Photovoltaic Conversion Laboratory; Internal Combustion Engine Laboratory; Hydro, Wind and Ocean Technology Laboratory; General Proficiency-III.

Semester VII

Professional Ethics and IPR; Nanotechnology for Renewable Energy Systems; Chemical Energy Storage Devices and Systems; Fuel Cell and Hydrogen Energy; Waste Heat Recovery; Chemical Storage and Fuel Cell Laboratory; Field Visit/Industrial Training; Minor Project and Seminar, General Proficiency IV.

Semester VIII

Major Project; General Proficiency V.

PhD Courses

Research Methodology; Energy Resources and Technology; Nanomaterials in Energy Devices and Systems.

Seminars/Conferences/Symposia/ Workshops

Organized

The Department organised: (i) National Conference on *Renewable Energy Technology Utilization for Rural Development and Trade Show* from 27 February to 1 March 2017. *Convenor*: Dr. Samrat Paul, (ii) Entrepreneurship Awareness Camp on 12-14 December 2016. *Convenor*: Dr. Samrat Paul, and (iii) One day awareness programme on *Renewable Energy* on 24 August 2016. *Convenor*: S J Hazarika.

Attended

Dr. Samrat Paul

Delivered a lecture on “Mixed Phase Visible Active Titania-CNT Nanocomposite for Dye Sensitized Solar Cells” at Springer international conference on *Electrical Engineering and Renewable Energy* organised by Sikkim Manipal Institute of

Technology, Gangtok (December 17-18, 2016).

Publications

Published Abroad

Nair, R.G., Das, A., Paul, S., Rajbongshi, B., Samdarshi, S.K. (2017). MWCNT decorated V-doped titania: An efficient visible active photocatalyst. *Journal of Alloys and Compounds*, 695:3511–3516.

Paul, S., Rajbongshi, B., Bora, B., Nair, R.G., Samdarshi, S. K. (2017). Organic photovoltaic cells using MWCNTs. *New Carbon Materials*, 32 (1):27–34.

Proceedings

Hazarika, S.J. (2015). An experimental investigation on zero head water turbine. In: *WEENTECH Proceedings in Energy, RESD 2015*. Tshering, T. Lhendup, R. Singh and Anil Kumar (Eds.). World Energy and Environment Technology Ltd, UK, p. 193-199.

Research Projects

New: 2

Title of Project	PI/Co-PI	Funding Agency	Rupees in lakh
Synthesis of d-group Metal Perovskite Nanocomposite for Dye Sensitized Solar Cell	PI: Dr. Samrat Paul Co PI: Mr. Sanat Das	DST-SERB	46.13
Synthesis of Nano-Catalyst Decorated Activated Char for Biofuel Production	PI: Dr. Rahul Singh Chutia Mentor: Dr. Samrat Paul	DST-SERB	19.20

Department of Energy Engineering

Ongoing: 1

Title of Project	PI/Co-PI	Funding Agency	Rupees in lakh
Titanium Dioxide/Carbon Nanotube Nano Composite Dyed Sensitized Solar Cells	Dr. Samrat Paul	DST-SERB	21.92

Academic Collaborations

Dr. Samrat Paul

Collaborated with: (i) Prof. Alberto Tagliaferro, Applied Science and Technology, University of Politecnico di Torino, Torino, Italy, on *Effect of Mixed Phase Titania on Active Layer of DSSC*, (ii) Prof. S. K. Samdarshi, Centre of Energy Engineering, Central University of Jharkhand, Ranchi, on *Characterization of Photoactive Nanoparticles for Photocatalytic Activity*, (iii) Prof. B. Ghosh, School of Energy Studies, Jadavpur University, WB, on *Characterization of Perovskite Materials for Solar Cell Application*, (iv) Prof. R. Kataki, Department of Energy, Tezpur University, Assam, on *Production of Biofuels from Locally available Pine- wood*, (v) Dr. R. G. Nair, Department of Physics, NIT Silchar, Assam, on *Characterization of Perovskite Materials for Solar Cell Application*, and (vi) Dr. P. Deb, Department of Physics, Tezpur University, Assam, on *Characterization of Perovskite Materials for Solar Cell Application*.

Mr. Samar Jyoti Hazarika

Collaborated with: (i) Dr. Manoj Kr. Singh, JSPS post-doctoral researcher, University of Tokyo, Japan, on *Estimation of Comfort Status in Offices of Shillong, Meghalaya*, (ii) Mr. Anil Kumar, Executive Director (HR),

NEEPCO, Ministry of Power, Government of India, Shillong, on *Quality Control and Quality Assurance, ISO Management System EMS, QMS, and OHSAS*, (iii) Shri Debajit Das, National Project Coordinator, United Nations Industrial Development Organisation (UNIDO), on *Promoting Market Transformation for Energy Efficiency in MSMEs-Baseline Study for Jorhat Tea Cluster* and (iv) Shri Naba Kalita, CEO, SURVIVE-NE, on *Energy Audit in Radisson Blu Hotel, Guwahati, Assam*.

Honours/Awards/Recognitions

Dr. Samrat Paul

Certified by International Registrar for Certified Auditors as Lead Auditor for ISO 9001: 2015 standards, 2017.

Manmit Saikia

Certified as Chartered Engineer (India) in Mechanical Division of Institute of Engineers (IEI), Kolkata, on 29 December 2016.

Samar Jyoti Hazarika

Certified as Energy Auditor-cum-Energy Manager (EA 15266) by Bureau of Energy Efficiency, Ministry of Power, Government of India, as per Energy Conservation Act 2001.

Other Activities

Dr. Samrat Paul

Delivered an invited lecture on “Renewable and Non-renewable Energy” at UGC-HRDC short-term course in *Environmental Sciences* organised by UGC-HRDC, NEHU (October 07, 2016).

Mr. Manmit Saikia

Participated in the short-term course on “*Renewable Energy Conversion Technology*” organised by Power Electronics Group, CDAC (T) and NEHU, Shillong.

Mr. Sanat Das

Completed the UGC-sponsored special winter school on *Cultural Heritage and North East Studies* from 23 January 2017 to 12 February 2017 organised by UGC, HRDC, Gauhati University.

Mr. Samar Jyoti Hazarika

Delivered an invited talk on: (i) “Efficient Operation and Maintenance of Boilers” at a national workshop at Guwahati on 22 November 2016 conducted by the National Productivity Council, Under Ministry of Commerce and Industry, Government of India, (iii) “Quality Control and Quality Assurance and Management System like QMS, EMS and OHSAS” at NEEPCO, Corporate Office, Shillong, on 30 March 2017.

Acted as Team Leader for conducting: (i) “Baseline Energy Study for Jorhat Tea Cluster, Assam” for United Nations Industrial Development Organisation, conducted by Survive-NE (26 December, 2016 to 10 January 2017), and (ii) “Energy Audit in Radisson Blu Hotel, Guwahati, Assam” conducted by Survive-NE (27 January 2017 to 8 February 2017).

DEPARTMENT OF INFORMATION TECHNOLOGY

Head: Dr. Debdatta Kandar

Telephone: 0364-2723611(O)

E-mail: hodit@nehu.ac.in

Faculty: 12

Designation	Name and Qualification	Specialization
Professor (1)	Goutam Saha, MTech (Calcutta), PhD (IIT Kgp)	Bioinformatics and Image Processing
Associate Professor (4)	Md. Iftekhar Hussain, MTech & PhD (Tezpur)	Internet of Things (IoT), QoS Issues in Computer Networks, Wireless Networks
	Bubu Bhuyan, MTech (Tezpur), PhD (Jadavpur)	Information Security
	Hemanta Kumar Kalita, MTech (Tezpur), PhD (Jadavpur)	Computer and Network Security
	Debdattta Kandar, MTech (Allahabad AIDU), PhD (Jadavpur)	Wireless Mobile Communication, Soft Computing, Artificial Intelligence, RADAR Imaging
Assistant Professor (7)	Swarup Roy, MTech & PhD (Tezpur)	Data mining, Computational Biology, Machine Learning
	Arnab Kumar Maji, MTech (IEST, Shibpur), PhD (Assam)	Image Processing, Algorithm of NP Complete Puzzles
	Sangita Neog, MTech (Tezpur)	Information Theory and Coding
	Sufal Das, BTech (WBUT), MTech(Tezpur)	Big Data Analysis, Data Mining, Soft Computing
	Subhas Chandra Sahana, BTech (WBUT), MTech (Tezpur)	Cryptography and Network Security
	K. Amitab, BE (Manipur), ME (Punjab Engg College)	Image Processing, Soft computing
	Amitabha Nath, MTech (Tezpur)	Remote Sensing and GIS

Thrust Areas of Research

Internet of Things (IoT), Wireless Networking, Computational Biology and Bioinformatics, Information Security, Cryptography, Big Data Analysis, RADAR Imaging, Remote Sensing, and Image Processing.

Brief Statement of Academic Activities

The Department is offering the BTech (IT), MTech (IT) and PhD programmes. During the year under report, 30 students completed their BTech degree and 15 students got their MTech degree. In addition to teaching and research

School of Technology

programmes, the Department organized for the second time an international conference on *Computing and Communication Systems* during November 11-13, 2016. Eleven students received the UGC-Non-Net Fellowship, and

three students were awarded the Visvesvaraya Fellowship. Faculty members of the Department contributed eight papers published in international journals, and 15 chapters in edited volumes and proceedings.

Students' Profile

Enrolment Capacity: BTech – 60/6 (Vertical/Lateral); MTech – 18; PhD - Variable

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
BTech	54	07	12	18		31	09	52	61
MTech	08	10		12		06	08	10	18
PhD	05	04	01	04		04	05	04	09

Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
BTech	14	16	04	06		20		30	30
MTech	09	06		08		07	08	07	15

Placement of Students in different companies: 12

Ms Imayanmosha Wahlang, Phronesis Partners; Ms Anumita Bora Bodosa, Phronesis Partners; Ms Jenny Pao, Indigo; Ms Anjali Roy, InfoAnalytica Consulting Pvt Ltd; Ms Anumita Bora Bodosa, InfoAnalytica Consulting Pvt Ltd; Ms Darshana Nath, InfoAnalytica Consulting Pvt Ltd; Ms Debashree Bhattacharjee, InfoAnalytica Consulting Pvt Ltd; Mr Kangan Patowary, Wipro Technologies; Mr Purnendu Saha, Wipro Technologies; Mr Chandan Deka, PRADAN; Mr Manjil Deuri, PRADAN; Ms Suchibrata Buzar Baruah, Amazon India.

Research Fellowships: 14

UGC Non-Net: 11

Visvesvaraya: 3

Courses Conducted

Undergraduate: BTech

Semester I

Professional Communication Skills; Engineering Mathematics I; Engineering Physics; Engineering Mechanics; Basic Electrical Engineering; Digital English Language Laboratory; Engineering Physics Laboratory; Basic Electrical Laboratory; Workshop Practice.

Semester II

Elements of Environmental Science; Engineering Mathematics II; Engineering Chemistry; Computer Systems and Programming; Basic Electronics; Engineering Chemistry Laboratory; Computer Programming Laboratory; Basic Electronic Laboratory; Engineering Graphics; General Proficiency I.

Department of Information Technology

Semester III

Engineering Economics and Financial Accounting; Engineering Mathematics III; Signals and Systems; Computer Graphics and Multimedia; Data Structures and Algorithms; Discrete Mathematics; Computer Graphics and Multimedia Lab; Data Structure Laboratory; Numerical Programming laboratory.

Semester IV

Statistics and Random Processes; Data Communication; Digital Electronics; Formal Language and Automata Theory; System Programming; Computer Organization and Architecture; Digital Electronics laboratory; Systems Programming Laboratory; General Proficiency II.

Semester V

Management Information System; Microprocessor, Information Theory and Coding; Object Oriented Programming and Methodology; Algorithm Analysis and Design; Computer Networks; Microprocessor Laboratory; Object Oriented Programming Laboratory; Computer Networks Laboratory.

Semester VI

Operating System; Software Engineering; Relational Database Management System; Compiler Design; Elective I (Mobile Computing, Data Mining); Elective II (Cryptography and Network Security, E-Commerce); Operating System Laboratory; Database Management System Laboratory; Compiler Design Laboratory; General Proficiency III.

Semester VII

Professional Ethics and IPR; System Administration; Web Technology; Elective III (Fuzzy Logic and Neural Networks,

Computer Vision); Elective IV (Wireless Communication, Digital Image Processing); System Administration Laboratory; Visual Programming Laboratory; Web Technology Laboratory; Minor Project.

Semester VIII

Major Project; General Proficiency - IV (Grand Viva).

Postgraduate: MTech

Semester I

Mathematical Foundations of Information Science; Theory of Computer Science; Computer Architecture and Operating System; Advanced Database System; Elective; Software System Laboratory.

Semester II

Algorithms and Complexity; Advanced Computer Networks; Elective I; Elective II; Elective III; Seminar on Advanced Topics; Internet Technology Lab.

Semester III

MTech Thesis; Elective IV (Advance Wireless Networks; Distributed System).

Semester IV

MTech Thesis

List of Elective subjects: Distributed Computing; Embedded Systems and Applications; Image Processing; Network Security; Data mining and Data warehousing; Advanced Wireless Networks.

PhD Courses

Research Methodology; Algorithm Analysis and Design; Elective (Cryptography, Advanced Wireless Networks).

Seminars/Conferences/Symposia/ Workshops

Organized

The Department for the second time organised the international conference on *Computing and Communication Systems* (I3CS 2016) during November 11-13, 2016.

Publications

Published Abroad

Ahmed, N., Rahman, H., Hussain, I. (2016). A Comparison of 802.11ah and 802.15.4 for IoT. *ICT Express*, 2(3): 100-102.

Dhal, D., Datta, P., Chakraborty, A., Saha, G., Pal, R. K. (2016). Multiple parallel assay operations with cross contamination avoidance in a given biochip. *IET Computers and Digital Techniques*, 10(5), 243-253.

Goswami, P., Singh, M. M., Bhuyan, B. (2016). A new public key scheme based on DRSA and generalized GDLP. *Discrete Mathematics*, 8(4), doi.org/10.1142/S1793830916500579.

Hussain, I. (2017). Internet of things: Challenges and research opportunities. *CSI Transactions on ICT*, 5(1): 87-95.

Hussain, I., Ahmed, N. (2016). A performance analysis of e-Learning over WiFi-based long distance networks. *Journal of Wireless Net. and Comm.*, 6(4): 85-93.

Kashyap, H., Ahmed, H. A., Hoque, N., Roy, S., Bhattacharyya, D. K. (2016). Big data analytics in bioinformatics: Architectures, techniques, tools and issues. *Network Modeling Analysis in Health Informatics and Bioinformatics*, 5(1), doi: 10.1007/s13721-016-0135-4.

Kumar, V.D., Chyng, P., Kandar, D., Paul, B.S. (2016). Performance analysis of hybrid WiMAX/DSRC scenarios for vehicular communication environment. *International Journal Microsystem Technologies (Springer), Micro- and Nanosystems Information Storage and Processing Systems*, 22(4):1-6.

Kumar, V.D., Kandar, D., Paul, B.S. (2017). Physical Layer Design for Image Transmission between WiMAX/DSRC System. *International Journal Microsystem Technologies (Springer)*, 23(3):1-6.

Book Chapters/Proceedings

Ahmed, N., Hussain, I. (2016). A distributed channel access mechanism for IEEE 802.11ah. In: *IEEE World Forum on Internet of Things (WF-IoT)*, Reston, USA, p. 1-6, 2016, (IEEE): <http://doi.ieeecomputersociety.org/10.1109/WF-IoT.2016.7845428>.

Ahmed, N., Hussain, I. (2016). Relay-based IEEE 802.11ah network: A smart city solution. In: *IEEE International Conference on Cloudification of Internet of Things (CIoT)*, Paris, France, p. 1-6.

Amitab, K., Kandar, D. (2016). Speckle noise reduction in synthetic aperture radar images using fuzzy logic. In: *The Proceedings of the 3rd International Conference on Microelectronics, Circuits and Systems (Micro-16)*. Science City, Kolkata, ISBN: 978-93-80813-45-5, p. 82-87.

Amitab, K., Kandar, D., Maji, A. K. (2016). Comparative evaluation of radial basis function network transfer function for filtering speckle noise in synthetic aperture radar images. In: *Emerging Research in Computing, Information, Communication*

- and Applications*. Springer, Singapore, p. 243-252.
- Das, S., Kalita, H. K. (2016). Semantic text summarization for web-based dynamic large data using FP-Growth: A big data analysis. In: *Proceedings of 5th International Conference on Computing, Communication and Sensor Network (CCSN 2016)*, Vol.1, p. 65-70.
- Dey, D., Bandyopadhyay, A., Jana, S., Maji, A. K., Pal, R. K. (2017). A novel image steganographic scheme using 8 X 8 Sudoku puzzle. In: *Advanced Computing and Systems for Security*. Springer, Singapore, p. 85-100.
- Dkhar, R. A., Nath, K., Roy, S., Bhattacharyya, D. K., Nandi, S. (2016). Evaluating the effectiveness of Soft K-Means in detecting overlapping clusters. In: *Proceedings of the Second International Conference on Information and Communication Technology for Competitive Strategies*. ACM, p. 4.
- Maji, A. K., Jana, S., Pal, R. K. (2016). A comprehensive sudoku instance generator. In: *Advanced Computing and Systems for Security*. Springer India, p. 215-233.
- Manners, H. N., Jha, M., Guzzi, P. H., Veltri, P., Roy, S. (2016). Computational methods for detecting functional modules from gene regulatory network. In: *Proceedings of the Second International Conference on Information and Communication Technology for Competitive Strategies*. ACM, p.3.
- Medhi, K., Ahmed, S. S., Roy, S., Bhattacharyya, D. K., Kalita, J. K. (2016). Information theoretic approaches for detecting causality in gene regulatory networks. In: *Proceedings of the Second International Conference on Information and Communication Technology for Competitive Strategies*. ACM, p. 128.
- Nath, K., Roy, S., Nandi, S. (2016, September). Incremental approach for detecting arbitrary and embedded cluster structures. In: *International Conference on Model and Data Engineering*. Springer International Publishing, p. 220-233.
- Rahman, H., Ahmed, N., Hussain, I. (2016). A hybrid data aggregation scheme for provisioning quality of service (QoS) in internet of things (IoT). *IEEE International Conference on Cloudification of Internet of Things (CIoT)*, Paris, France, doi: 10.1109/CIOT.2016.7872917.
- Rymbai, B., Kandar, D., Maji, A. K. (2016). A hybrid face recognition scheme using contour and Gabor wavelet. In: *Proceedings of International Conference on ICT for Sustainable Development*. Springer, Singapore, p. 377-385.
- Sahana, S.C., Bhuyan, B. (2016). A key escrow-free identity based signature scheme without using secure channel during the private key issuance stage. In: *Proceedings of the 5th International Conference on Computing, Communication and Sensor Network (CCSN-2016)*, Kolkata, ISBN: 81-85824-46-0 Vol.-II, p. 164-169.
- Sharma, R. K., Kalita, H. K. R., Das, S., Issac, B. (2016). Learning is never secure: Poison learning by intrusion detection system based on self-organizing map. In: *Proceedings of 5th International Conference on Computing, Communication and Sensor Network (CCSN 2016)*, Volume 1, p. 34 – 39.

Research Projects

Ongoing: 1

Title of Project	PI/Co-PI	Funding Agency	Rupees in lakh
QoS Provisioning in Internet of Things (IoT)	Dr. Md. Iftekhar Hussain (PI)	Ministry of Electronics and Information Technology	82.40

Academic Collaborations

Dr. Md. I Hussain has collaborated with Dr. Debashis De, Maulana Abul Kalam Azad University of Technology, West Bengal, on the Research Project - *QoS Provisioning in Internet of Things (IoT)*.

Dr Swarup has collaborative research with: (1) Dr. Pietro H Guzzi, University of Cantanzaro, Italy, on *Protein Interaction Network Alignment*, (ii) Prof. Jugal Kalita, University of Colorado at Colorado Spring, USA, on *Machine Learning and Its Applications*, and (iii) Prof. Sukumar Nandi, Indian Institute of Technology, Guwahati, on *Big Data Analysis in IoT*.

Mr. Amitabha Nath has collaborated with Dr. Diganta Barman, North Eastern Space Applications Centre, Shillong, in the *Area of Remote Sensing*.

Other Activities

Dr. Md. I. Hussain

Delivered an invited talk on “Issues and Research Challenges in Internet of Things” at the first international conference on *Advanced Computing* (ICAC), Moulana Abul Kalam Azad University of Technology, West Bengal, Kolkata (26-27 October 2016). He was also a reviewer for international journals of *Wireless Personal Communication* (Springer), and *EURASIP Journal of*

Wireless Communication and Networking (Springer).

Dr. B. Bhuyan

Delivered an invited lecture on “Coding Theory” during the TEQIP II-sponsored faculty development program on *Discrete Mathematics and Its Application in Engineering* at the Tripura Institute of Technology, Tripura (26 October to 28 October 2016).

Dr. S. Roy

Conducted classes as visiting professor for UG-PG level at the University of Colorado at Colorado Springs, USA, on *Database Schema Refinements* during 18 August 2016 to 17 November 2016.

Reviewer for various international journals including *IEEE/ACM Trans. on Computational Biology and Bioinformatics*, *Elsevier-Computer Methods and Programs in Biomedicine*, *Springer-Network Modeling Analysis in Health Informatics and Bioinformatics*, *PLOS Computational Biology*, *BMC-System Biology*, *BMC-Bioinformatics*, Springer Plus.

Mr. A. Nath

Delivered an invited lecture on “Information Theft and Prevention Mechanisms” at UGC-HRDC, NEHU (9 March 2017).

DEPARTMENT OF NANOTECHNOLOGY

Head: Dr. L. Robindro Singh
Telephone: 0364-2723903
E-mail: robindro001@yahoo.co.in, officenanonehu@gmail.com

Faculty: 2

Designation	Name and Qualification	Specialization
Assistant Professor (2)	Dr. L. Robindro Singh, MSc, PhD	Nanomaterials, CNT, Nanoceramics, Nanomedicine
	Mr. D. Pyngrope, BTech, MTech	Nanomaterials and Nanoelectronics

Thrust Areas of Research

Nanomaterials, Assemble Nanoparticles, Micro-Electro-Mechanical Systems (MEMS), Nanoceramics, Nanomedicine, and Carbon nanotube (CNT).

Brief Statement of Academic Activities

The Department of Nanotechnology is offering the MTech and PhD programmes. The faculty members are actively involved in diverse areas of research in Nanoscience and Nanotechnology, viz., nanomaterials, nanophosphors, CNT, hybrid nanomaterials, MEMs, and drug delivery. The Department started MTech-III and IV semesters' projects to train students in different areas of research. The Department is also collaborating with BARC, Manipur University, IIT Guwahati, IGCAR Kalpakam, and UGC-CSR, Indore.

Moreover, one MTech-III-semester student cleared the GATE examination 2016, and another passed the JRE Examination. One of the project RAs got PhD admission to the University of Tiwan. The faculty members were invited to different conferences and symposia for delivering their research findings. Two PhD students of the Department also received the National Fellowship for Higher Education (ST).

Besides regular teaching and research programmes, the Department organized a national conference on *Recent Advances in Nanoscience and Nanotechnology* (NCRANNT-2016) during September 8-9, 2016. Three students received the Merit-Cum-Means Scholarship Scheme for Professional and Technical Course CS, and three students were awarded the NEHU PG-Merit Scholarship.

Students' Profile

Enrolment Capacity: MTech (Nanotechnology) - 18, PhD -Variable

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MTech Sem-IV	10	08	02	08		08	09	09	18
MTech Sem-II	16	02	01	02		15	02	16	18

Research Fellowships: 3

Non-NET Fellowship: 1

National Fellowship for Higher Education (ST): 2

Fieldwork/Educational Tour of Students

Teacher-in-Charge: Mr. Davidson Pyngrope and Ms. N. Lyngskor.

Places/Institutions Visited: Centre for Material and Nanoscience Technology, Sikkim. Manipal Institute of Technology, Sikkim.

Duration of Tour: 17-26 November 2016.

Purpose of Tour: Field visit, exposure and hands on training on sophisticated nano-synthesis and characterization equipment.

Courses Conducted

Postgraduate: MTech (Nanotechnology)

Semester I

Quantum Mechanics of Nanostructured System; Material Science and Nanoelectronics; Mathematical Methods and Modelling; Nanobiotechnology; Nanobiotechnology Laboratory; Simulation Laboratory.

Semester II

Synthesis and Characterization of Nanomaterials; Polymer and Nanocomposite; Nanophotonics, Elective I (Open); Synthesis and Characterization of Nanomaterials Laboratory; Nanophotonics Laboratory.

Semester III

Electric and magnetic properties of nanostructures; Elective II; Project Phase I.

Semester IV

Project Phase II.

PhD Courses

Research Methodology; Optical Properties of Nanomaterials; Nanomedicine and Drug Delivery; Nanotechnology for Solar Photovoltaic.

Seminars/Conferences/Symposia/Workshops

Organized

National Conference on *Recent Advances in Nanoscience and Nanotechnology (NCRNNT-2016)* during 8-9 September 2016.

Attended

Dr. R. L. Singh

Presented a paper entitled “Preparation and Luminescence Study of Li^{2+} Activated Y_2O_3 Nanoparticles Doped with Eu^{3+} ” at the national conference on *Recent Advances in Physics Research and Its Relevance* organised by the Physics Academy of the North East at the Department of Physics, St. Anthony’s College, Shillong (November 10-12, 2016).

Mr. D. Pyngrope

Presented papers entitled: (i) “Synthesis and Characterization of $\text{Gd}_2\text{O}_3:2\text{Tb}@ \text{Fe}_3\text{O}_3$ ” at the national conference on *Recent Advances in Physics Research and Its Relevance* organised by the Physics Academy of the North East at the Department of Physics, St. Anthony’s College, Shillong (November 10-12, 2016), and (ii) “Synthesis, Characterization and Comparative Studies of Rare-Earth Doped Gd_2O_3 Nanoparticles” at the international conference on *Emerging Trends in Nanoscience and Nanotechnology* organised by SMIT, Sikkim (March 16-18, 2017).

Publications

Published Abroad

Gogoi, P., Singh, L.R., Pamu, D. (2017). Characterization of Zn doped MgTiO_3 ceramics: An approach of RF capacitors applications. *Journal of Materials Science: Materials in Electronics*, <http://link.springer.com/article/10.1007/s10854-017-6975-6>.

Hemam, R., Singh, L.R., Prasad, A.I., Gogoi, P., Kumar, M., Chougankar, M.P., Singh, S.D.,

Sharan, R.N. (2016). Critical view on TL/OSL properties of $\text{Li}_2\text{B}_4\text{O}_7$ nanoparticles doped with Cu, Ag and co-doping Cu, Ag: Dose response study. *Radiation Measurement*, 95:44-54.

Singh, L.R. (2017). Eu^{3+} as a marker for formation of core-shell system: $\text{YVO}_4:\text{SiO}_2$, *OpenNano*, <https://doi.org/10.1016/j.onano.2017.01.002>.

Research Projects

Ongoing: 2

Title of Project	PI/Co-PI	Funding Agency	Rupees in lakh
Preparation, Characterization and Luminescence Study of $\text{Li}_2\text{B}_4\text{O}_7$ Nanoparticles Doped with Metal and Lanthanide Ions for Feasibility of Their Application in Radiation Dosimetry	Dr. L.R. Singh	BRNS, Mumbai	23.00
Preparation and Study on Effect/Role of Sensitizers on the Photoluminescence Properties of Lanthanide Doped Gd_2O_3 and Y_2O_3 Nanocrystals: Dispersion in Organic Solvents	Dr. L. R. Singh	DST, New Delhi	22.00

Completed: 1

Title of Project	PI/Co-PI	Funding Agency	Rupees in lakh
Study Particle Size Effect and Role of Sensitizers in the Luminescence Emission of Nanoparticle Oxide Phosphors	L. Robindro Singh	UGC	6.00

Academic Collaborations

The Department collaborated with: (i) UGC-CSR, Indore, on *Preparation and Luminescence Behaviour of Lanthanide Doped Oxide Phosphors*, (ii) IGCAR, Kalpakam, on *Characterization and*

Investigation of Luminescence Properties of Zn^{2+} and Sulphate Based-Nano-Phosphors Doped with Lanthanide and Metal Ions for Feasibility on Luminescence Dosimetry Application, (iii) BARC on *Preparation, Characterization and Luminescence Study of $\text{Li}_2\text{B}_4\text{O}_7$ Nanoparticles Doped with Metal*

School of Technology

and Lanthanide Ions for Feasibility of Their Application in Radiation Dosimetry (RPD Section) and in Chemistry Division Nano-Drug Delivery by Mesoporous Nanoparticles, and (iv) Manipur University

on Preparation, Characterizatdoiiion and Luminescence Study of $\text{Li}_2\text{B}_4\text{O}_7$ Nanoparticles Doped with Metal and Lanthanide Ions for Feasibility of Their Application in Radiation Dosimetry.

IX

ADMINISTRATIVE DEPARTMENT

COLLEGE DEVELOPMENT COUNCIL

Director: Dr. C. R. Diengdoh
Telephone: 0364-2721201/1202/1203/1204 (O)
E-mail: dircdc@nehu.ac.in, cdcnehu@gmail.com

The College Development Council is an intermediary between the University and the affiliated colleges under its jurisdiction. It is the Principal Advisory Body to the Executive Council and the Academic Council of the University in all matters relating to affiliation. It is constituted every two years and has representatives comprising university officials, faculty members, principals and teachers of affiliated colleges, and a representative of the Government of Meghalaya. It plans for the integrated development of the affiliated colleges by extending help, guidance and advice. Serving as an academic guide to the college system, it ensures availability and use of facilities in the University departments to the teachers of affiliated colleges. It provides a forum for taking necessary steps on various aspects of education with a view to promoting coordination and improving the general educational standards in the affiliated colleges of the University.

In accordance with the Section 2(f) and 12(B) of UGC Act, 1956, the Council is also a liaison between UGC and affiliated colleges in carrying out all procedural formalities regarding proposals for obtaining funds under the different schemes for the overall development of colleges,

including minor/major research projects, faculty development programme for college teachers for pursuing MPhil/PhD, etc.

The University has 65 affiliated colleges, of which 33 are permanently affiliated and 32 are provisionally affiliated. The University also affiliates Minority Educational Institutions located anywhere in the country as per the provisions of the National Commission for Minority Educational Institutions (NCMEI) Act.

Some of the official transactions of the College Development Council are as follows:

- ☞ Processing of applications of affiliated colleges for grant of affiliation.
- ☞ Constitution of Inspection Teams for inspecting the colleges.
- ☞ Convening of Affiliation Committee.
- ☞ Placing of recommendations of Affiliation Committee as agenda to Academic Council/ Executive Council for consideration and approval.
- ☞ Appointing Subject Experts/Vice Chancellor's Nominees as members

Administrative Department

of Selection/Screening Committees for appointing/placement of Assistant Professors in affiliated Colleges as per University/UGC norms.

- ☞ Nominating NEHU representatives from among the academicians, to represent the University on the Governing Bodies/ Advisory Committees of the affiliated colleges.
- ☞ Circulation of information/guidelines/ regulations of NEHU, UGC, MHRD and other agencies to affiliated colleges.
- ☞ Forwarding of proposals submitted by the colleges to the UGC for funding purposes under its various schemes.
- ☞ Legal matters of affiliated colleges.
- ☞ General/Miscellaneous correspondences with affiliated colleges/State Government/ University academicians/University Administration/UGC, New Delhi and Guwahati/MHRD, New Delhi.

List of Colleges Visited by Various Inspection Teams during 2016-17 for Affiliation

1. Tirot Sing Memorial College, Mairang, West Khasi Hills
2. St. Dominic's College, Dumdum – Nongthymmai, Shillong, East Khasi Hills
3. St. Anthony's College, Extension Campus Byndihati, East Jaintia Hills
4. NEIGRIHMS College of Nursing, Mawdiangdiang, Shillong, East Khasi Hills
5. Shillong College, Shillong, East Khasi Hills
6. Kiang Nangbah Govt. College, Jowai, West Jaintia Hills
7. Umshyrpi College, Shillong, West Garo Hills
8. Nongrum College, Zekabari, West Garo Hills
9. Jaintia Eastern College, Khliehriat, East Jaintia Hills
10. Phukan Memorial College, Dalu, West Garo Hills
11. Thomas Jones Synod College, Jowai, West Jaintia Hills
12. Williamnagar Govt College, Williamnagar, East Garo Hills
13. Loyola College, Williamnagar, East Garo Hills
14. St. Edmund's College, Shillong, East Khasi Hills
15. Mawsynram Border Area College, Mawsynram, East Khasi Hills
16. Ampati Degree College, Ampati, South West Garo Hills
17. Mairang Presbyterian Science College, Mairang, West Khasi Hills
18. Sankardev College, Shillong, East Khasi Hills
19. North East Adventist College, Thadlaskein, West Jaintia Hills
20. Acheng Rangmanpa College, Mahendraganj, South West Garo Hills
21. St. Anthony's College, Shillong, East Khasi Hills
22. Lady Keane College, Shillong, East Khasi Hills
23. St. Francis D'Assisi College, Nongstoin, West Khasi Hills

College Development Council

24. North Eastern Institute of Ayurveda & Homoeopathy (NEIAH), Mawdiangdiang, Shillong, East Khasi Hills
25. Don Bosco College, Tura, West Garo Hills
26. St. Mary's College, Shillong, East Khasi Hills
27. Metas Adventist College, Surat, Gujarat
28. NEIGRIHMS MBBS, Mawdiangdiang, Shillong, East Khasi Hills
29. Woodland Institute of Nursing, Laitkor, Shillong, East Khasi Hills
30. Meribon K.H. Memorial College, Sohiong, East Khasi Hills
31. Shangpung College, Jowai, West Jaintia Hills
32. Morning Star College, Shillong, East Khasi Hills
33. Khad-Ar-Doloi Law College, Jowai, West Jaintia Hills
34. Nabon Women's Synod College, Shillong, East Khasi Hills
35. Durama College, Tura, West Garo Hills
36. Sngap Syiem College, Mawkyrwat, South West Khasi Hills
37. Khadsawphra College, Mairang, West Khasi Hills
38. IAEER's PIBM Shillong Campus, Nongrim Hills, Shillong, East Khasi Hills
39. Regional Institute of Science and Technology, Raid Marwet, Ri-Bhoi Dist.
40. Goodwill College, Shillong, East Khasi Hills
41. Greater Mawlai College, Shillong, East Khasi Hills

42. Nongstoin College, Nongstoin, West Khasi Hills
43. Mawkyllei College, Mairang, West Khasi Hills

Actions Taken on Affiliation Matters, etc. during 2016-17

- ☞ *Permission to Open/Start New College:* Four colleges
- ☞ *Provisional Affiliation of New College:* Two colleges
- ☞ *Provisional Affiliation to New Subject(s)/ Course(s) of study in an Affiliated College/ Institution:* Thirteen colleges
- ☞ *Renewal of Provisional Affiliation:* Twenty-five colleges
- ☞ *Permission to start new subject(s)/course(s) of study in an affiliated Colleges/Institute:* Fourteen colleges.
- ☞ *Applications Received from Colleges for Permission to Start New College/ Institution:* Two Colleges: 1) Shillong Government College of Engineering, Shillong, and 2) PASF-Abong Noga College, New Tura.
- ☞ *Permission or Provisional Affiliation to start PG Department in an existing College/ Institution:* One college.
- ☞ One College, *Khrawsing Christian College*, Mawngap, Mawphlang, East Khasi Hills, has been approved under 2(f) status of the UGC.

NAAC Assessment and Accreditation of Colleges during 2016-17

- ☞ Jaintia Eastern College, Khliehriat, East Jaintia Hills District, was assessed and

Administrative Department

accredited by NAAC, Bangalore, with **Grade B**.

- ☞ *Two Colleges were reassessed and reaccruited by NAAC, Bangalore:* (i) Shillong College, Shillong with **Grade A**, and (ii) St. Mary's College, Shillong, East Khasi Hills, with **Grade A**.

Other Activities

In the year under report, the CDC was instrumental:

- ☞ In recommending Nodal Officers for uploading data of the affiliated colleges for All India Survey on Higher Education (AISHE) carried out by the Department of Higher Education, MHRD, in May 2016. The data base on higher learning for the year 2015-16 was successfully uploaded for the University on the AISHE portal.
- ☞ In coordinating matters related to co-curricular activities and sports with the affiliated colleges under NEHU.
- ☞ In coordinating as nodal office the UGC Expert Committee's visits to six affiliated colleges located in East Khasi Hills, Garo Hills and Ri-Bhoi Districts, for on-the-spot evaluation of ongoing projects for construction of Boys' Hostels under UGC Scheme of funding to colleges.
- ☞ In coordinating matters and correspondences with the MHRD/UGC concerning the setting up of Deen Dayal Upadhaya Community College/Deen Dayal Upadhaya Kaushal Vikash Kendra (Skill Development) and BVoc at Wahiajer, West Jaintia Hills District, Meghalaya under NEHU.
- ☞ In conducting election of college teachers of the affiliated colleges as members to the Academic Council of the University.

EXAMINATION DEPARTMENT

Controller of Examinations : Dr. L. Cajee
Telephone : 0364 2721211/1212 (O)/9774026782 (M)
Email : offcoe@nehu.ac.in

Activities during 2016-17

- During the Academic Year under review, the Examination Department had effectively declared all undergraduate results within the stipulated time frame, which facilitated students seeking admission to the postgraduate programmes within and outside the University. The Department also took special measures towards timely declaration of all postgraduate results to enable students aspiring for higher academic pursuit in various Universities within the country and abroad.
- With the initiative of Government of India on *Digital India*, the Department has introduced an online system of filling out the examination forms by students of affiliated colleges of the University and, as a result of which, Registration Cards and Admit Cards of students are being auto-generated. Similar features are also in the pipeline for PG, MTech, BTech, BA LLB, and other courses offered by the University. Introduction of these features thus facilitated the students to download their Admit Cards, Grade Cards and efforts are being made to have access to their Degree Certificates in future. In order to prevent forgery of the University documents, the Examination Department has introduced adequate number of security features in the Grade Cards/Registration Cards issued to the students with QR Code Facility for web-based verification.
- The Examination Department has taken initiative and implemented cashless transaction concerning payment of remunerations to the teachers, which is now being done on digital mode. Examination Fees payable by the students are also being remitted through digital mode, i.e., RTGS/NEFT or through SBI Collect.
- As a part of research activities, the Examination Department is conducting the course work examinations for the MPhil and PhD programmes in accordance with the UGC guidelines; and all results of the course work examinations under the UGC's 7 Point Scale have been declared within the stipulated time frame.
- The Examination Department has successfully declared the results of final year MS and MD Degrees offered by NEIGHRIMS.
- The Examination Department has received a numbers of requests from external agencies for verification and authentication of certificates/documents issued by NEHU for the purpose of employment. The Department has made special provisions to respond to these queries expeditiously. The Examination Department is also taking

Administrative Department

adequate steps to digitize all confidential records maintained since its inception.

- The 24th Convocation Ceremony of the University was held on 28 April 2017 in which eminent scientist and Hon'ble member of NITI AAYOG Dr. Vijay Kumar

Saraswat had graced the occasion as the Chief Guest.

- The student enrolment and results during 2016-17 are as given in the relevant Tables of the Executive Summary of this Annual Report.

Finance Department

FINANCE DEPARTMENT

Finance Officer-in-Charge : Smti N.G. Marwein

Telephone : 0364 2721021(O)

Email : fo@nehu.ac.in

Accounts of Receipts and payments for the period ending 31.03.2017

Receipts	2016-17	Payments	2016-17
	(Rupees)		(Rupees)
<i>I. Opening Balances</i>		<i>I. Expenses</i>	
a) Opening/Fixed Deposit/Investment	1207188999	a) Establishment Expenses	1329904760
b) Bank Balances		b) Academic Expenses	73671647
i) In Current Accounts	592303851	c) Administrative Expenses	92820850
ii) Saving Accounts	126678012	d) Transportation Expenses	18119382
iii) Opening Current Liability & Refundable Deposit	137525079	e) Repairs and Maintenance Expenses	30193071
iv) Adjustment in Opening Balances, Opening Current Liability/Deduct Bank Balance Closed/Transferred herein as Receipts of Income	-539756	e) Tura Campus Advances	91819240
v) Total Opening Balances after Adjustment	2063156185	f) Prior Period Expenses	
<i>II. Grants Received</i>		<i>II. Payments against Earmarked/Endowment Funds</i>	17095417
a) From Govt. of India	2154354967	<i>III. Payments against Sponsored Projects/Schemes</i>	135999412
b) From State Govt.		<i>IV. Payments against Sponsored Fellowships/Scholarships</i>	26372395
c) From other Sources	29503138	<i>V. Investments made</i>	
<i>III. Academic Receipts and other Income</i>	160079104	a) Out of Earmarked/Endowments	

Administrative Department

<i>IV. Receipts against Earmarked, Endowment Funds</i>	45693259	b) Out of own funds	
<i>V. Receipt against Sponsored Projects/Schemes</i>	1272204	<i>VI. Term Deposits with Scheduled Banks</i>	
<i>VI. Receipts against Sponsored Fellowships/Scholarships</i>		<i>VII. Expenditure on Fixed Assets and Capital work in Progress</i>	
<i>VII. Income on Investments from</i>		a) Fixed Assets	153350686
a) Earmarked/Endowment funds	40851018	b) Capital Works in Progress	
b) Main Account Investments	22710949	c) Statutory Remittances and Release of Security and Caution Deposits, Transfer to other Funds	513137560
<i>VIII. Interest Received on</i>		<i>IX. Refund of Grants</i>	2956386
a) Bank Deposits		<i>X. Deposits & Advances/Interest Bearing Advances</i>	
b) Loan & Advances	8012314	<i>XI. Other Payments/Bank Charges</i>	254045
c) Saving Bank Accounts	23775717	Closing Balances	
<i>IX. Investment Encashed</i>		b) Cash in Hand	
<i>X. Term Deposits with Scheduled Banks Encashed</i>		Bank Balances	1152866121
<i>XI. Other Income (Including Prior Period Income)</i>		In Current Accounts	
<i>XII. Deposits and Advances/Interest Bearing Advances</i>	13078350	In Savings Accounts	
<i>XIII. Statutory Dues including Security, Caution, Earnest Deposits, etc.</i>	34323226	In Statutory Recoveries, Security, Caution Deposits	16485440
<i>XIV. Any other Receipts/Stale Cheques Credited as Receipts</i>	1248921	In Fixed Deposits/Investments	943012940
TOTAL	4598059352	TOTAL	4598059352
Previous Year (2015-16)	4091287049	Previous Year (2015-16)	4091287049

Planning Department

PLANNING DEPARTMENT

Assistant Registrar : Shri A. Sohtun.
Telephone : 0364 2721059(O)
E-mail : asohtun123@gmail.com.

The Planning department was created in 1978 with a view to designing and implementing the vision plans for the overall development of the University. It is the Central Unit for budgetary planning of the University. It scrutinizes and finalizes the budgetary plan proposals and allocation of funds

to different Schools/Departments/Centres of the University.

During 2015-16, an amount of Rs. 4681.13 lakhs was sanctioned by the UGC towards General Development Assistance under the XII plan period as per the details below:

Rupees in Lakh					
XII Plan Allocation	Name of Item	Head of Accounts	Grant already Sanctioned	Grant Sanctioned in 2016-17	Total Grant
2700.00	Grant-in-Aid General (Recurring) (31)	I(D) 2552.00.131.02.02.31 CU(NER)	2082.06	212.50	2294.56
		I(E) 2552.00.789.02.04.31 CU(NER) SC	389.84	65.00	458.84
		I(F) 2552.00.789.05.04.31 CU(NER) ST	228.10	22.50	250.60
		Total	2700.00	300.00	3000.00
2600.00	Grant-in-Aid General Salary (36)	I(D) 2552.00.131.02.02.36 CU(NER)	419.20	1550.14	1969.34
		I(E) 2552.00.789.02.04.36 CU(NER) SC	92.19	300.03	392.22
		I(F) 2552.00.796.05.04.36 CU(NER) ST	88.43	150.01	238.44
		Total	599.82	2000.18	2600.00

Administrative Department

8350.00	Grant of Capital Assets (Non-Recurring) (35)	I(D) 2552.00.131.02.02.35 CU(NER)	3937.70	1845.24	5782.94
		I(E) 2552.00.789.02.04.35 CU(NER) SC	849.91	357.14	1207.05
		I(F) 2552.00.796.05.04.35 CU(NER) ST	331.44	178.57	510.01
		Total	5119.05	2380.95	7500.00
		Grand Total	8418.87	4681.13	13100.00
13650.00					

It may be noted that the reduction in total Budget of the University during the XII Plan period has impacted adversely on the General Development of the University, especially the

newly established departments in the School of Technology. For this reason, the University has requested the UGC for additional grant specifically for the new Departments.

X CENTRAL SERVICES

BIOINFORMATICS CENTRE

Name of the Coordinator : Dr. Atanu Bhattacharjee
**Co – Coordinator
& Information Officer** : Dr. Devendra K. Biswal
Telephone : 0364-2550150/2550300
Website : <http://bicnehu.ac.in>
Email : nehuniv.btisnet@nic.in

Staff: 8

Name of Staff	Designation	Working since
Mr. Manish Debnath	Senior Technical Assistant	November 1999
Mrs. Nirmala Dayanandan	Computer Operator	April 2014
Mr. Welfrank Thongnibah	Computer Operator	March 2007
Mr. Graciously Kharumniud	Technical Assistant	March 2007
Mr. Santosh Kumar Vishwakarma	Technical Assistant	March 2007
Mr. Pradeep Kumar Kar	Data Entry Operator	November 2005
Government of India sponsored manpower on contract basis: 2		
Mr. Gary Victor Ropmay	Technical Assistant	April 201
Mr. Nirmal Das	Data Entry Operator	April 2012

Thrust Area of Research

The Bioinformatics Centre (BIC) is funded by the Department of Biotechnology (DBT), Ministry of Science and Technology under the Biotechnology Information System Network (BTIS) Program since November 1999 with a view to catering to the needs of the scientific

community in the North-Eastern region of the country and to augmenting their research activities through information inputs. Rich in great variety of flora and fauna, the North-Eastern part of the country has been identified as one of the biodiversity hotspots. Being a part of the national Bioinformatics Network, the

Centre's mandate is biodiversity informatics, and it serves as an information base in various areas of Biosciences. Some of the important areas of research are molecular characterization, genome organization and expression in plants, animals and microbes, oncology, parasitology, crop improvement, microbial genetics, etc., which are relevant to the North Eastern region and the facilities of the Centre are extensively used for preparation of databases. Besides, extensive work on parasite genomics, proteomics and metabolomics, evolutionary bioinformatics and phylogeny have been also initiated, apart from providing support to all disciplines of research in biotechnology.

Brief Statement of Academic Activities

- **Information node of BTISnet:** The Centre is part of the National Bioinformatics Network and functions as an information base in various areas of Biosciences and Biodiversity for the entire North-East region ever since its inception.
- **Nodal Centre of North-East Bioinformatics Network (NEBINet):** The Centre serves as a nodal centre for the newly constituted NEBINet by DBT, GoI comprising 3 Sub-DIC's and 26 Bioinformatics Facilities through Biology teaching (BIF-BTBI) Centre's since 2008 spanning 8 states of the North-East.
- Nodal Centre for operating DBT-sponsored Online Access Facility of Library Resources (OAFLR) for 36 Secondary and Senior Secondary Schools in the North-Eastern States of India through eight BIF-BTBI Coordinators.
- Identified as one of the 18 nodal Centres in the North-Eastern region to operate and monitor the DBT e-Library Consortium

(DeLCON) facility (that comprises a total of 917 selective Journals and a Database (SCOPUS) for NEHU).

- **DBT-Sponsored Bioinformatics National Certification (BINC) Examination Exam Centre:** BIC, NEHU as one of the seven Examination Centres for conducting BINC Exam since 2008.
- **Dissertation Training:** Students pursuing postgraduate degree in any branch of biosciences are trained in Bioinformatics for a period of 3-6 months towards their dissertation work as a partial fulfillment of their MSc degree (Completed – 15).
- **Research and Database Development:** Molecular characterization, functional and comparative genomics, proteomics, metabolomics, and evolutionary bioinformatics of pathogenic worm infections.
- **Bioinformatics Training Programmes** have always been an integral part of the Centre's activity, for which connoisseurs in the field are always invited to act as resource persons.
- **Identified and completed** the first phase of Bio-Resource Information Centre (BRICs) and portal development under Indian Biodiversity Information Network (IBIN), DBT, Government of India.

Seminars/Conferences/Symposia/Workshops

Attended

- D. K. Biswal made an oral presentation on the theme of “*Swastha Bharat* (Integrated Health Care Including Innovative Diagnostic Aids)” at the IISF-Young Scientists' Conclave (YSC) during the

India International Science Festival 2016 at NPL, Delhi. He also presented a paper entitled “Ancestral Area Reconstruction and Genetic Variation of *Paragonimus westermani* (Trematoda: Digenea) and Its Position within the Genus *Paragonimus*: An *In Silico* Study Using ITS2 and COXI Sequences” (Co-authors: M. Debnath, S. Ramachandran, A. Chatterjee and V. Tandon) at the *GLBIO/CCBC Great Lakes Bioinformatics and the Canadian Computational Biology Conference 2016* on May 16-19, 2016.

Konkar, Ruchishree presented a paper entitled “Age Estimation for the Genus *Cymbidium* (Orchidaceae: Epidendroideae) with Implementation of Fossil Data Calibration Using Molecular Markers (ITS2 & matK) and Phylogeographic Inference from Ancestral Area Reconstruction” (Co-authors: Manish Debnath, Jean V. Marbaniang, D.K. Biswal, Pramod Tandon) at the 15th International Conference on *Bioinformatics* (INCOB 2016) Singapore September 21-23, 2016.

Publications

Published Abroad

- Biswal, D., Konhar, R., Debnath, M., Sriram, P., Sundar, D., Tandon, P. (2016). Chloroplast genome sequence annotation of *dendrobium nobile* (Orchidaceae, Asparagales), an endangered medicinal orchid from Northeast India. *PLOS Currents Tree of Life, Edition 1*, doi: 10.1371/currents.tol.cf1709613759c2223eb582c0fa694cc7.
- Biswal, D.K., Konhar, R., Debnath, M., Tandon, V. (2016). Complete mitochondrial genome annotation of the giant intestinal fluke, *fasciolopsis buski* (Indian isolate) as revealed by ion torrent and illumina next-generation sequencing. *Mitochondrial DNA Part B*, 1(1):693-695.
- Kehie, M., Kumaria, S., Tandon, P. (2016). Biotechnological enhancement of capsaicin biosynthesis in cell suspension cultures of Naga King Chili (*Capsicum chinense* Jacq.). *Bioprocess Biosyst Eng.*, 39(1):205-10.
- Konhar, R., Biswal, D.K., Debnath, M., Parameswaran, S., Sundar, D., Tandon, P. (2016). Complete chloroplast genome sequence of *dendrobium nobile* from Northeastern India. *Genome Announc*, 4(5): e01088-16, doi:10.1128/genomeA.01088-16.
- Konhar, R., Debnath, M., Marbaniang, J.V., Biswal, D.K., Tandon, P. (2016). Age estimation for the genus *Cymbidium* (Orchidaceae: Epidendroideae) with implementation of fossil data calibration using molecular markers (ITS2 & matK) and phylogeographic inference from ancestral area reconstruction. *J. Bioinform. Comput. Biol.*, 9:1660001, <https://doi.org/10.1142/S0219720016600015>.
- Lyngdoh, D., Sharma, S., Roy, B., Tandon, V. (2016). Animal fascioliasis: Perspectives from high altitudinal regions. *Vet. Parasitol.*, 15(232):21-31.
- Sharma, S., Lyngdoh, D., Roy, B., Tandon, V. (2016). Differential diagnosis and molecular characterization of *Hymenolepis nana* and *Hymenolepis diminuta* (Cestoda: Cyclophyllidae: Hymenolepididae) based on nuclear rDNA ITS2 gene marker. *Parasitol. Res.*, 115(11):4293-4298.
- Sharma, S., Lyngdoh, D., Roy, B., Tandon, V. (2016). Molecular phylogeny of

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Cyclophyllidea (Cestoda: Eucestoda): An in-silico analysis based on mtCOI gene. Parasitol. Res., 115(9): 3329-3335.

Infrastructure Facilities

- **Computer and Communication Facilities:** Implementation of LAN on a Structured CAT 5 UTP Cabling Network using Switches and Hubs; 3 Servers; 20 PCs & 3 Workstations; 3 Printers; One Scanner; 5 UPSs; and 2 LCD Projectors.
- **Scientific Software Packages:** Accelrys Gene 2.5 (Sequence Analysis Work Bench); Matlab 7.0; Winspirs Ver 4.1 for Biotechnological Abstracts; Reference Manager; CLC Genomics workbench; PAUP; DNASTAR.
- **Databases and Other Information Resources:** Derwent Biotechnological Abstracts (July 1987 - March 2006); Reference Update Deluxe Edition (July 2002 - June 2004); Parasitology Database (obtained through MOEF); Application Software from Microsoft, RHEL, SQL, Adobe, Apple, etc.
- **Facility Procured through DIT Sanctioned NEPIAC Project:** Apple Work Group 13 node Cluster (HPCC); 7 Apple iMACs; One 40 kva UPS; SPSS; iWork; iNquiry software.
- **DeLCON Facility through DBT, GOI** – free access to 917 selected journals available to the potential users through University LAN.
- **Facility Procured through NER Twinning Next-Gen-Sequencing Project:** One Apple Mac Pro; one 10 kva UPS; 6 Apple iMAC, (21”).
- **G. Facility Procured through DBT, GOI Sanctioned IBIN-BRIC Project:** One

Backup Device; one Workstation; one HP Procurve Switch; one Cisco 1841 Router; 2 Servers; Red Hat Enterprise Linux 6 Advance Platform (1 user); Microsoft SQL Server 2008 R2 Enterprise Edition (1 user).

Research Activities

NEHU Bio-Resource Information Center (BRIC) for Indian Biodiversity Information Network (IBIN) NEHU-BRIC sponsored by DBT has now entered into the third phase. In the third phase the project is extended for another three years. Currently, we are working on the *Helminth Parasite Database*, of which 121 species have been formatted and entered into the system. The project envisages the following:

Plan A: Continuation of the previous work undertaken (Helminth parasite spectrum in North-East India.

- i) Extensive transcriptome and comparative genomics analysis would be carried on the Next Generation Sequencing (NGS) data that was the twinning project.
- ii) Knowledge base generated would contribute to novel genes, pathways that can be utilized to study the genomics, proteomics and interactome of parasites at molecular level for development of potential therapeutic drugs and other products.
- iii) De novo assembly of the transcripts and Functional genome and transcriptome analysis of the orchids and mapping of important metabolic pathways (Biosynthetic pathway of secondary metabolites of medicinal importance widely used as analgesic, anti-inflammatory and anti-cancerous).
- iv) Ecological Genomics of Orchids (of Medicinal Importance) specific to North-East India.

Research Projects

Ongoing

- a) Establishment of Portal for Indian Bioresource Information Network (IBIN) under National Bioresources Development Board (NBDB, DBT) (2011-2014), vide sanction no. BT/PR14571/NDB/52/187/2010 dated March 04, 2011.
- b) DBT-sponsored NER Twinning project on Next Generation Sequencing (NGS)-based de novo assembly of expressed transcripts and genome information of Orchids in North-East India (PI: Prof. Pramod Tandon, Devendra K. Biswal (CO-PI) and Dr. S. Sundar (PI), IIT, Delhi).

CAMPUS DEVELOPMENT DEPARTMENT

University Engineer : Shri. J. Cherian
Telephone : 0364-2722069(O)
Email : jcherian@nehu.ac.in

Status of Various Works Undertaken during 2016-17

Name of the works	Allotted Amount (Rupees in lakh)	Status of Work
Shillong Campus: 5		
Remaining works of construction of glass dome for butter fly park at Shillong campus	223.73	In progress
Construction of Guest House building near airport at Guwahati	900.00	Building works work completed*
Renovation of old residential quarters at Shillong campus	100.00	Tendering works in progress
Providing parking facilities at Shillong campus	100.00	In progress
Pipe line works and installation of Geysers in all the Hostels at Shillong campus	27.30	In progress
Tura Campus: 3		
Construction of 20 bedded Guest House at Tura campus, Tura	319.94	In progress
Construction of Service Building at Tura campus, Tura.	153.13	In progress
Construction work in the basement of MBA Hostel at Tura campus	8.53	In progress
Jowai Campus: 1		
Repair works in rented building for starting Deen Dayal Upadhaya Community College at Wahiajer	12.15	In progress

*Building Completion cost Rs 631,55,177.00

In addition to the above works, Repair/Renovation/Maintenance works of various structures have been undertaken by the Campus Development Department to the extent of Non Plan allocation.

CAREER AND COUNSELLING CELL

Coordinator : Dr. Dinesh Bhatia
Telephone : 0364-2723604 (O)/ 2723607(C)
Fax : 0364-2723607
Email : placement.nehu@gmail.com, placement@nehu.ac.in

Student Representatives Running Different Activities of the Cell during 2016-2017

Names	Position	Department
Ms. Moshina Afroz	President	Bio-medical Engineering
Mr. Wapynsuk Makri	Vice President	Tourism and Hotel Management
Mr. Saurav Dubey	General Secretary	Information Technology
Mr. Saranga J Barauh	Joint Secretary	Information Technology
Mr. Ricky Phawa	Member	Environmental Sciences
Ms. Juliana Lyngdoh	Member	Tourism and Hotel Management
Mr. Samborwell Kharjana	Member	Law
Mr. Chandan Deka	Voluntary Member	Information Technology
Mr. Ayan Barman	Voluntary Member	Electronics and Communication Engineering
Mr. Prashanta Kumar Ghosh	Voluntary Member	Electronics and Communication Engineering
Mr. Deshabrata Mukherjee	Voluntary Member	Bio-medical Engineering
Mr. Saswata Chakarabarty	Voluntary Member	Information Technology

The Career and Counseling Cell (CCC) was established on April 01, 2008 as per UGC guidelines functioning from the School of Technology, NEHU. Till date it is being run by a faculty Coordinator and two office staff personnel. The CCC endeavors to provide the best opportunities to NEHU graduates in terms of counseling and guidance, campus placements, trainings, internship opportunities, etc. The CCC regularly publicizes detailed notification on any matter related to counseling, training, and career/job opportunities, job fairs, pool campus for students' and other related

activities. Job-oriented awareness workshops are being organized by the CCC regularly for the students of NEHU and affiliated colleges. It also interacts with reputed industries, organizations, training centers, and other entities for meeting the demands of the students from time to time. The CCC invites experts from corporate organizations for interactive sessions, lectures on soft skills and training of students. The CCC also organizes job fairs/career related fairs, pool campuses for the job seekers in the university premises as per opportunity and requirements. It also organizes interactive sessions, special

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lectures and seminars so as to help the students face the challenges of the corporate world and avail the opportunity to undergo training during semester break in reputed companies, industries, hospitals, and government organizations. To facilitate the above objectives, enrollment of representatives from various departments of the University has been carried out under the guidance of the Coordinator. The Committee consists of faculty and student representatives, who coordinate the different activities of the CCC.

Activities Undertaken during 2016-17

- Phronesis Partners conducted a pool campus drive at the School of Technology (SOT), NEHU, on 21 and 22 April 2016 where 49 students from NEHU, Assam Down Town University, NIT, Meghalaya and Tezpur University participated. Three students of NEHU and one student of NIT, Meghalaya, got selected.
- A recruitment drive was conducted by Indigo at NEHU, Shillong (25 April 2016) in which 39 students attended the drive and out of which three students were selected.
- An online telephonic interview for recruitment by Info Analytica Consulting Pvt Ltd Amedabad, Gujarat, was conducted on 7 and 13 June 2016 where four students got selected.
- A motivational lecture was conducted by the Indian Air Force, Shillong, in collaboration with the CCC on 17 June 2016 at NEHU where a total of 130 students participated.
- NEHU was invited by Assam Down Town University (ADTU) to the Largest On-Campus Job Drive, which was held at ADTU, Guwahati (17-18 June 2016) where one student attended.
- Ten Institutions from the North-East including NEHU attended a pool campus at NIT, Meghalaya, conducted by Tech Mahindra on 9 and 10 August 2016. Around 22 students of the School of Technology, NEHU, attended the pool campus where two students of ECE Department got selected.
- Interaction Session on Industry Interface Meeting was organized by the Department of Tourism and Management in collaboration with the CCC on 16 August 2016 at IT Seminar Hall, NEHU. Around 150 students attended the session.
- Around four students of the School of Technology, NEHU, attended the pool campus drive at Sikkim which was conducted by Robert Bosch in collaboration with Sikkim Manipal University, Tadong, Gangtok. One student from ECE Department, NEHU, got placed.
- A Seminar on *Decision to Face a Competition* by the International School of Technology Management, Mumbai, was conducted at NEHU on 7 September 2016 at Muti-Use Convention Hall, NEHU, where a total of 220 students of NEHU attended.
- Twenty-six students attended a pool campus drive organized by NIT, Meghalaya, on 20 September 2016 where two students were selected by the Wipro Technologies.
- An Awareness Programme by Indian Navy, Visakhapatnam, was conducted on 23 September 2016 at NEHU where around 165 students from different departments of NEHU attended.
- The Young India Fellowship in collaboration with the CCC organized an interaction session with the students of NEHU on 24 October 2016 at the School of Technology,

Career and Counselling Cell

NEHU, where around 250 students participated.

- A recruitment drive by Zaloni Technologies Pvt Ltd was conducted on 24-25 November 2016 for the engineering students of NEHU at the School of Technology, NEHU, where 12 students participated in the drive, and out of which two students got selected for the final round.
- An interaction session with the students of NEHU on a training course on *Smart Banking Program and Post Graduate Diploma in Banking Management* was organized by Adonis, a partner with Times Group in collaboration with the CCC on March 1, 2017 in the Multi-Use Convention Hall, NEHU, where around 188 students participated.
- A Pool Campus Drive by Professional Assistance for Development Action (PRADAN) was conducted on 6-7 March 2017 for students of NEHU and its affiliated colleges at TISS Guwahati where five students participated in the drive out of

which three students got selected for the final round.

- An online telephonic interview for placement recruitment by Tracxn Technologies Pvt Ltd was conducted in the month of March where few students from NEHU took part.
- A pool campus drive by Amazon India and Firstnaukri.com was conducted on 11 March 2017 for students of NEHU and all affiliated colleges at NIT, Shillong, where 29 students participated in the drive out of which one student got selected for the final round.
- A pool campus drive by Adecco Group India was conducted on 27 March 2017 at Assam ADTU, Guwahati, where five students participated.
- A pool campus drive by Amazon India was conducted on 30 March 2017 for students of NEHU and its affiliated colleges at IT Seminar Hall, NEHU, where 140 students participated and out of which 13 students got placed.

Details of the students placed through the Career and Counseling Cell during 2016-17

Date of Interview	Name of students	Department/College	Name of Company
21 & 22.04.16 (4 selected)	Mr. Shivaji Roy	ECE, NEHU	Phronesis Partners
	Ms. Imayanmosha	IT, NEHU	
	Ms. Anumita Bora Bodosa	IT, NEHU	
	Mr. Anat Katiya	NIT, Shillong	
25.04.16 (4 selected)	Ms. Jenny Pao	IT, NEHU	Indigo
	Ms. Wankmenlang Pyrbot	JMC, NEHU	
	Ms. Risa L. Kharmawlong	JMC, NEHU	

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07 & 13.06.16 (5 selected)	Ms. Anjali Roy Ms. Anumita Bora Bodosa Ms. Darshana Nath Ms. Debashree Bhattacharjee Ms. Pooja Nath	IT, NEHU IT, NEHU IT, NEHU IT, NEHU ECE, NEHU	Info Analytica Consulting Pvt. Ltd.
07.08.16 (10 selected)	Mr. Shrimanta Ramchiary Ms. Neha Kumari Mr. Monir Uddin Khandokar Ms. Bhagyashree Sarma Mr. Mohd. Aurif Shergujri Ms. Mohsina Afrooz Mr. Heerok Jyoti Sonowal Ms. Jinty Dutta Ms. Uzini Devi Daimary Mr. Jadu Doley	BME, NEHU BME, NEHU BME, NEHU BME, NEHU BME, NEHU BME, NEHU BME, NEHU BME, NEHU BME, NEHU BME, NEHU	Pamtron Pvt Ltd Mumbai
09.08.2016 (2 selected)	Ms. Anisha Kandoi Ms. Pooja Nath	ECE, NEHU ECE, NEHU	Tech Mahindra
29-30.08.2016 (1 selected)	Ms. Ananya Bordoloi	ECE, NEHU	Robert Bosch
20.09.2016 (2 selected)	Mr. Kangan Patowary Mr. Purnendu Saha	IT, NEHU IT, NEHU	Wipro Technologies
06-07.03.2107 (3 selected)	Chandan Deka Pragan Duarah Manjil Deuri	IT, NEHU ECE, NEHU IT, NEHU	PRADAN
30.03.17 (13 selected)	Priyanka Borkakoty Avinash Kumar Prasad Sawan Sarkar Dibakar Das Suchibrata Buzar Baruah Esther Wahlang Pranab Kalita Joydeep Ghosh Shibu Dhar Shubham Kapur Avishek Pandit Somansh Raj Treilangki S. Manner	ECE, NEHU ECE, NEHU ECE, NEHU EE, NEHU IT, NEHU Mysore Univ SAC, Shillong SAC, Shillong SEC, Shillong UTM, Shillong Sikkim, Manipal NIT, Shillong NIT, Shillong	Amazon India

Notes: BME- Biomedical Engineering, NIT-National Institute of Technology, IT – Information Technology, ECE – Electronics and Communication Engineering, JMC – Journalism and Mass Communication, EE – Energy Engineering, SAC- St. Anthony's College, SEC – St. Edmund's College.

CAREER AND COUNSELLING CELL (TURA CAMPUS)

Officer In-Charge : Dr. Abhigyan Bhattacharjee
Telephone : 09435017519/08415098100
E-mail : abhigyan09@rediffmail.com

The Career and Counselling Cell (CCC) is also functioning at Tura Campus and is known as Placement Cell. Following the UGC guidelines, the Cell plays a major role in addressing the diverse socio-economic handicaps of the students belonging to the different communities by providing active guidance and information regarding career and placement opportunities. In doing so, the CCC at Tura interacts with reputed industries, organizations, training centers, and other entities through seminars, workshops, placement drives, etc., in collaboration with the Department of Management and others.

Activities Undertaken during 2016-17

- A placement drive was conducted by Axis Bank on 24 January 2017 in which 10 students from the Departments of Management and Agribusiness Management and Food Technology participated. Four students from Management Department and one student from Agribusiness Management and Food Technology got offer letters.
- A placement drive was conducted by HDFC AMC on 20 December 2016 in which five students from the Management Department of 2016-17 batch participated.
- The Professional Assistance for Development Action (PRADAN), an NGO from New Delhi, conducted a recruitment drive for the post of Development Apprentice

on 6-7 March 2017. Students from the Departments of Management, RDAP, Horticulture, Agri-business Management and Food Technology of Tura Campus participated.

- A placement drive was held by Vodafone Spacetel Ltd in the first week of January 2017. Two MBA students were shortlisted for the next round of selection process.
- An Annual HR Conclave was held on 21 May 2016. The theme of the Conclave was *Skilling the Unskilled – Handling the Corporate Dilemma* and was coordinated by Dr. A. Bhattacharjee. The Executive Director of IOCL, Bongaigaon, Assam, was the Chief Guest and DGM (HR), Powergrid Corporation of India Ltd, Shillong, was the Guest of Honour, besides other dignitaries and corporates.
- The Department of Management and the CCC organised: (i) Faculty Development Programme (FDP) from February 22 to March 04, 2017, sponsored by EDII, North-East Region, Guwahati, with Dr. Abhigyan Bhattacharjee as Coordinator, (ii) Five Entrepreneurship Awareness Camps (3 days) from 8 to 29 March 2017. Students from five Departments, viz., Management, Agribusiness Management and Food Technology, Computer Applications, Horticulture and RDAP participated in the awareness camp. The camps were

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sponsored by EDII, North-East Region, Guwahati. The programme was coordinated by Dr. Abhigyan Bhattacharjee, (iii) Workshop on *Application of Statistics in Social Sciences and Official Data for PhD Students* from 5 to 11 December 2016. This was organised in collaboration with the Sampling and Official Statistics Unit, Indian Statistical Institute, Kolkata, (iv) Workshop on *Application of Statistics in Social Sciences for Research Scholars* during 20-24 March 2017. This was organised in collaboration with the Applied

Statistics Unit, Indian Statistical Institute, Kolkata. Dr. Abhigyan Bhattacharjee was the Coordinator of the workshop, and (v) Workshop on *Modern Ecological and Agricultural Practices with Statistical Methodologies and R Software* during 30-31 March 2017 in collaboration with the Agricultural and Ecological Research Unit, Biological Sciences Division, Indian Statistical Institute, Kolkata. Dr. Abhigyan Bhattacharjee was the Coordinator of the workshop.

CENTRAL LIBRARY

Librarian (In-charge) : Dr. F. R. Sumer
Telephone : 0364-2721251(O)
Email Id : fsumer@nehu.ac.in

Brief Statement of Activities

The NEHU Central Library has made an effort to improve upon the various services that it renders to its members. During the period, apart from the addition of basic learning resources, such as books and journals, additional equipment and infrastructure were also procured to augment the organisation and management of the Library which in turn enhance the overall library services. The Library has also paid special attention to the various requirements of the special category of library users who are physically challenged. To address one of such requirements, an automated device, viz. Lex Air Digital Capture Book Reader is introduced in the library. This device enables a visually impaired library user to “hear” the words/text/line from a book/document as it scans the document through a text-to-audio conversion process.

The Central Library celebrated the Librarian’s Day on 12 August 2016 to commemorate the birth anniversary of Padmashree Dr. S.R. Ranganathan (189 -1972). Dr. Lalhmachhuana, Documentation Officer, delivered a talk on the “Life and Contributions of Dr. S.R. Ranganathan in the Field of Library and Information Science” in the presence of Officers and Staff of the Library.

The Central Library organized the 10th Convention Promotion of Library Automation and Networking in North-East region (PLANNER 2016) on the theme of *Disruptive Innovations for Libraries: Adopt, Adapt and Evolve* with special reference to Academic Libraries in the North-Eastern region under the aegis of INFLIBNET Centre, Gandhinagar (9-11 November 2016). The three-day convention was attended by more than 250 participants including officials, paper/poster presenters and experts in the field of library and information sciences. The Central Library also organised a two-day advance level workshop to implement *Koha on Cloud: A Special Focus on Libraries in North-East India* in collaboration with the Informatics Global Pvt Ltd from 24 to 25 February 2017. The objective of the workshop was to create awareness amongst Librarians including library students and researchers in the region on the implementation of *Koha*, an Integrated Library Management System (ILMS) with a focus on the cloud environment. The workshop was attended by more than 90 participants including librarians, researchers, students, and staff from Universities, Colleges and Institutes located in Meghalaya and other parts of the North-Eastern region.

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Budget Allocation 2016-17

Particulars	Rupees in lakh
1. Books	
a) Non-Plan	10.00
b) Plan	105.00
2. Journals and periodicals for sciences - Scientific journals including Subscription to e-resources, viz. IEL Online (IEEE e-journals) for School of Technology and subscription to Scopus database	
a) Plan	95.00
b) Non-Plan: Other than sciences - periodicals for Humanities, Social Sciences, etc.	20.00
c) Other Grants: Plan -NBHM	13.90
3. Infrastructure and Additional Manpower – Plan	16.03
4. Allocated for Tura Campus Library	11.97
5. One time allocation :Accessories to facilitate installation of Wi-Fi in Library – Non-Plan	3.29
6. Recurring Expenditures & Contingency – Non-Plan	13.75
7. Digitization: Manpower – Non-Plan	2.40
Total	291.34

Library Collection: 289483 volumes

Particulars	Volumes
Economics, Management and Information Sciences	0850
Education	0674
Humanities	1300
Human and Environmental Sciences	0088
Life Sciences	0192
Physical Sciences	0184
Social Sciences	0763

Central Library

Technology	0354
Gifts and others	0736
NBHM	0002
Theses	0370
Data Bank (Government Publications and Reports)	0352
Total books added during the year	5522

Subscription to Periodicals including Scientific Journals (Titles in Print)

- International Journals: 137
- Indian Journals: 126
- Total: 263

Membership Enrollment during the year (2016-17)

Particulars	Number
Undergraduate Students	0323
Postgraduate Students	1128
Research Scholars	0196
University Teachers	0000
Non-Teaching Staff	0004
Visiting/Guest Professors/Lecturers	0005
Others (Including College Teachers)	0001
Total number of membership	1657

Usage and Issue of Books and Journals, etc.

- Daily average number of books issued/ returned/renewed: 352
- Number of users who availed consultation services: 261

- Average usage of journals and back volumes: 801 per month

- **Total Usage of Theses/Dissertations including Data Bank:** (i) Students: 400 per month, (ii) Research Scholars: 200 per month, and (iii) Others: 150 per month

Central Services

- Photocopies of journal articles including Back Volumes made: 20 issues per month
- Average number of internet users: 195 per month
- NEHU usage of UGC INFONET Digital Library: 272,946 articles

Revenue Generated by the Library during the Year

- Consultation fees: Rs. 7050.00
- Fines from Books overdue (including Law Library): Rs. 114907.00
- Total: Rs. 121957.00

Other Activities

Awareness/Orientation/Internship Programme for Students and Research Scholars

- Library Orientation Programme was conducted from 6 to 16 September 2016 in the Central Library Conference Hall for the first semester students of different departments. The programme focused on the library's rules and guidelines, in-house/online resources, features of the Online Public Access Catalogue (OPAC), and a guided tour of the Central Library. The programme was co-ordinated by Dr. M. Rana, Assistant Librarian.
- The 5th Library Internship Programme was conducted by the Central Library from August 1 to September 9, 2016 for the outgoing MLISc 4th semester students of the Department of Library and Information Science, NEHU, Shillong. The programme was co-ordinated by Dr. Lalhmachhuana, Documentation Officer.

Exposure to e-Resources across the Academic Fraternity

- With the nation-wide launching of the National Digital Library of India, sponsored by the Ministry of Human Resource Development (MHRD), Government of India and co-ordinated by the Indian Institute of Technology, Kharagpur, under the National Mission on Education through Information and Communication Technology, the Central Library have initiated the process so that NEHU academic fraternity can register and login into the portal <https://ndl.iitkgp.ac.in/> in order to access the learning resource available in the form of books, articles, theses, manuscript and lectures.
- The online services through the subscription/renewal of e-databases and e-journals are provided through hyperlinks that are placed on the Library webpage (<http://www.nehu.ac.in/library>) for the convenience of users. Similarly, hyperlinks to e-resources available through the e-ShodhSindhu and DelCON Consortium are available on the library webpage to ease wide access.
- While the Internet Room in the library is fully dedicated to support the library users to access the e-resources available in NEHU, the Library also supports the users especially the MPhil/PhD research scholars and teachers on their individual requirement including the use of anti-plagiarism software.

Membership with other Libraries

- The Library was enrolled as a member of the American Libraries in India during the period.

Central Library

Subscription to e-journals, e-books and Online Databases

- The following subscribed online databases and e-journals were renewed/subscribed during the period: (a) Biological Abstracts, (b) IndiaStat, (c) Library and Information Abstracts, (d) IEL Online, (f) Indian Journals.com, (g) Library and Information Science Abstracts (LISA), and (h) Scopus.

Important Activities/Steps Accomplished towards Improvement of Library Services

- The Library Online Public Access Catalogue (OPAC) has been hosted on a cloud platform to ensure seamless access of the library catalogue over the Internet by the library members of the University and interested members of the public. The hyperlink to the library catalogue is placed on the Library webpage listed as “OPAC.”
- Additional equipment and infrastructure in the form of computer servers and book racking facility were installed/setup.
- Awareness on the availability of online learning resource portal, namely National Digital Library of India, e-ShodhSindhu & DelCON Consortium including subscribed e-resources were initiated in the University.
- Awareness on the National Digital Repository for theses and dissertations, viz., Shodhganga and the use of Anti-Plagiarism software were initiated and conducted in the University. Soft Copies of PhD Theses awarded by NEHU were submitted to INFLIBNET Centre, Gandhinagar, for uploading in the Shodhganga repository.
- A total of 90,000 pages equivalent to 352 books pertaining to the rare and out print

books were digitized and uploaded on the NEHU Institutional Repository.

- A Lex Air Digital Capture Book Reader was installed in the library for the visually impaired library members.

Publications

Edited/Book Chapters

Arora, J., Kumar, M.K., Patel, Y., Sumer, F. R., Hosamani, H.G., editors. (2016). *Disruptive Innovations for Libraries: Adopt, Adapt and Evolve - 10th Convention PLANNER 2016*. Information and Library Network Centre, Gandhinagar, ISBN: 978-93-81232-06-4.

Oinam, A. C., Nongbri J. P. (2016). Software migration from LibSys 4.0 to Koha: Post-migration issues in a University Library of North-Eastern Hill University. In: *Disruptive Innovations for Libraries: Adopt, Adapt and Evolve - 10th Convention PLANNER 2016*. J. Arora, M. K. Kumar, Y. Patel, F. R. Sumer, *et al* (Eds.). Information and Library Network Centre, Gandhinagar, p. 375-381

Sten, B., Kharakor, D. (2016). Problems and prospects on library automation in rural colleges of Meghalaya: With reference to the Mawsynram Border Area College. In: *Disruptive Innovations for Libraries - Adopt, Adapt and Evolve: 10th Convention PLANNER 2016*. J. Arora, M. K. Kumar, Y. Patel, F. R. Sumer, *et al* (Eds.). Information and Library Network Centre, Gandhinagar, p. 197-201.

Seminars/Conferences/Orientation Course/Workshops/Extension Programmes

Dr. F. R. Sumer was the Organising Secretary for the 10th Convention PLANNER 2016

Central Services

on *Disruptive Innovations for Libraries: Adopt, Adapt and Evolve* organised by the INFLIBNET Centre, Gandhinagar, Gujarat, in collaboration with NEHU, Shillong (9-11 November 2016.) He was also Coordinator for the workshop on *Implementation of Koha on Cloud: A Focus on Libraries in North-East India* organised by the Central Library in collaboration with Informatics Ltd., Bangalore, at the Multi-Use Convention Centre, NEHU, Shillong (24-25 February 2017).

Acted as a resource person during the 36th, 37th, 38th and 39th Orientation Programmes conducted by the UGC-HRDC, NEHU and delivered two lectures on each occasion during 2016-17. He also delivered lectures on: (i) "Discussion on Research Methodology" in the Meghalaya State Judicial Academy, Tapovar Bungalow, Shillong (22 March 2017), (ii) "Library Automation and Networking" during the workshop-cum-training programme on *Knowledge Organisation in Academic Libraries* organized by NEHU Tura Campus Library during 18-22 July 2016, (iii) "Consortium for Higher Education: e-resources for Colleges in India" at Shillong College, Shillong (30 August 2016), and (iv) acted as a resource person during the national workshop on *Koha Open Source Library Software* organized by the Department of Library and Information Science, NEHU, Shillong (25-30 July 2016) and during the workshop on *Open Source Software for Libraries 2017* at Guwahati organized by the Documentation Research and Training Centre, Indian Statistical Institute, Bangalore, in collaboration with Assam Don Bosco University, Guwahati

(23-25 January 2017).

He also extended free consultation services during the period to Librarians of Shillong College and Shillong Polytechnic, on aspects related to implementation of library automation including introduction and management of online services in their college/institute.

Dr. Lalmachhuana

Acted as a resource person during the 36th, 37th, 38th and 39th Orientation Programmes during 2016-17 conducted by UGC-HRDC, NEHU, and delivered two lectures on each occasion.

Dr. Manoj Rana

Acted as a resource person during the national workshop on *Koha Open Source Library Software* organized by the Department of Library and Information Science, NEHU, Shillong (25-30 July 2016).

Shri Alex Blah

Participated in a workshop cum-training programme on *Institutional Digital Repository (NE-States-II)* organized by the Central Library, NIT, Meghalaya, and the Indian Institute of Technology Kharagpur under NDL Project, sponsored by MHRD Government of India during September 23-24 2016.

Shri B. Sten

Imparted training on *Library Automation and Networking Using Koha: An Open Source Integrated Library Management Software* to the Librarians and other library staff of Shillong Law College, and Shillong Polytechnic during the period. Training includes installation, customization, setting

Central Library

of parameters, learning of various library modules and data backup of the software.

Shri J.P. Nongbri

Imparted training on the *Circulation Module Including Registration and Renewal of Library Members on the Koha Open Source Integrated Library Management Software* to the Librarian, Shillong Polytechnic, Shillong, during 2016.

Shri A. Blah

Imparted training on the *Cataloguing and Serial Modules of the Koha Open Source Integrated Library Management Software* to the Librarian, Shillong Polytechnic, Shillong. He also coordinated Library

House Keeping Programme (Job Diary) for the MLISc 2nd semester Students of the Department of Library Science and Information Science, NEHU, during April 2016-June 2016.

PhD Award

Dr. Manoj Rana, Assistant Librarian, was awarded the PhD degree in Library and Information Science for his thesis entitled “Personality Traits and Job Satisfaction: A Study of Library Professionals of North-East India” under the supervision of Prof. Moses M. Naga, Department of Library and Information Science, NEHU (28 November 2016).

Central Services

CENTRAL LIBRARY (TURA CAMPUS)

Assistant Librarian : Mr. A. J. Singh (In-Charge)

During 2016-2017, the Tura Campus Library achieved outstanding progress in terms of its collection. The Library offers services like Reference, Circulation, Bibliography Services, Reprography, OPAC, online access to e-journals and databases and

internet browsing facilities to the students, research scholars, faculty members and non-teaching staff of the Campus. The Library also extends its services to the neighbouring colleges in the West Garo Hills district.

Budget Allocation during 2016-17

Particulars	Rupees in lakh
Books & Periodicals 2016-2017 (Non-Plan)	12.00
a) Book Grant	3.10
b) Periodicals Subscription	7.90
c) Library Stationary and Others	1.00
Books (Plan)	11.97
• Book Grant	11.00
• Library Stationary and Others	0.97
Total	23.97

Total Library Collection: 27776 volumes

Particulars	Volume
Books on Purchase	27020
Gifted Books	756
Total Book collection up to 31.03.2017	27776

Central Library (Tura Campus)

Book and Journal Collection during 2016-17

Particulars	Volume/Number
Purchased Books	2044
Gifted Books	16
Indian Journals	71
International Journals	18
Books added during the year (2016-2017)	2060
Total number of journals subscribed (2016-2017)	89

Library Membership

Particulars	Number
Students of 9(Nine) PG Departments	391
MPhil/PhD Scholars	26
Faculty Members	41
Guest Lecturers	22
Non-Teaching Staff	27
Total membership	507

Library Circulation and Automation

Particulars	Volume
Books Issued	14027
Books Returned	12753
Books Consulted	36212
Books Classified (2016-2017)	2060
Books Added in the Database & Barcoded	2060

Revenue Collected during 2016-2017

Particulars	Rupees
Reprography Services	13277
Overdue Fine	4125
Total	17402

Central Services

Other Activities

- The Campus Library is finally merged into Central Library Chasingre. The Libraries at Chandmari Campus and Management Department was shifted to the Central Library during the period from 28 to 30 September 2016.
 - The Library is using Libsys4 software for its computerised housekeeping operations.
- All books are in the Computer processed database and they are available on OPAC and on Web-OPAC.
- The Library provided an orientation to the new students on the use of OPAC and introduced the library resources (Print & Electronic) to them.
 - The Library started introducing smart card for issue and return (Circulation) for the Students.

COMPUTER CENTRE

Head : Prof. A. K. Chandra (Till 26 March 2017)
 Prof. Mangal C. Mahato (Since 27 March 2017)

Telephone : 0364-2723751/272833

E-mail : hodcc@nehu.ac.in, mangal@nehu.ac.in

Faculty/Staff: 7

Designation	Name and Qualification	Specialization
Head (2)	Prof. Mangal C. Mahato, since 27 March 2017, PhD (IISc Bangalore)	Solid State Physics
	Prof. A. K. Chandra, till 26 March 2017, PhD (Burdwan)	Computational Chemistry
Senior System Analyst (1)	Mr. P. P. Dey, BTech (REC Warangal), MTech (NEHU)	Electronics and Communication Engineering, Information Technology
System Analyst (2)	Mr. H. Kharshiing, BTech (Jawaharlal Nehru Engg College)	Computer Science and Engineering
	Mr. M. Kharjana, BE (Sardar Patel College of Engg., Mumbai)	Computer Science and Engineering
Computer Operator (1)	Mr. P. Kharlukhi, BCA Posted to Examination Section since September 2016.	Computer Hardware and Networking

Thrust Areas of Research

- Providing High Performance Computing facility (24×7) to faculty members, research scholars and students of the University.
- Conducting training programs in computer related subjects.
- Supporting ICT/UMS related automation activities of the University.

Brief Statement of Academic/Other Activities

Research scholars and teachers/non-teachers from various Departments/Centres utilize

the facilities of the Centre for computational work, documentation and internet browsing. Several short-term courses were conducted throughout the year, namely C Programming, Java Programming, Windows & MS-Office, Computer Hardware and Networking. The Centre has been assisting Finance, Examination and Administration Departments of NEHU. System analyst and Data entry operators of the Centre are involved in the Examination Department's work on a regular basis. The Centre also supports the Helpdesk for University online admission.

Student Intake (Short-Term Courses)**Enrolment capacity:** 80

Degree	Male	Female	ST	GEN	Meghalaya	Non-Meghalaya	Total
Windows & MS-Office	09	17	24	02	26		26
C-Programming	06	03	04	05	09		09

Short-Term Courses Taught

1. C programming by Mr. P.P. Dey
2. Java Programming by Mr. M. Kharjana
3. MS-Windows and MS-Office by Mr. H. Kharshiing
4. Hardware and Networking by Mr. P. Kharlukhi

Publications**Published Abroad**

Kharkongor, D., Reenbohn, W. L., Mahato, M. C. (2016). Particle dynamics in a symmetrically driven underdamped inhomogeneous periodic potential system. *Physical review E*, 94, <https://doi.org/10.1103/PhysRevE.94.022148>.

Pandey, T., Shukla, R., Shukla, H., Sonkar, A., Tripathi, T. (2017). A combined biochemical and computational studies of the rho-class glutathione s-transferase sll1545 of *Synechocystis* PCC 6803. *International Journal of Biological Macromolecules*, 94:378-385.

Rao, A. B. P., Uma A, Chiranjeevi, P., Bethu, M. S., Venkateshwara, Rao, J., Deb, D. K., Sarkar, B., Kamisky, W., Kollipara, M. Roa. (2016). The *in vitro* antitumor activity of oligonuclear polypyridyl rhodium and iridium complexes against cancer

cells and human pathogens. *Journal of Organometallic Chemistry*, 824:131-139.

Shukla, H., Shukla R., Sonkar, A., Pandey, T., Tripathi, T. (2017). Distant Phe345 mutation compromises the stability and activity of *Mycobacterium tuberculosis* isocitrate lyase by modulating its structural flexibility. *Scientific Reports*, 7, www.nature.com/scientificreports.

Sonkar, A., Shukla, H., Shukla, R., Kalita, J., Pandey, T., Tripathi, T. (2017). UDP-N-Acetylglucosamine enolpyruvyl transferase (MurA) of *Acinetobacter baumannii* (AbMurA): Structural and functional properties. *International Journal of Biological Macromolecules*, 97:106-114.

Infrastructure facilities

High Performance Cluster Computer
SULEKOR-Dell Cluster has been used by the University community primarily by Research Scholars from the Departments of Chemistry, Physics, Bio-Chemistry, Biotechnology and BSSS. The system is in use for 7×24. The SULEKOR has primarily users for FORTRAN, GROMACS AND GAUSSIAN.

SULEKOR-HP High Performance Cluster Computer: SULEKOR-HP Cluster was reinstalled since June 2016. It has been used by the University community primarily by Research Scholars from the Departments of

Computer Centre

Physics, Zoology and BSSS. The system is in use for 24×7. The SULEKOR-HP has primarily users for FORTRAN and BLAST. The Centre also has 40 Desktop PCs that are connected on a LAN with NEHU internet facility.

Other activities

The Centre organized LaTeX & Scilab Workshop under SPOKEN Tutorial Project of IIT Bombay. The details of participation are as follows:

Date	Topic	Number of participants
3 October 2016	LaTeX	11
4 October 2016	Scilab	12

The Centre generated an amount of Rs.73191 during the period through its various activities. Prof. A. K. Chandra and Mr. P. P. Dey are deputed by the University as Project Manager and Associate Project Manager, respectively, for the ongoing UMS implementation. Mr. P. Khalukhi repairs the desktop computers from various Departments/Centres of NEHU. Mr. H. Kharshiing, Mr. P. P. Dey and Mr. P. Kharlukhi are providing assistance to

Examination Section, Administration Section, and Finance Section of NEHU in Computer Automation work. Mr. H. Kharshiing, Mr. M. Kharjana and Mr. P. P. Dey are supporting the Helpdesk for University Online Admission. Further, staffers of the Centre are engaged by Finance Section, Examination Section, and College Development Council of the University as and when required.

EQUAL OPPORTUNITY CELL

Brief Statement of Activities

The Cell deals with matters pertaining to implementation of the Government of India Orders, UGC Guidelines and other instructions issued from time to time on the subject of reservation, etc., in coordination with the Establishment I & II Sections and the Office of the Dean of Students' Welfare of the University.

The present position of the Schedules Castes (SC), Scheduled Tribes (ST), Other Backward Communities (OBC), and Persons with Disabilities (PWD) at the teaching and non-teaching levels, and admission to various courses/degrees as on 31 March 2017 is given as under:

Teaching Staff

Name of the Post	Total Post		In Position out of Total Filled						
	Sanctioned	Filled	General	OBC	SC	ST	PWD	Total	Vacant
Assistant Professor	205	187	131	19	21	15	01	187	18
Associate Professor	147	091	085		01	05		091	56
Professor	093	050	048		01	01		050	43
Professor/ Associate Professor	002*								02

**Posts that can be filled either as Professor or Associate Professor*

Non-Teaching Staff

Name of the Post	Total Post		In Position out of Total Filled						
	Sanctioned	Filled	General	OBC	SC	ST	PWD	Total	Vacant
Group A	067	050	050					050	017
Group B	185	114	034	43	23	013	01	114	071
Group C	765	444	189	30	06	218	01	444	321

Equal Opportunity Cell

Admission to Various Courses/Degrees during 2016-17

Course/ Degree	Total Seats		In Position out of Total Filled					
	Sanctioned	Filled	General	OBC	SC	ST	PWD	Total
UG	0340	1252	424	37	95	0695	01	1252
PG	1359	2622	300	66	87	2163	06	2622
MPhil		0124	030	09	08	0077		0124
PhD		0931	267	50	50	0564		0931
Others	0050	0223	008	12		0203		0223

HEALTH CENTRE

Staff

SHILLONG CAMPUS	
Chief Medical Officer Senior:	Dr. M. Marwein
Medical Officer:	Dr. C. Mukhim
Senior Medical Officer:	Dr. M.B.G. Momin
Physiotherapist:	Ms. Evalari S. Skhembill
Pharmacist:	Two
Staff Nurses:	One regular and two on contractual basis
Laboratory Technician:	One
Other staff:	Two office staff, two MTS (one daily), one Dresser, three Receptionists, four Cleaners, and two Safaiwalas.
Telephone:	0364-2721705/2224639
TURA CAMPUS	
Senior Medical Officer:	(Mrs.) Tangsil Dilme Ch. Momin
Laboratory Technician:	One
Other staff:	One Driver, one Peon (Ad-hoc), and one Cleaner

The Health Centre at both Campuses in Shillong and Tura is catering to the health needs of the teaching, non-teaching and student communities.

Facilities Available in the Health Centre (Shillong Campus)

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

Pharmacy: The required medicines are purchased from the wholesale suppliers and stocked in the medical store. 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.

Laboratory: Bio-Chemical and Clinical Pathology tests for blood and urine analyses are performed in the Laboratory of the Health Centre.

Observation Room: In the observation room, moderately sick patients have been taken care off by giving IV drips, etc.

Health Centre

In-patient Treatment: Patients requiring in-patient treatment are referred to the hospitals/Specialist within Shillong and thereafter outside Shillong depending upon the necessity.

Ambulance: Ambulance service is provided during emergency for transporting the severely sick patients from residents to Clinic/Hospitals.

Emergency duty: The Resident Medical Officers and Resident Nurse are doing emergency duty outside duty hours whenever needed.

Credit Billing Facility: Credit billing facility is available for patients admitted to Nazareth and KJP Hospitals in Shillong and CMC Hospital at Vellore.

Sports Aid: First Aid service is provided at sport tournaments organized by the University.

Physiotherapy: After the joining of a contractual Physiotherapist in July last year, the physiotherapy facility has been provided to the University community.

Medical Camp: Free medical camps like Bone Mineral Density Test (BMD), Eye Check-up, Diabetes and Blood Donation camps are being held at the Health Centre during the period.

Facilities Available in the Health Centre (Tura Campus)

Consultation: Senior Medical Officer is available for consultation during the office hours

and for emergency consultations and advice on off duty hours. The SMO looks after the clinical works as well as the administrative matters of the Health Centre.

Pharmacy: The SMO also dispenses medicines herself since the Pharmacist has left the job. The Laboratory technician also helped in dispensing medicines to the patients.

Laboratory: Recently Urine Analyzer, Semi-automated Biochemistry Analyzer & CBC Cell Counter 3 Parts have been procured and thus basic laboratory tests are being done in the Health Centre.

Ambulance: An ambulance service is provided to transport patients from hostels/residences to clinics/hospitals during emergencies.

Emergency and in-patient treatment: For emergency treatments and for patients requiring in-patient treatments, they are referred to the hospitals/specialists within Tura and thereafter outside Tura depending upon the case.

Credit billing facility: This is available at International Hospital and GNRC Guwahati and CMC Hospital, Vellore.

Sports: First Aid Service is provided by the Centre during the sports tournament organized on the Campus.

HINDI CELL

Hindi Officer : Sri Rajendra Kr. Ram
Telephone. : 0364-2721331(O)
Email : hindiofficer@nehu.ac.in

The Hindi Cell was established in pursuance of the Official Language Policy of the Government of India to promote the progressive use of *Rajbhasha* Hindi. An Official Language Implementation Committee is already constituted by the University for implementing and monitoring the *Rajbhasha* Policy.

Activities

- During the year, the Cell conducted a Hindi Training Programme for the employees of the University under the aegis of the Government of India, Hindi Teaching Scheme, Shillong Centre. Cash awards were given to the successful employees on completion of different courses, namely *Prabodh*, *Praveen*, and *Pragya*. The successful employees of the last course (namely *Pragya*) were given a one year special increment as per the Government of India's order and guidelines.
- The Departmental Official Language Implementation Committee held all the mandatory Quarterly Official Language Implementation Committee meetings and the reports on the Progressive use of Hindi were forwarded to the Ministry of Human Resource Development and Ministry of Home Affairs, Government of India.
- During the period, three Hindi Workshops were conducted for the employees of the University, Shillong Campus. The Hindi Cell also conducted Hindi Divas on Shillong Campus in the month of September 2016 in which several Hindi programmes like Hindi extempore speech, Hindi Essay writing, Poem recitation, Noting and Drafting, and Hindi Antakshari competitions were conducted. The winners of the various competitions were awarded cash prizes with certificates on the valedictory function.
- The Hindi Officer participated in a one-day official language conference and prize distribution programme for the *East and North-East region* in Ranchi, Jharkhand, on 21 January 2017 organised by the Department of Official Language, Home Affairs, Government of India.
- The Cell also conducted the *Matribhasha Divas* on 21 February 2017 on Shillong Campus.

INTERNAL QUALITY ASSURANCE CELL

Director : Prof. N. Srivastav
Telephone : 0364- 2721070/1080(O)
Email : directoriqac@nehu.ac.in

The IQAC is meant for planning, guiding and monitoring Quality Assurance (QA) and Quality Enhancement (QE) activities of the institution. Accordingly, the IQAC of NEHU aims at systematization of the efforts and measures of the University towards academic excellence.

Activities Undertaken During 2016-17

- Compilation, preparation and submission of Annual Quality Assurance Report (AQAR) 2015-2016.
- Compilation and submission of additional documents to NAAC Bengaluru in connections with the submission of LOI.
- Compilation of the Self- Study Report, (SSR Volume I & II) 2015, for the NAAC Third Cycle of Assessment and Accreditation.
- Preparation and compilation of addendum of the self-study-report for the years 2014-15 and 2015-16 in addition to SSR-2015 for the NAAC Third Cycle Assessment and Accreditation.

NATIONAL SERVICE SCHEME CELL

Programme Coordinator: Dr. Lakhan Kma
Telephone: 0364-2721151/2721152/2721153
Email: nss.nehu@gmail.com

The National Service Scheme (NSS) of Government of India envisages utilizing the free time of Higher Secondary School/Colleges/University students for socially productive works. An important feature of the NSS is that its programmes are organized by the student volunteers themselves under the guidance of their teachers as Programme Officers. The works undertaken by the NSS units are divided into Regular Activities and Special Camping. The volunteer strength has increased to 21981 comprising volunteers from two PG units, 41 colleges and one Medical institute with 81 NSS Programme Officers.

Review Meeting

- A Review Meeting was held for the NSS Programme Officers of various institutions from the East Khasi Hills, West Khasi Hills, Jaintia Hills, Ri-Bhoi and Garo Hills Districts on 29 May 2016 in the Conference Room, Administrative Building, NEHU, Shillong. Fifty NSS Programme Officers attended the meeting.
- The 36th NSS University Advisory Committee meeting was held on 3 March 2017 at NEHU, Shillong.

Blood Donation

- The Cell conducted 18 camps during 2016-17 with 348 NSS volunteers making donations to the various blood banks in

the state through *Blood Donation Camps and Emergency Donations*. These camps were conducted in collaboration with the Meghalaya AIDS Control Society, (MACS), State Blood Transfusion Council (SBTC) and the blood banks of Pasture Institute, Nazareth Hospital, NEIGRIHMS and Tura Civil Hospital.

Inter State Youth Exchange and Home Stay Programme

- Ten NSS volunteers along with one Contingent leader from NSS Unit, NEHU, Shillong, participated in the Inter-State Youth Exchange and Home Stay Programme in Ahmedabad from 26 January to 4 February 2016.

Republic Day Parade Camp

- The *Selection Camp* for Pre-Republic Day parade was held on 18 October 2016 in the Community Hall, NEHU, Shillong. More than 90 students from all districts of the State actively participated in the camp.
- Fourteen NSS Volunteers along with one Programme Officer attended the *Pre-Republic Day Parade Camp* held at State Youth Hostel, Salt Lake, Kolkata, from 10 to 19 November 2016.
- Mr. John Frankie Shadap of Ri-Bhoi College, Nongpoh and Ms. Osin Mosu of

National Service Scheme Cell

Union Christian College, Umiam, attended the *Republic Day Parade Camp* in New Delhi (1-31 January 2017).

National Youth Festival

- Four NSS volunteers along with one Programme Officer from Sngap Syiem College, Mawkyrwat, attended the *20th National Youth Festival* held at Raipur (Chattisgarh) from 12 to 16 January 2016.

North-East NSS Festivals

- Fifteen NSS volunteers from NEHU Unit of Shillong participated at the *North-East NSS Festival* held at Guwahati University, Assam (5-9 January 2017).
- Fourteen NSS Volunteers along with two NSS Programme Officers of Meghalaya participated in the *North-East NSS Festival* held at Don Bosco College, Jullong, Itanagar, (Arunachal Pradesh) from 6 to 10 March 2017.

Adventure/Trekking Programme

- The NSS Unit of Tura Government College, Tura organized an adventure-cum- trekking programme to Bandare Chiontim Waterfalls on 20 August 2016, and 44 NSS volunteers participated.
- Twenty NSS volunteers along with two Programme Officers attended the *Winter Adventure Camp* held at NIMAS, Dirang, West Kameng District, Arunachal Pradesh, from 12 to 21 November 2016.
- The NSS Unit of Tura Government College organized an adventure-cum-trekking programme to Chisobibra, Togan Nengminja Memorial Park on 25 March 2017. Forty-five volunteers along with

three Programme Officers participated in the programme.

- The NSS Unit of Williamnagar Government College organized a trekking programme to Chibok Dare on 21 March 2017, and 70 volunteers participated in the programme.

Special Camps: Under the theme of “Healthy Youth for Healthy India”

Different activities were undertaken in these camps, such as socio-economic survey of the village, literacy programmes, demonstration on rural technologies and low cost sanitation, disaster management, formation of SHG’s, waste disposal and composting, cleaning drives, white washing of local schools, digging of water ponds/fish ponds, asset creation, quiz/debate, sports competitions, trekking, awareness on HIV/AIDS, drug abuse, etc. Besides these activities, free medical and eye check-up camps have become a regular feature during these camps. Twenty-eight Special Camps were held at various places as highlighted below:

- Bellefonte Community College, Shillong at Saphai village from 18 to 24 January 2016.
- Shillong College at Umphrup village from 25 to 30 July 2016.
- Jaintia Eastern College, Khliehriat at Lumchyrim village from 23 to 29 September 2016.
- Synod College, Shillong, at Mawpdang village from 3 to 8 October 2016.
- St. Edmund’s College, Shillong, at Dewlieh village from 8 to 14 October 2016.
- Union Christian College, Umiam, at Mawlyndep village from 7 to 13 October 2016.

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- NSS NEHU Unit, Shillong, at Mawlyngkhung Village from 7 to 13 October 2016.
- Sngap Syiem College, Mawkyrwat, at Nongdom village from 10 to 16 October 2016.
- St. Anthony's College, Shillong, at Swer village from 10 to 16 October 2016.
- St. Edmund's College, Shillong, at Mawdulop village from 10 to 16 October 2016.
- Shillong College at Nongtyngur village from 10 to 16 October 2016.
- Mawlai Presbyterian College at Laitmawroh village from 31 October to 6 November 2016.
- Mawsynram Border Area College at Phlangmawsyrpat village from 31 October to 6 November 2016.
- Shillong College at Nongpathaw village from 31 October to 6 November 2016.
- Loyola College, Williamnagar, at Chiringgro village from 1 to 7 November 2016.
- Durama College, Tura, at Sropgre village from 14 to 20 November 2016.
- Kiang Nangbah Government College, Jowai, at Khonglah village from 7 to 12 November 2016.
- Ri Bhoi College, Nongpoh, at Umkyrpiang village from 21 to 27 November 2016.
- Thomas Jones Synod College, Jowai, at Amutong village from 28 November to 4 December 2016.
- Capt Williamson Memorial Government College at Jakshogram village from 29 November to 5 December 2016.
- Tura Government College at Boldorenggre village from 28 November to 4 December 2016.
- Acheng Rangmanpa College, Mahendraganj, at Modakpara village from 7 to 13 December 2016.
- NSS NEHU Unit, Shillong, at Mawlyngkhung Village from 16 to 22 December 2016.
- Lady Keane College, Shillong, at Pingwait village from 3 to 9 December 2016.
- Nabon Women's Synod College, Shillong, at Umjathang village from 9 to 14 January 2017.
- Phukan Memorial College, Dalu, at Dombagre village from 7 to 13 February 2017.
- Sankardev College, Shillong, at Kyrdemkhla village from 18 to 24 February 2017.
- Balawan College, Umsning, at Lumkeni village from 18 to 24 February 2017.

Workshops/Trainings/Orientations/ Seminars

- About 20 NSS Programme Officers from different colleges of Meghalaya attended a five-day training of TOT on *Social Harmony and National Unity* held at NEHU New Guest House, NEHU, Shillong (5-9 January 2016).
- More than 300 NSS Volunteers and Programme Officers from different institutions of Meghalaya participated in a two-day workshop on *Disaster Management* organized by the NSS Cell at NEHU, Shillong (25-26 February 2016). The programme was conducted by the Office

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- of the Deputy Controller, Civil Defence, Shillong.
- The NSS Cell organised a one-day workshop on *Digital India* at the Multi-Use Convention Centre, NEHU, Shillong, on 3 March 2016. More than 250 Programme Officers, NSS Volunteers, and Officials participated. Resource persons were from NeGD, New Delhi and SeMT, Meghalaya.
 - The District Disaster Management Authority, West Garo Hills District, in collaboration with the Meghalaya Administrative Training Institute along with the Civil Defence and Home Guards, West Garo Hills District, Meghalaya, organized a three-day programme on *Search and Rescue and First Aid* for NSS volunteers of Tura Government College Unit at Circuit House, Tura (15-17 March 2016). Forty NSS volunteers participated.
 - The NSS Unit of Union Christian College, Umiam, organized a two-day workshop on *Open Source and Android Application Development* at the college (3-4 August 2016), and 86 NSS volunteers attended.
 - The NSS Cell, NEHU, Shillong organized a one-day workshop on *Swachhta* on 24 August 2016 at the Community Hall, NEHU, Shillong. Around 300 NSS volunteers from all over the state attended. Topics on *Swachhta* and Food Safety, Environment, Health and Waste Management were discussed.
 - Four NSS Programme Officers attended the *TOT on Life Skills* conducted at IIE, Guwahati from 12 to 16 September 2016.
 - The Programme Coordinator and the Programme Organiser of the NSS Cell had attended a meeting at the Deputy Commissioner's Office on 21 September 2016 relating to a cleaning drive of Iewduh (Barabazar), which was organized on 2 October 2016 as part of the *Swachh Bharat Mission*, as desired by the Hon'ble Governor of Meghalaya.
 - The NSS Unit of Sohra Government College organized a one-day workshop on *Economic Prospect of Tourism in Sohra* on 22 September 2016.
 - Mr. B. Kharkongor of the NSS Cell along with one NSS volunteer attended a thematic seminar on *Approaches to Better Waste Management* organized by the Urban Affairs Department, Government of Meghalaya, on 25 November 2016 at Brookdene, Cleve Colony.
 - The NSS Unit of Durama College, Tura, organized a two-day workshop on *Youth Leadership and Personality Development* for NSS volunteers from different units of Garo Hills at SMELC, Tura, on 29 and 30 November 2016.
 - The NSS Unit of St. Anthony's College in collaboration with the Ministry of Social Justice and Empowerment, Government of India, organized a two-day workshop on *Drug Abuse Prevention* on 3 and 4 March 2017. Around 150 NSS volunteers from 17 Colleges of Shillong along with the Programme Coordinator of the NSS Cell participated.
 - The NSS Unit of Women's College organized an awareness programme on *Organic Farming at Mawblang* (adopted village) on 4 March 2017. Resource persons from the Indian Council of Agricultural Research, Umiam, delivered talks on the importance of the organic farming in

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agriculture. Fourteen volunteers and 120 farmers participated in the same.

- The Programme Coordinator attended a workshop organized by the National Council of Rural Institute at Hyderabad on 6 and 7 March 2017.
- The Office of the Deputy Commissioner, East Khasi Hills District, along with the Civil Defence and Home Guards, East Khasi Hills District, organized a two-day programme on *First Aid, Search & Rescue* on 21-22 March 2017. Six NSS volunteers from Mawlai Presbyterian College participated.

NSS Day

The 47th NSS Foundation Day was observed in a befitting manner on 24 September 2016 at NEHU with the participation of 500 NSS volunteers from all over the State. Shri P. S. Dkhar, Deputy Commissioner, East Khasi Hills District, was the Chief Guest on the occasion. Special invitees were Prof. H. Kayang, DSW, NEHU, Mr. S. K. Basumatary, Regional Director, NSS, Guwahati. The University Level NSS Awards were also presented on the occasion. The best NSS Unit was awarded to the **NSS NEHU Unit** and the best Programme Officer was awarded to **Mr. Sujol Kharrymba** of Shillong College. The best NSS Volunteer Awards were given to: (i) **Ms. Cathleen Kharbyngar**, Shillong College, (ii) **Mr. Robin Nongrum**, Shillong College, (iii) **Mr. Sumeet Agarwala**, NSS NEHU Unit, Shillong, (iv) **Mr. Jason Jyrwa**, St. Edmund's College, Shillong, (v) **Mr. Greatbornson Snaitang**, Sngap Syiem College, Mawkyrwat, and (vi) **Mr. Balajied Lawriniang**, Synod College, Shillong. The awards were given on the

basis of their committed and effective participation in community service. The day ended with a variety of programmes, which included songs, dances, skits and multi-varied cultural items.

Environmental Programmes

Various NSS units organized programmes to observe the World Environment Day, such as awareness talks on environment, cleaning drives, tree plantation, rallies and slogan, quiz, debate and drawing competitions. A total of 2420 saplings were planted on the occasion.

District Level NSS Meet

The Deputy programme Coordinator of the NSS, Garo Hills Districts, organized a one-day District Level NSS Meet on 10 June 2016 at Dakopgre, Tura. Around 150 NSS volunteers participated. Programme Coordinator attended the same.

Other Activities

- The NSS Unit, NEHU, Shillong, in collaboration with DMHO, Government of Meghalaya, organized a *Pulse Polio Immunisation Programme* at Mawryngkneng Village on 22 February 2016. Around 13 NSS volunteers attended and 150 children benefitted.
- The NSS Unit, NEHU, Shillong, in collaboration with the Meghalaya AIDS Control Society, Nazareth Hospital and NEIGRIHMS, organised a blood donation camp at the University campus on 18 March 2016, where 154 NSS volunteers donated.
- The NSS Unit of Sngap Syiem College conducted an extension work during natural

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- calamity on 21 April 2016 following the rain and hailstorm, which affected more than 200 villages in the district of South West Khasi Hills. Relief materials such as tarpaulin acquired through donations were given to the 22 most affected families of three villages through the Block Development Office.
- Various NSS units also observed the World Earth Day on 22 April 2016 by organizing various programmes at the college and community levels.
 - The NSS Unit of Shillong College organized a free eye-check-up camp at Sohryngkham village on 28 May 2016 in collaboration with Bansara Eye Care Centre, Shillong, where 135 residents benefitted and 50 NSS volunteers participated.
 - The NSS Unit of Synod College, Shillong, organized an awareness talk and pledge taking to observe the Anti-Terrorism Day on 31 May 2016. More than 32 NSS volunteers participated.
 - The NSS Unit of Shillong College, Shillong, observed the World-Anti Tobacco Day on 31 May 2016 on the college campus. Essay, slogan and painting competitions were conducted for all college students.
 - The Programme Organiser along with NSS Programme Officers and volunteers attended a programme at Nazareth Hospital in observance of the World Blood Donor's Day on 4 June 2016. Voluntary blood donors from the NSS were felicitated by the State Blood Transfusion Council, Government of Meghalaya.
 - The NSS volunteers who were blood donors were felicitated on the occasion of the World Blood Donor's Day on 14 June 2016 at a programme organized by the State Blood Transfusion Council, Government of Meghalaya and the Meghalaya AIDS Control Society at Nazareth Hospital.
 - Around 1308 NSS Volunteers from various colleges participated in programmes held to observe the International Day of Yoga on 21 June 2016.
 - The NSS Unit of Synod College, Shillong, attended a rally and awareness programme on 24 June 2016 in observance of the International Day against Drug Abuse.
 - Various units also observed the International Day against Drug Abuse on 24 and 25 June 2016 by organizing rally and awareness campaign.
 - Around 120 NSS volunteers from various colleges participated in the cleaning drive at Police Bazar on 30 June 2016 organised by CII, Youth Wing.
 - Various units also observed Van Mahotsav Week during the 1st forth-night of July 2016 by conducting various programmes with a large participation of volunteers at the college and community levels.
 - The NSS volunteers from BBS and Shillong College along with the Programme Organiser, NSS Cell, NEHU, attended a programme to commemorate the first death anniversary of Dr. A. P. J. Abdul Kalam at Bethany Hospital, Shillong, on 27 July 2016. Two NSS volunteers voluntarily donated blood during the camp.
 - The NSS Unit of Sohra Government College under the SHANU campaign programme organized an inter-school debate and quiz competition on 29 July 2016 at the college. Nine schools participated in *A Poster Painting and Slogan Writing competition*

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organized for the students of colleges and schools on 11 August 2016 with the theme *Unity is Strength and National Integration*.

- The NSS Unit of Union Christian College organized a cleaning drive at the college and hostel premises followed by cleaning of water sources and water tanks on 30 July 2016 which was attended by 109 NSS volunteers.
- The NSS Unit of Thomas Jones Synod College, Jowai, conducted a motivational-cum-awareness programme on *Blood Donation* at Civil Hospital, Jowai, on 1 August 2016 which was attended by 200 NSS volunteers; slogan writing and skit competition were also organized.
- The Programme Organiser attended the inauguration of the NSS Unit at Balawan College, Umsning, on 2 August 2016, and delivered a motivational talk to the volunteers.
- The NEHU NSS Unit organized its 1st State Level NSS Meet at NEHU from 3 to 5 August 2016. More than 250 participants from all over the state participated.
- The NSS Unit of Sohra Government College organized a one-day cleaning drive at the college on 12 August 2016. A total of 70 NSS volunteers participated.
- The NSS Unit of Seng Khasi College, Shillong organized a cleaning drive at the college premises on 12 August 2016. More than 50 NSS volunteers participated.
- The NSS Unit of Tura Government College organized a cleaning drive in and around the college premises on 12 August 2016. Cleaning of toilets, classrooms and surroundings were carried out. A total of 60 NSS volunteers participated.
- The NSS Unit of Bellefonte Community College organized a Pre-Independence Day Celebration on 12 August 2016 at the college campus which was attended by 200 students.
- The NSS Unit of St. Edmund's College, Shillong, in collaboration with RGNIYD, observed the UN International Youth Day 2016 on the UN theme *The Road to 2030: Eradicating Poverty and Achieving Sustainable Production and Consumption* on 12 August 2016. The day was observed by organizing an awareness rally where about 300 NSS volunteers participated. A slogan writing competition was also held followed by talks on sustainable development, poverty and role of youth, etc.
- The NSS Unit of Union Christian College also organized a cleaning drive of the college campus on the occasion of the college foundation day on 13 August 2016. About 400 NSS volunteers, students, staff of the college participated.
- As part of the Independence Day Celebration, the IGND Awardees of the NSS Cell organized a cleaning drive of the monuments/statues of local freedom fighters, leaders and educators from 13 to 15 August 2016 in different parts of Shillong City.
- The NSS Unit of Shillong College organized an awareness programme-cum-musical event for college and school students on the *Effects of Drug Addiction & Alcoholism* in the Wahingdoh Community Hall on 16 August 2016, which was attended by 400 students.
- The NSS Cell of NEHU organized the Tiranga March on 22 August 2016 from Polo to NEHU Campus. About 800 NSS

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- volunteers carrying placards on nationalism participated in the march. This was followed by talks on *nationalism*. Prof. S. K. Srivastava, Vice Chancellor, and Chairman NSS UAC also addressed the gathering.
- The NSS Unit of Union Christian College, in collaboration with Nazareth Hospital, Regional Blood Bank, Pasteur Institute and State Blood Transfusion Council, conducted a HIV/AIDS awareness-cum-blood donation camp at the college premises on 25 August 2016. A poster slogan competition was also conducted, and 69 NSS volunteers donated blood.
 - The NSS Unit of Durama College, Tura, organized a cleaning drive of the college premises and surrounding areas on 2 September 2016. Students also pledged *No to Plastic Bags and No Littering* in which 60 NSS volunteers participated.
 - The NSS Unit of Sngap Syiem College, Mawkyrwat, organized a financial literacy awareness programme at the college premises on 14 September 2016. Resource persons were from the State Bank of India. About 200 volunteers attended.
 - The NSS Unit of St. Anthony's College held a motivation-cum-awareness camp on voluntary blood donation at the college premises on 14 September 2016. This was followed by a voluntary blood donation camp on 15 September 2016, wherein 50 volunteers donated blood. The programme was held in collaboration with Nazareth Hospital and MACS.
 - Eighteen volunteers of the NSS Cell attended a programme organized by MACS on 27 September 2016 in observance of the International Youth Day.
 - The NSS Unit of Balawan College, Umsning observed the 47th NSS Foundation Day at the college premises, wherein 60 volunteers attended.
 - The NSS Unit of Williamnagar Government College organized a cleaning drive of the college campus on 3 October 2016 in which 65 volunteers participated.
 - Several NSS units observed the *Rashtriya Ekta Divas* Day on 31 October 2016 by organizing a pledge taking on *National Unity* and organizing programmes such as cleaning drives of their respective campuses.
 - Another programme was organized by the Office of the Deputy Commissioner in which 50 volunteers from NEHU participated.
 - The NSS Unit of Seng Khasi College conducted a cleaning drive at the Shillong Golf Course on 2 November 2016 in which 40 NSS volunteers participated.
 - NSS Unit of NEHU organized an awareness programme on blood donation on 3 November 2016 followed by a blood donation camp on 4 November 2016 in which 120 donors donated blood on this day.
 - Another blood donation camp was organized by the NSS Unit of Thomas Jones Synod College, Jowai, on 7 November 2016, wherein 14 NSS volunteers donated blood.
 - As part of the Children's Day Celebration, the NSS Unit of St. Edmund's College, Shillong, organized an exposure trip for children of the adopted village on 14 November 2016. They were taken to visit the Museum and other places in Shillong.

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- A cancer awareness rally was organized by the NSS Unit of Ri-Bhoi College, Nongpoh, on 18 November 2016.
- The NSS Unit of Lady Keane College organized a blood donation camp on 25 November 2016 at the college campus. Nine donors donated blood.
- To celebrate the Constitution Day on 26 November 2016, a pledge taking was administered and different programmes were organized, such as essay writing competition, debate, lecture, etc., on 26 November 2016 by different units.
- The NSS Unit of St. Edmund's College, Shillong, celebrated Christmas at their adopted village of Dewlieh on 23 December 2016. Students presented Christmas carols and played games and distributed gifts to the children.
- The NSS Unit of Seng Khasi College in collaboration with HNYF organized a blood donation camp for the victims of the road accident at Nongspung village on 3 March 2017 at NEIGRIHMS, wherein 10 donors donated blood.
- The NSS Unit of Shillong College in collaboration with the Office of the District Labour Commissioner, East Khasi Hills and State Bank of India, Nongmynsong, organized an awareness programme on *Labour Welfare Scheme* on 11 March 2017 which was attended by 153 residents.
- The NSS Unit of Shillong College organized a talk on *Human Trafficking & Sexual Offences against Women and Children* on 14 March 2017 at the college, wherein 200 volunteers and other students attended.
- NSS Unit of NEHU conducted a painting of tree pots-cum-cleaning drive at Lake Side, NEHU Campus, Shillong, on 18 March 2017. Sixty numbers of volunteers participated in the programme and around 118 tree pots, weeding tree saplings and cleaning the lake sides was carried out.
- The NSS Unit of St. Anthony's College Extension, Byndihati Campus, in collaboration with Umkiang Holy Cross School organized a drug abuse awareness programme at Umkiang, East jaintia Hills, on 21 March 2017.
- NSS Unit of NEHU conducted a cleaning drive near U Soso Tham Bust opposite Department of Linguistics on 22 March 2017 in which 160 NSS volunteers from the Departments of Linguistics, Khasi and Education participated.
- The NSS of Seng Khasi College in collaboration with the Dorbar Shnong Mawpat organized a drug addiction prevention programme at Mawpat Village on 22 March 2017. More than 100 School Students attended the programme. Dr. Sandi Syiem and his team from San-Ker addressed the gathering on drug addiction and the need for better aftercare to help the addicts.
- The NSS Unit of Shillong College organized *Swasth Balika Swasth Samaj* (Healthy Girl Child-Healthy Society) Programme on 22 March 2017 at the college. More than 200 volunteers and other students attended.
- The BBS College's NSS Unit in collaboration with the Regional Blood Bank, Pasteur Institute, Shillong, organized a voluntary blood donation camp at the institute on 23 March 2017, wherein 16 donors donated blood.
- The NSS Unit of Umshyrpi College organized an awareness programme on *HIV/AIDS* at the college premises on 27 March

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2017. Around 35 NSS volunteers and other students attended.

- The NSS Unit of Seng Khasi College in collaboration with the Seng Samla Mawlai Nongpdeng organized a one-day awareness programme on *Drug Abuse* at Dorbar Hall, Mawlai Nongpdeng, on 29 March 2017. More than 200 NSS volunteers, local residents and other students attended.

Special Programme during Special Camping

NSS units have also constructed community utilities through the labour of volunteers at the respective adopted villages during the course of the special camping programme:

- The NSS Unit of NEHU constructed a tree pot and brick fencing at NEHU Campus.
- The NSS Unit of Mawlai Presbyterian College constructed a bus shed at Mawroh village.
- The Unit of Shillong College constructed a retaining wall of L. P. School at Umphrup village.
- The NSS Unit of St. Edmund's College constructed a water and sewage drain at Dewlieh village.
- Completion of footpath at Swer village by St. Anthony's College NSS Unit.
- The Unit of Shillong College constructed a footpath at Nongtyngur village.
- The Unit of Shillong College constructed a concrete dustbin at Nongpathaw village.
- The NSS Unit of NEHU constructed a footpath at Mawlyngkhung village.
- The NSS Unit of Lady Keane College constructed a garbage disposal unit at Pingwait village.

- The NSS Unit of Thomas Jones Synod College constructed a footpath at Amutong village
- The NSS Unit of Sankardev College constructed a mini check dam at Kyrdemkhla village.

Model Village

Several programmes have been conducted for the residents of the model village of Lawsohtun.

A list of activities is given below:

- **Installation of Solar Lights:** 35 numbers of Solar Street Lights have been installed as the Second phase.
- **Skill Development:** Two residents attended training programme on Computer.

Adopted Village

The NSS Cell has adopted 8 villages, namely: (i) Sumer village, Umbang, Ri-Bhoi District, (ii) Mawlein Mawkhan village, Ri-Bhoi District, (iii) Umshorshor village, Ri-Bhoi District, (iv) Umsaitsning village, Ri-Bhoi District, (v) Nongrim Umksih village, Ri-Bhoi District, (vi) Nongumlong village, Upper Shillong - An Eye Check-up camp was held on 22 April 2016 where 100 residents availed of the services, (vii) Nongkseih village, Upper Shillong – *General Health and Eye Camp* was held at Mawpun Village, East Khasi Hills District on 14 July 2016. More than 300 residents attended the camp and 61 benefitted, and (viii) Mawngap Mawkharshiing, East Khasi Hills: One resident attended a skill development training course on hair sculpture.

Swachh Bharat Abhiyan

Under the *Swachh Bharat* campaign, several programmes have been conducted. These include the following:

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- The NSS Unit of Sngap Syiem College, Mawkyrwat, organized the Inaugural Function-cum-Awareness on *Swachh Bharat Abhiyan* for the toilet at the L. P. School which was constructed by the NSS Unit at Pawphlang village (Adopted village) on 21 April 2016.
- The NSS Unit of Balawan College, Umsning, conducted a Cleaning Drive in and around the college premises as part of *Swachh Bharat Abhiyan* on 23 July 2016. About 100 volunteers participated in the same.
- The NSS Unit of Bellefonte Community College, Lumshyiap, Shillong, organized a day long programme on *Swachh Bharat Abhiyan* on 28 July 2016 at the college campus.
- The NSS Unit of Durama College, Tura, observed the *Swachh Bharat Abhiyan* week at the college premises on 11 August 2016. Around 500 volunteers and students participated in cleaning of toilets, drains, classrooms and nearby surroundings.
- Under the aegis of the Deputy Commissioner's Office, South West Khasi Hills, a Public Dustbin was inaugurated at the market place of the adjoining adopted village of Sngap Syiem College on 21 September 2016. Volunteers from the college, who are Green Ambassadors of the *Swachh Bharat* campaign, attended along with the community residents.
- In observance of Gandhi Jayanti on 2 October 2016, the NSS Cell, NEHU, on the behest of the Governor of Meghalaya and the Deputy Commissioner Office lent a helping hand to the Cleaning Drive at Iewduh (Barabazar) Shillong. More than 150 students of different colleges participated in the same along with the Programme Coordinator.
- The NSS Unit of NEHU conducted a Cleaning-cum-Beautification Drive at

NEHU campus on 22 October 2016 in which 40 NSS volunteers participated.

Toilet Constructions: Swachh Bharat Abhiyan

The NSS Unit of Mendipathar College constructed a toilet at L. P. School at the adopted village. The NSS Unit of Tura Government College constructed a toilet -cum-urinal at Boldorenggre village.

Cleaning Drives of Tourist Spots

- The NSS Unit of Sohra Government College, Sohra, organized a cleaning drive at Nohkalikai Waterfalls (tourist spot) view point on 13 August 2016. Around 30 NSS volunteers participated.
- The NSS Unit of Loyola College, Williamnagar, organized a cleaning drive of tourist spots on 14 August 2016. More than 60 NSS volunteers participated.
- The Unit of Tura Government College also organized a cleaning drive at William Point (recreational spot), Tura, on 13 September 2016 where 60 NSS volunteers participated.

Skill Development

- Forty-three students of Shillong College underwent various training courses on computer hardware, photography/film making, mobile repairing, bakery, beautician, dress making, computer course, food processing, candle making and fast food technology.
- Eight students from Sohra Government attended the skill development courses on basic electrical, mobile repairing, DTP, tally, computer application skill, tailoring, and food processing.

NEHU DATA AND VOICE NETWORK (NDVN)

SHILLONG CAMPUS

Administrative in-charge

Technical Officer Prof. P. Nongkynrih

System Analyst Mr. Ivan Lyngdoh

Technical Assistant Mr. S. Nongkhlaw

Field Assistant (Technical) Mr. S. N. Sharma

Mr. Kapoorchand Chaudhury (On contract)

Telephone 0364-2726195/2726196/2726197/2551297

E-mail admin@nehu.ac.in & ndvn@nehu.ac.in

TURA CAMPUS

System Analyst Mr. Deramun Ch Momin (On contract)

E-mail deramunmomin@gmail.com

The NEHU Data and Voice Network (NDVN) Facility commissioned in 2003 as VSAT Facility is the network backbone for all Information and Communication Technology (ICT) related services covering all academic and Administrative Departments including Hostels and Residential Quarters.

SHILLONG CAMPUS

Facility and Services

Servers

The HP Blade Chassis C7000 hosts 9 Blade Servers for the following services:

- **NEHU Webserver** <http://www.nehu.ac.in>
- Four Squid **Proxy servers**
- **Examination Webserver** <<http://exams.nehu.ac.in/>>

DNS Servers

- Dell Server running Mail (nehu.ac.in) and LDAP for single sign on authentication.
- IBM servers running HP's Intelligent Management Center (IMC) and Extreme's Epicenter for Network Management System.
- IBM Server running Avaya VisAbility Management Suite for Telephony Administration, and CUBE Software for call logging and required billing.

Data Network

- The National Knowledge Network (NKN) of 1 Gbps link commissioned on 19 May 2010 provides Internet access and other related applications (Internet, IP authenticated e-journals from UGC-Infonet

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E-journal Consortium, mail and web, etc.) to all academic and administrative departments.

- The Extreme Summit Black Diamond 8806 Core Switch with 24 ports 1/10 Gbps Fibre connectivity and latest MSM and OS provide connectivity, routing, Vlans access to and from all layers 2 (L2) switches located in departments' buildings.
- All departments are connected to the core switch with the Layer 2 Switches consisting of Extreme Summit X150-24t, Extreme Summit X150-48t, HP Procurve 1920 Cisco SG500 with gigabit uplinks.
- Dedicated Internet connections with 48 port L2 HP Procurve Switches are provided to most departments having computer laboratory facilities.
- The NextGen Firewall DELL SonicWall SuperMassive 9200 provides the required up-to-date network security and performance.
- The DELL SonicWall Email Appliance Security (ESA) provides enhanced security and spam filter for the mail server.
- Wi-Fi connectivity is available in all hostels with LAN-Controller based Access Points.
- Broadband Internet connectivity is provided to all P- Type, L- Type, Type V, Type IV and Type III residential quarters with the installation of 6 IPDSLAMs.
- The Network provides IP CCTV cameras connectivity across the campus.
- Limited Wi-Fi access is provided to several departments and Guest House.

Other Services

- Intranet and Internet connectivity for the Digital Repository under the Library Digitalization Project.
- Intranet and Internet connectivity for the University Management Software (UMS), the ERP e-governance project running several Academic, Finance and Administration Modules.
- Web and sub-domain services to: Library Services (OPAC); Access to Computer Centre's HPC (Sulekor); Bioinformatics Centre - NEIHPID (North-East India Helminth Parasite Information Database <http://nepiac.nehu.ac.in>); Geography Department's Automatics weather station.

Voice Network

- Two Avaya S8730 servers in hot-standby mode, two G650 Media-gateways located in NDVN, Administrative Building and Political Science Department and four G450 Media-gateways located in the School of Technology (SOT), Old Guest House, Type II and New SOT provide TDM backbone and IP enable switch architecture for the voice/telephony network. All the Media-gateways are connected and registered to the Server-over-IP-Back-Bone.
- The 2 Mbps PRI and 2 Mbps Level-DID leased lines from BSNL integrated with the IP –PBX Server provide incoming and outgoing telephone calls facilities to/from the network.
- Voice Network (Telephone Connectivity) is extended to all Departments, Centres, Administrative building and most residences quarters with a capacity of over 1500 telephone extensions.

NEHU Data and Voice Network (NDVN)

Website Data

Usage Statistics for www.nehu.ac.in generated by the system as on June 2016:

Summary by Month										
Month	Daily Avg				Monthly Totals					
	Hits	Files	Pages	Visits	Sites	KBytes	Visits	Pages	Files	Hits
May 2017	71442	48459	22660	3382	56018	157718373	104849	702481	1502242	2214723
Apr 2017	61389	36236	28113	2731	42844	63592285	81936	843411	1087106	1841680
Mar 2017	72236	59872	38477	2904	49798	236995591	90045	1192787	1856034	2239325
Feb 2017	56931	39109	26669	2654	48105	53762032	74334	746733	1095070	1594090
Jan 2017	43830	30527	14946	2676	55218	52197893	82974	463330	946346	1358753
Dec 2016	36205	24201	10624	2468	51334	53417492	76534	329362	750246	1122381
Nov 2016	38039	25032	12412	2113	43469	56412273	63403	372365	750961	1141184
Oct 2016	31936	21103	9072	2115	41536	42892854	65595	281249	654222	990017
Sep 2016	38512	25634	9939	2327	44945	55714423	69834	298191	769039	1155385
Aug 2016	71117	44059	21462	4429	70024	192487088	137307	665340	1365831	2204636
Jul 2016	104466	59566	27096	5687	95054	158363315	176305	840006	1846546	3238470
Jun 2016	136764	86548	29525	7324	103122	186646023	219724	885766	2596467	4102949
Totals						1310199642	1242840	7621021	15220110	23203593

TURA CAMPUS

The NEHU Tura Data and Voice Network (NDVN) Facility commissioned in 2012 and continues to provide data (Internet) and voice (telephony) access to all academic and administrative departments.

New Implementations for 2016 - 2017

- Internet connection of 16 Mbps has been increased to 50 Mbps on the Permanent Campus at Chasingre.
- CCTV surveillance installation is under process for security and effective monitoring within the campus.
- Installation of Wi-Fi campus in-order to give students and faculty easy access to the internet is under process.
- Installation of Video Conferencing System in Administrative departments is under process.
- Workstation HP Z440 is installed in server room for centralize control of endpoint security and for security monitoring.
- Extension of LAN and Internet Facility for the departments that have been shifted from Chandmari Campus.
- Power over Ethernet Switches is installed in all departments for powering IP Phones and other network device like Wi-Fi, CCTV, etc.
- Installation of 10 KVA secondary UPS Backup System for Server is under process for giving internet facility during power failure from the supplier.

Central Services

Existing Components providing continual services

Data Network

- The Extreme Summit Black Diamond 8810 core switch provides connectivity with VLAN tagging to all departments layers 2 switches.
- All departments are connected to the core switch with the Extreme Summit X150-24t L2 switches to corresponding VLAN with gigabit uplinks.
- Data network is secured with Firewall Unified Threat Management Cyberoam300ING

which provides Web and Application Filter, Intrusion Prevention System (IPS), Gateway Anti-virus and Gateway Anti-Spam.

- Installation of IBM Server X3500M4 for Library Management System.

Voice Network

- The Avaya server 8300 with G450 Media-gateways provide core IP Base PBX Voice Network.
- IP Phones is installed in all the departments.

PUBLICATION UNIT

Professor In-Charge	: Prof. R. Khongsdier
Publication Officer	: B. Shylla
Assistant Editor	: G. Umdor
Telephone	: 0364-27221422
E-mail	: bmsylla21@gmail.com, rkhangsdier@hotmail.com

The NEHU Publication Unit functions as the official printer of the University with the printing press attached to it. At present, the Press has been undertaking almost all printing jobs assigned to it by different departments including Examination Department, Centre for Distance Education, and Printing and Stationery.

The Unit is mainly concerned with printing and promoting publications in various academic areas of the University. These include some undergraduate textbooks, such as *Phuit! Ka Sabuit!*, *Bhramar* (a Nepalee text book for UG syllabi), official publications of the University like the Acts and Statutes, Ordinances, Annual Report, annual account, The NEHU Journal (biannually) and the e-NEHU News (quarterly), and supplementary reading materials. The Unit has also assisted the Vice-Chancellor's Office in designing, printing, and framing photos of important persons associated with the University. As for book distribution, the Unit is entering into contracts with major distributors and book sellers in and around Shillong to sell books and other publications. A staff in this connection makes a list for delivery of the requisitioned books. A list of its publications is also available on the website of the University.

With the addition of a digital printing machine, the Unit is now able to undertake short-run colour printing jobs to meet any emergency that may arise from time to time. The Unit is also equipped with a bi-colour demy offset printing machine. The binding section is yet, however, to procure the machines to undertake the binding jobs with speedy delivery. We hope to modernize it in the near future.

Printing and publication works undertaken during 2016-2017

- Printing of items relating to Examination Department, NEHU.
- Printing of items relating to Printing and Stationery Department, NEHU.
- Printing of the English and Hindi versions of the Annual Reports (2016-17), Annual Report Cell.
- Printing of English and Hindi versions of the Annual Accounts (2015-16), Finance Department, NEHU.
- Printing of stickers for two-wheelers, cars for teaching, non-teaching staff and students of NEHU.
- Printing of certificates for Career and Counselling Cell, NEHU.

Central Services

- Printing of NEHU wall calendar and engagement pads for the year 2017.
- Printing of invitation cards, certificates and IDs for BIOREHAB 2016, NEHU.
- Printing of NAAC Self Study Report, Volumes I and II.
- Printing of the NEHU Journal, Volumes XIV No.1, Jan 2016 & Volume XIV No.2, July 2016.
- Printing of invitation cards for the Tribal Conclave.
- Printing of *Bhramar*, a Nepali text book.
- Printing of greeting cards for the VC.
- Printing of visiting cards for the VC, PVC & Registrar.

SOPHISTICATED ANALYTICAL INSTRUMENT FACILITY

Head: Prof. Sudip Dey
Telephone: 0364-2721801(O) /9436119787(M)
Fax: 0364-2550212
Email: saifnehu@gmail.com, hodsaiif@nehu.ac.in, sudipdey.dey1@gmail.com

Scientific Staff: 6

Sr. Scientific Officer	Dr. Tapas Chakraborty, MSc, PhD (Physics, NEHU)
Scientific Officers	Dr. Begonia Dkhar, MSc (Zoology, NEHU), PhD (Zoology, Gauhati); Dr. Debashish Dey, MSc (Chemistry, NEHU), PhD (Chemistry, RDU); Dr. Paul S. Dkhar, MSc (Biochemistry, NEHU), PhD (Bio-Physics, NEHU); Dr. Shiv K. Prasad, MSc (Biochemistry, NEHU), PhD (Env Sc, NEHU); Mr. John M Sohtun, MSc (Biochemistry, NEHU)

Thrust Area

The Department of Science and Technology (DST), Government of India, has provided facilities for sophisticated analytical instruments to researchers, through its Sophisticated Analytical Instrument Facilities (SAIF) program, so that the non-availability of these instruments in their institutes may not cause any difficulty in pursuing their R&D activities requiring such facilities. The highly sophisticated analytical instruments available in SAIF, NEHU, enable the faculty members of NEHU and other universities, and scientists of other R&D institutes and industries to keep pace with developments taking place globally.

Brief Statement of Activities

SAIF carries out analysis of samples received from researchers of different institutes. It also acquires and develops capability for preventive maintenance of the analytical instruments and organizes short-term training courses/workshops

on the use and application of sophisticated instruments/analytical techniques. In addition, SAIF trains technicians for maintenance and operation of analytical instruments.

Seminars/Conferences/Symposia/Trainings

Attended

1. Mr. John Mario Sohtun, Scientific Officer, attended the five-day training program on *LC-MS* from 25 April 2016 to 29 April 2016 at SAIF Division of CSIR-CDRI, Lucknow.
2. Mrs. Dalanamika Myrboh, STA, attended the one-week hands-on training program on *Mass-Spectrometer* from 5 June 2016 to 10 June 2016 at SAIF Division of CSIR-CDRI, Lucknow.
3. Mr. Gayanesh Pandey, Lab Assistant, attended the one-week hands-on training program on *FT-NMR* from 5 June 2016 to

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10 June 2016 at SAIF Division of CSIR-CDRI, Lucknow

from 16 May to 25 June 2016 at the Department of Anatomy, AIIMS, New-Delhi.

4. Mr. M. Thangkhiew, STA, attended the training program on *Electro- Microscopy*

Conducted Training

Department attending the Training	Date	Name of the Program	Number of Students
Department of Biomedical Engineering, NEHU, Shillong,	04.10.2016	Characterization of Nano-particles	57
	06.10.2016		
	27.10.2016		
	29.10.2016		
	01.11.2016		
Department of Zoology, St. Anthony's College Shillong	01.08.2016	DBT-Star College-Scheme, Zoology (Hons)	35

Workshops

Title of Workshop	Date	Number of Participants
Application of Electron Microscopy in Material Science and Related Fields	7- 9 June 2016	17
Application of NMR for structural Elucidation of Organic Compounds	19 July to 21 July 2016	17

Publications

Pala, E.M., Dey, S. (2016). City garbage and municipal wastes causing physiological stress in testis and sperm of the fish, *Channa gachua* in a North-East Indian hill stream. *Imperial J. Interdisciplin Res.*, 2(11):1723-1735.

Pala, E.M., Dey, S. (2016). Microscopy and Microanalysis of blood in a snake head fish, *Channa gachua* exposed to Environmental pollution. *Microscopy Microanal.*, 22:39-47.

Pala, E.M., Dey, S. (2016). Physiological significance of adverse effects of city garbage and municipal wastes on skin and muscle of a hill stream fish of North-East India. *Int. Res. J. Nat. Appl. Sci.*, 3(9):44-66.

Paul, A.G., Dey, S., Kalita, J. (2016). Fine structural studies on major larval mouth part sensilla of *Antheraea assamensis*, an endemic silk moth species of North-East India in regard to sensory physiology. *J. Appl. Fundamental Sci.*, 2 (1): 6-16.

Prasad, S.K., Dey, S. Nongkynrih, J.P. (2016). Fine-structural deformities in hepatocytes

Sophisticated Analytical Instrument Facility

of a hill stream fish *Brachydanio rerio* due to toxic effects of environmental acid stress. *J. Toxicol. Health*, 107:538-544.

Rajguru, U., Dey, S. Pathak, D.C. (2016). Studies on the adverse effects of bleached sulphite pulp mill effluents on physiology of liver function in *Heteropneustes fossilis*. *J. Env Sci Toxicol. Food Tech.*, 10(9):121-128.

Syngai, G.G., Dey, S. Bharali, R.J. (2016). Evaluation of toxicity levels of the aqueous extract of *Allium sativum* and its effects on the behaviour of juvenile common carp (*Cyprinus Carpio* L, 1758). *Asian J. Pharmaceut Clin. Res.*, 9(3): 417-421.

Syngai, G.G., Gopi, R., Bharali, R.R., Dey, S., Alagulakshmanan, G.M., Ahmed, G.U. (2016). Probiotics - The versatile functional food ingredients. *J. Food. Sci. Technol.*, 53(2): 921-933.

Infrastructure Facilities

The following sophisticated analytical instruments are available for analytical services:

- Scanning Electron Microscope (Jeol, JSM 6360) with EDS (Oxford, Inca 350)
- Transmission Electron Microscope (Jeol, JEM 2100) with EDS (Oxford X, MAX 65)
- FT-NMR 400 MHz (Bruker AVANCE II-400)
- LC-MS Spectrometer (Waters ZQ-4000)
- Graphite Furnace (Analytic Jena AG Vario 6)
- Liquid Nitrogen Plant (Philips PLN-106)
- Microscope with Image Analyzer (Leica-DMRX)
- Seminar Room (capacity: 50 seats)
- Conference Room (capacity: 14 seats)

In addition, New Glass-Knife-Maker for Transmission Electron Microscope and Carbon-Coating-unit for Scanning Electron Microscope has been installed. Inductively Coupled Plasma - Optical Emission Spectrometer (ICAP-7600 from M/S Thermo Fisher) is in the process of installation.

Services Offered

Scanning and Transmission Electron Microscopic studies of biological and material science samples; 1-D and 2-D NMR spectra of biological and chemical samples in liquid solution phase; trace element analysis of biological, chemical and industrial samples; Mass spectra of various compounds both biological and non-biological compounds.

Total Revenue Earned Rs. 27,40,242 (Rupees twenty-seven lakh forty thousand two hundred and forty-two only)

Other Activities

NEHU-SAIF hosted the following visits: (i) Fifteen postgraduate students of College of PG Studies, Central Agricultural University, Umiam Campus Meghalaya, (ii) Twenty-five BSc Students of Kaliabor College, Dt Nagaon, Assam, (iii) Thirty-four BSc Zoology students of Pragjyotish College, Guwahati, Assam, (iv) Fourteen MSc Zoology students of Handique Girls College, Guwahati, Assam, (v) Thirty-one BSc Students of St. Anthony's College, Shillong, Meghalaya, (vi) Twenty UGC-ASC workshop participants, (vii) Nine Zoology BSc students of Darrang College, Tejpur, Assam, (viii) Summer School Students of the Department of Botany, NEHU, (ix) Twenty-three BSc Zoology students of Pandu College, Guwahati,

Central Services

Assam, (x) Twenty-five BSc Botany students of Biswanath College, Biswanath-Chariali, Assam, (xi) Twenty PG students of the Department of Zoology, Bodoland University, Kokrajhar, Assam, (xii) Twenty-one BSc students of Birjhora Mahavidyalaya, Bongaigaon, Assam, (xiii) Eleven BSc students of the Department of Botany of Jagiroad College, Jagiroad,

Assam, and (xiv) BSc students of the Department of Botany from BH College, Hoogly, West-Bengal.

Academic Collaboration

PhD Guided: Prof. Sudip Dey, Head, SAIF, NEHU jointly supervised two PhD students with Faculty Members of the Zoology Department, Gauhati University, Guwahati.

SPORTS DEPARTMENT

Teacher-in-Charge : Dr. S. Umdor
Telephone : 0364-2721381/1383
Email : nehusports@gmail.com

Staff: 3

Name	Designation
Shri. N. Das	Assistant Director
Mrs. A. R. Synnah	Basketball Coach
Shri. L. Darlong	Football Coach

The Sports Department of the University functions under the overall guidance of the NEHU Sports Board, which is chaired by the Vice-Chancellor of the University. The Sports Department is the nodal agency for organising sports activities for students of the university and affiliated colleges, and also for other stakeholders of the University. The Department is also actively involved in providing support to students in conducting sporting events such as annual varsity fest and other sporting events organised from time to time.

Activities undertaken during 2016-17:

1. The annual meeting of NEHU Sports Board was convened on the 16 May 2016, which was chaired by Vice-Chancellor Prof. S K Srivastava. Important decisions were taken in the meeting including approval of the annual sports calendar of the University and necessary amendments of the constitution of the Sports Board.
2. The Department organised the *Inter-College Football (Men) Tournament* from 2 to 11 August 2016 at J.N. Sports Complex,

Polo, Shillong. Altogether 21 colleges participated in the tournament. In the final match played between the St. Anthony's College and Shillong College, the former emerged as the winner. The tournament ended with a closing ceremony in which the Chief Guest, Prof. S K Srivastava, Vice-Chancellor of NEHU, gave away the prizes to the winning teams.

3. The Department organised the *Inter-College Badminton (Men & Women), Table Tennis (Men & Women) and Chess (Combined) Tournament* from 17 to 19 August 2016 at the Indoor Stadium, NEHU, and in the premises of Sports Department. In the Badminton Men and Women categories, the winners were St. Anthony's College and Synod College, respectively. In Table Tennis Men & Women (combined), St. Anthony's College lifted the championship trophy. In the Chess Men & Women (combined), St. Anthony's College won the event. Prof. B. Mishra, Dean, School of Economics, Management and Information Sciences (SEMIS), NEHU, was the Chief Guest and gave away the prizes to the winning teams.

Central Services

4. On 29 August 2016, the Department organised the *Inter-College Cross Country and the NEHU Cross Country Run (2016 edition)* for teaching, non-teaching members and students of the University to commemorate the birth anniversary of Major Dhyani Chand, which is celebrated as the National Sports Day. The event was flag off by Vice-Chancellor Prof. P. Srivastava. In the Inter-College Cross Country Run, BBS College, Shillong, emerged as the overall champion in the Men's course while the Women's course was won by the team representing Sngap Syiem College, Mawkyrat. In the NEHU Cross Country Run, the 1st position in the Men's senior category of above 50 years was secured by Dr. Atul Kumar from the Finance Section. In the 50 years below category, the 1st position went to Dr. Lakhan Kma from the Department of Biochemistry. In the Women's senior category below 50 years, the 1st position was secured by Mrs. Barihunlang Myrthong of the Department of Physics. In the Students' section, the 1st positions were secured by Mr. Henry B. Khongwar of the Department of Law (Boys category) and by Ms. Mona Haman Thakuri of the Department of Botany (Girls' category).
5. The Department organised the *Inter-College Basketball (Men & Women) Tournament* from the 6 to 9 September 2016 at the NEHU Basketball Court. Altogether 16 Colleges in the Men's section and 12 colleges in the Women's section participated in the tournament. In Men's section, St. Edmunds College defeated St. Anthony's College to emerge as Champions, while in the Women's section the University team defeated St. Anthony's College and was declared as champions.
6. The *Inter-College Football (Women) Tournament* was organised from 13 September to 17 September 2016 at the J.N. Sports Complex, Polo, Shillong. Altogether 11 colleges participated in the tournament. The final match of the tournament was played between Lady Keane College and Synod College, where the former emerged as champions.
7. The Department hosted the *1st Vice-Chancellor Indoor Tournament 2016* from 27 September to 29 September 2016 at the Indoor Stadium and Community Hall on permanent Campus. The events included Badminton (Men/Women), Table-Tennis (Men/Women), Chess (Combined) and Carom (Men & Women). Altogether four teams took part in the tournament, namely the Ministry of Human Resource and Development (MHRD), Government of India, New Delhi, North Eastern Indira Gandhi Regional Institute of Health and Medical Sciences (NEIGRIHMS), the Meghalaya College Teachers Association (MCTA) and NEHU. The tournament began with an opening ceremony where Dr. J.N. Nayak, Registrar of the host University graced the occasion as Chief Guest. In the Badminton (Men) section, MCTA lifted the championship trophy, whereas NEIGRIHMS lifted the championship trophy in women section. In Table Tennis (both Men & Women categories) event, MHRD lifted the championship trophy, while the Carom (both Men & Women categories) event went to NEHU. Again, in the Chess (Combined) event, NEHU lifted the championship trophy. The Tournament ended with a closing ceremony on 29 September 2016 where Vice-Chancellor, Prof. S. K. Srivastava graced the occasion.

Sports Department

- as the Chief Guest and gave away the prizes to the winners.
8. NEHU Football Women Team participated in the *East-Zone Inter-University Football Women Tournament* organised by Dibrugarh University, Assam, from 1 October to 6 October 2016.
 9. NEHU Badminton (Men), Table Tennis (Men & Women) and Chess (Men & Women) Teams participated in the *East-Zone Inter-University Indoor Tournament* organised by the KIIT University, Bhubaneswar, Odisha, from 9 October to 12 October 2016. The Women Team of the University reached the quarter final of the Table Tennis tournament losing to Rabindra Bharati University, West Bengal by 3-1.
 10. NEHU Basketball Men Team participated in the *East-Zone Inter-University Basketball Men Tournament* organised by M.G. Kashi Vidyapith, Varanasi, Uttar Pradesh, from 5 to 9 November 2016. After winning 1st and 2nd round matches, NEHU team lost the 3rd round match to Calcutta University.
 11. NEHU Volleyball Men Team participated in the *East-Zone Inter-University Volleyball Men Tournament 2016* organised by Gauhati University, Guwahati (Assam) from 5 to 8 November 2016. The University team cleared the first round of the tournament but was defeated in the next round by Jadavpur University, West Bengal.
 12. The Department organised the *Inter-College Volleyball (Men & Women) Tournament* from 24 to 25 November 2016 at NEHU Kendriya Vidyalaya Ground, Shillong. Altogether 12 colleges participated in the tournament. In the Men's section, St. Anthony's College defeated Union Christian College and was declared as Champions, while Union Christian College defeated St. Edmunds College in the Women's section. Prof. G. Saha, Dean, School of Technology, NEHU, graced the closing ceremony as Chief Guest and gave away the prizes to the winners.
 13. A team of the University staff members took part in the *Inter-Office Indoor Games 2016* organised by the Meghalaya State Government Employees Federation. The Department mobilized the University team consisting of both teaching and non-teaching staff members. A coaching camp was organised prior to the event and financial support was also provided to the team.
 14. The Department organised coaching camps for different events to prepare the University teams for taking part in Inter-University tournaments. All together six such camps were organised during 2016-17.

STUDENTS' WELFARE CELL

SHILLONG CAMPUS	
Dean Students' Welfare	Prof. H. Kayang
Provost	Dr. L. Joyprakash Singh
Telephone	0364-2721181
E-mail	dsw@nehu.ac.in
TURA CAMPUS	
Dean Students' Welfare (In-charge)	Dr. Deepak Bhagat
Telephone	+91-9436733357
E-mail	dip19bhagat@gmail.com
Teacher-in-Charge of Sports	Mr. Gino A Sangma
Telephone	+91-9612155002
Coordinator (Special Lecture Group)	Dr. Tilok Thakuria
Telephone	+91-8575133962

The Offices of the Dean Students' Welfare on Shillong and Tura campuses serve as the nodal agency for student services and their welfare. The major services of both the offices are management of the Halls of residences for the postgraduate, undergraduate, and research scholars; coordination of students' sports and cultural activities; conduct of elections to the Students Union; award of the PhD, MPhil, Non-Net Fellowships and postgraduate scholarships; organizing study and industrial tours through departments; grant

to outstanding students and students' aid to the economically weak students. Other activities include organizing of special lectures by eminent personalities and facilitating admission of foreign students.

Activities during 2016-17 (Shillong Campus)

Residence in Hostels: The number of students who were given hostel accommodation on Shillong Campus during the year 2016-2017 is as follows:

Particulars	Gender	ST	SC	GEN	OBC	International students	Total
Undergraduate	Men	218	059	178	52	01	508
	Women	114	016	073	29		232

Students' Welfare Cell

Postgraduate	Men	301	017	086	20		424
	Women	237	004	031	09	05	286
Research Scholars	Men	099	018	077	33	04	231
	Women	084	008	038	20	01	151
Total		1053	122	483	163	11	1832

Study Tours: The office coordinated the study tours of the following ten academic Departments from Shillong Campus for the year 2016-2017: (i) Commerce, (ii) Physics, (iii) Economics, (iv) Khasi, (v) English, (vi) History, (vii) Education, (viii) Anthropology, (ix) Mathematics, and (x) Nanotechnology.

Other Activities

To coincide the term of NEHUSU and that of the Academic calendar, the Elections to the Students' Union Executive Committee were held earlier than in the previous years and the new office-bearers of the Students' Union took charge on 26 October 2016. The Office also supported the annual event of NEHUSU to showcase talents of the students of the University. During 2016-17 the Varsity Fest was held from 24 March 2017 to 18 April 2017.

Student Aid Fund: Forty-two students (6 postgraduate and 36 undergraduate) were awarded the Student Aid Fund @ Rs. 3000 per student per annum for postgraduate student and @ Rs. 4000 per student per annum for undergraduate students.

NEHU PG Merit Scholarship: A total number of 105 postgraduate students were awarded the NEHU PG Merit Scholarship @ Rs.3000 per student per annum, out of which 74 students were fresh allottees and 31 students belonging to the renewal category (including ST/SC).

UGC Non-NET Fellowship: A total number of 359 PhD and 78 MPhil Scholars were awarded the UGC Non-NET Fellowship @ Rs. 8000 and @ Rs. 5000 per student per month, respectively.

Activities during 2016-17 (Tura Campus)

Residence in Hostels: The numbers of students residing in the hostels were as follows:

Particulars	Gender	ST	SC	GEN	OBC	International students	Total
Postgraduate	Men	73	02	21	11		107
	Women	82	06	13	14		115
Research Scholars	Men	04	01	07			12
	Women	08	06	09	02	01	26
Total		167	15	50	27	01	260

Central Services

Study Tours: The Office coordinated the study tours of the following nine academic departments from Tura Campus for the year 2016-2017: (i) Management, (ii) Education, (iii) English, (iv) Garo, (v) Rural Development and Agricultural Production, (vi) History and Archaeology, (vii) Agribusiness Management and Food Technology, (viii) Horticulture, and (ix) Computer Applications.

Other Activities

- Support and coordination of the *Annual Varsity Week* held from 8-18 April 2017 organised by PGSU, NEHU, Tura Campus.
- Organised the following special lecture series: (i) “Mathematics: Here, There and Everywhere” by Prof. S. N. Bora, Head, Department of Mathematics, Indian Institute of Technology, Guwahati (26 April 2016), (ii) “Institutional Building for Revival of Indigenous Knowledge and Wisdom” by Prof. Amarjyoti Choudhary, former Pro-Vice Chancellor, Tezpur University and former Vice-Chancellor, Gauhati University, on the occasion of the NEHU Day on 26 May 2016.
- In its continuous endeavour to keep the campus and environment green, the Office coordinated the programme on the World Environment Day on 5 June 2016.
- To mark the celebration of the International Yoga Day on 21 June 2016, two Yoga gurus were invited from Vivakananda Shanshthan for Yoga Anushandhan for demonstration and teaching of Yoga to students, teaching and non-teaching staff.
- The ninth issue of the annual campus magazine *DURAMONG* was published in August 2016. Over the years, *DURAMONG* has played the role of a mirror by reflecting various cultural, academic, sports and literary activities including achievements of the Campus.
- The students of NEHU, Tura Campus, participated in the Inter-College Basketball Tournament at NEHU, Shillong.
- Election for new office bearers of PGSU, NEHU, Tura Campus, was held on 9 November 2016.
- The 20th Foundation Day of NEHU was organised by PGSU, NEHU, on 23 February 2017 on NEHU Tura Campus, Chasingre.
- Other events organised were Parting Social, Fresher’s Social, and Celebration of Teachers’ Day.

UGC-HUMAN RESOURCE DEVELOPMENT CENTRE

Head : Prof. Rakesh Mohan
Telephone : 0364-2721401/2721402
Fax : 0364-2550103
E-mail : hrdcnehu@gmail.com

Faculty: 3

Designation	Name and Qualification	Specialization
Professor	Prof. Rakesh Mohan, MSc & PhD, BCKV Mohanpur	Agronomy
Associate Professor	Dr. (Mrs.) Quendarisa Kharbuli, MSc & PhD NEHU	Zoology (Genetics)
Assistant Professor	Dr. (Mrs.) Kuheli Biswas Das, MSc & PhD NEHU	Zoology (Biochemical Adaptation)

Thrust Area of Service

The UGC-Human Resource Development Centre (UGC-HRDC) is established to upgrade knowledge and skills of faculty members of the institutions of higher education under the Faculty Development Programme of UGC, New Delhi. The UGC-HRDC organizes Refresher Courses (RCs) and Orientation Programmes (OPs) for the faculty of Universities and Colleges located in the North-Eastern region as well as in other parts of the country. RCs and OPs are conducted in subjects approved by the UGC, New Delhi, in order to update and acquaint the participating teachers with the latest developments and recent trends in their respective subjects. The OPs and RCs are designed to empower the teachers with depth of knowledge to enhance their teaching skills and capabilities. Besides, UGC-HRDC conducts short-term courses and principal workshops for the faculty, research scholars, academic administrators and principals of affiliated colleges.

Brief Statement of Academic Activities

The UGC-HRDC was established at NEHU in 2006 with financial assistance from the UGC. It became fully functional in March 2007 after appointment of seven non-teaching staff. The UGC sanctioned three academic posts (Professor-Director, Associate Professor and Assistant Professor), which are filled accordingly. The UGC-HRDC has been allotted rooms for the faculty members and supporting staff, two lecture rooms, one library-cum-documentation room and a computer laboratory in the Building for Centre of Studies.

During 2016-17, the UGC-HRDC conducted four OPs, four RCs, one Special Summer/ Winter Schools and five Short-Term Courses and trained a total of 548 participants from various universities and colleges recognized by UGC. Further, the UGC-HRDC established a Computer Laboratory with PCs, a Server, two Network Laserjet Printers, a DLP Projector and a Scanner, etc. The Computer Lab is used for

Central Services

training the participants in the OPs and RCs as well as for the faculty, research scholars and students of the University in information technology with special reference to teaching and research. The UGC-HDRC has taken up

a new initiative to have a one-day Interactive Session of the respective departmental Refresher Course Participants with the faculty members of the department concerned on academic reforms.

Courses Conducted During 2016-17

Orientation Programmes	Duration
36 th Orientation Programme	30 May to 26 June 2016
37 th Orientation Programme	8 August to 4 September 2016
38 th Orientation Programme	23 January to 19 February 2017
39 th Orientation Programme	20 February to 19 March 2017
Refresher Courses	Duration
Refresher Course in Folkloristics and Semiotics	18 April to 8 May 2016
Refresher Course in Tribal Studies	9 May to 29 May 2016
Refresher Course in Economics	8 September to 28 September 2016
Refresher Course in Earth Science and Geography	28 November to 17 December 2016
Short-Term Course	Duration
STC in SPSS	27 June to 2 July 2016
STC in Research Methodology with special preference to SPSS	18 July to 23rd July 2016
STC in Life Sciences with Nano Sciences	1 August to 6 August 2016
STC in Environmental Sciences	30 September to 6 October 2016
STC in Soft Skills	17 October to 22 October 2016
Special Summer/ Winter School-2016	Duration
Special Summer School-2016	27 June to 17 July 2016

Study Tours/Field Trips

Field trips and visits are a regular feature of the activities of the Centre since they are included in the curriculum, designed for orientation programmes, whose objective is resource awareness and knowledge generation. Furthermore, since the orientation programmes provide training to the new-entrant college and university teachers participating from different

states of the country, these visits expand learning beyond the classrooms and expose them to the mesmerizing scenic beauty of the State and glimpses of the cultural heritage of the entire North-East India. SILOAM, being a Transformational Leadership Resource Centre, provides an excellent environment to the participants for faculty development especially in interpersonal relationship and student guidance and counselling.

UGC-Human Resource Development Centre

Study Tours/Field Trips during 2016-17

Name of Teacher-in-Charge	Places/ Institutions Visited	Name of the Courses/ Programmes	Dates
Prof. Desmond L. Kharmawphlang	Mawphlang and Sohra	Refresher Course in Folkloristics and Semiotics	30.04.2016
Dr. Kuheli B. Das	Mawphlang	Refresher Course in Tribal Studies	14.05.2016
Dr. Quendarisa Kharbuli	SILOAM Umsawkhwan	36 th Orientation Programe	04.06.2016
	Sohra	36 th Orientation Programe	18.06.2016
Dr. Kuheli B. Das	SILOAM	37 th Orientation Programe	20.08.2016
Dr. P. S. Suresh	Sohra	Refresher Course in Economics	20.09.2016
Prof. Suresh Kr. De	Sohra	Refresher Course in Earth Sciences and Geography	03.12.2016
Dr. Kuheli B. Das	Mawphlang	39 th Orientation Programme	04.03.2017

Funds Received from Agencies Other than NEHU

The Centre was sanctioned Rs. 50.00 lakhs for the year 2016-17 from the University Grants Commission, New Delhi, for conducting

refresher courses and orientation programmes, short-term courses/workshops in approved subjects and for meeting other expenditures.

Infrastructure Added During the period

Library books: 100 volumes

WOMEN'S CELL

Chairperson : Prof. Streamlet Dkhar

Telephone : 0364-2723301/ 9436117479 (M)

Email : s.dkhar@rediffmail.com

Members: 10

Name	Designation and Affiliation
Prof. Sukalpa Bhattacharjee	Professor, English Department, NEHU
Prof. H. Kayang	Professor, Botany Department, and DSW, NEHU
Dr. Tejimala Gurung Nag	Associate Professor, History Department, NEHU
Dr. Begonia Dkhar	Scientific Officer, SAIF, NEHU
Smti. T. A. W Umdor	Technical Assistant, Chemistry Department, NEHU
Smti. Edaneola Kynta	Director, Women's Studies Centre, St. Edmund's College
Smti. Rosanna Lyngdoh	Social Activist
Smti. T. Shering Yagi	Legal Expert
Ms. Jupitara Kalita	Member
Ms. Merry C. Passah	Member

Vision: Gender Sensitive Institutional Space.

Mission: To Ensure Safety Security and Dignity of Female Students, Faculty and Staff in the Institution.

Programmes Organized During 2016-17

1. The Cell in collaboration with the Synod College Alumni Association organized a programme on *Gender Sensitization for Youth* for the students of Synod College, Shillong, held on 6 December 2016, at the Synod College Auditorium.
2. The Cell organized an awareness programme on *Sexual Harassment at Work Place in Higher Education Institutions* for research

scholars of NEHU on 14 December 2016 at the Science Seminar hall, NEHU, Shillong. The resource persons were Ms. Mayfereen Ryntathiang, President Grassroot, Shillong and Ms. Naphibanmer Laso, Advocate Legal Aid and Counsel, Remand Advocate of East Khasi Hills District.

3. The Cell also organized a panel discussion on the theme *Be Bold for Change* on the International Women's Day on 8 March 2017 at the Science Seminar hall, NEHU. The panelists were Ms. Meena Kharkongor, Chairperson for Protection of Child Rights; Ms. Nakilyn Shylla, Member State Commission for Women; Smti. Darilyn Syiem, Chairperson North-East

Women's Cell

Network; Shri. Tokiwaio Blah, President ICARE; Ms. Crescency Lyngdoh, DSP, East Khasi Hills and Smti. Patricia Mukhim, Editor, *Shillong Times* and a Social Activist (as moderator).

Complaints Reported During 2016-17

One complaint was reported and the case is still pending as an independent inquiry is going on.

APPENDIX A

MEMBERS OF THE UNIVERSITY COURT

(Constituted under Clause 10A of the University Statutes)

(All members of the Court, other than ex officio members and members representing students, shall hold office for a term of three years)

Ex Officio members:

- | | | |
|--------------------------------|---|--|
| (i) Chancellor | - | Prof. André Betèille
Chancellor
69, Jorbag, Ground Floor
New Delhi – 110003 |
| (ii) Vice-Chancellor | - | Prof. Sri Krishna Srivastava
Shillong Campus |
| (iii) Pro-Vice-Chancellor | - | Prof. Henry Lamin
Shillong Campus

Prof. G. Singaiah
Tura Campus |
| (iv) Dean of Students' Welfare | - | Prof. H. Kayang |
| (v) Registrar | - | Dr. J. N. Nayak (In-charge) |
| (vi) Librarian | - | Dr. F. R. Sumer (In-charge) |
| (vii) Proctor | - | Dr. R. L. Nongkhlaw |
| (viii) Finance Officer | - | Mrs. N. G. Marwein (In-charge) |

Representatives of Schools and Departments

1. All Deans of Schools, Ex Officio
2. All Professors, Ex Officio
3. All Heads of Departments/Centres, Ex Officio
4. Two Associate Professors who are not Head of Department and two Assistant Professors appointed by rotation in the manner prescribed by Ordinances

Members of the University Court

Associate Professors

1. **Miss N. Ganguly**
Department of English
NEHU, Shillong
2. **Miss Nola Syiem**
Department of English
NEHU, Shillong

Assistant Professors

1. **Dr. Mohandas Kushwaha**
Department of RADP
NEHU, Tura
2. **Dr. E. R. Tongper**
Department of Philosophy
NEHU, Shillong

Representatives of Affiliated Colleges

Seven Principals of Colleges in the State of Meghalaya

1. **Principal**
St. Mary's College
Laitumkhrach, Shillong
2. **Principal**
St. Mary's College of Teacher Education
Laitumkhrach, Shillong
3. **Principal**
Union Christian College
Khrawsing Christian College
Umiang Khwan, Ri-Bhoi District
4. **Principal**
Shillong College
Shillong
5. **Principal**
Tura Government College
Tura

Appendix A

6. **Principal**
Sankardev College
Shillong
7. **Principal**
College of Teacher Education
Shillong

Four Teachers from Affiliated Colleges Nominated by the Visitor on the Recommendation of the Vice-Chancellor - VACANT

Representatives of Parliament

Lok Sabha

1. **Smt. Bijoya Chakravarty**
18 Mahadev Road
New Delhi-110001
2. **Shri Biren Singh Engti**
17 Windsor Palace
Ferozeshah Road
New Delhi-110001
3. **Shri Conrad Sangma**
Walbakgiri P.O. Tura
West Garo Hills District
Meghalaya
4. **Shri Ram Prasad Sarmah**
House No. 6 Kacharibasti
Ulubari, Kamrup Metro
Guwahati, Assam-781007

Rajya Sabha

1. **Shri P. Bhattarcharya**
59A Palm Avenue
Flat-4, Ballygunge
Kolkata-700019
2. **Shri Oscar Fernandes**
4-1-40 Doris Rest Heaven
Brahmagiri, Ambalapadi Post
Udupi-576103

Members of the University Court

Persons Representing Learned Professions and Special Interests (Ten members to be nominated by the Visitor) - VACANT

Representatives of the Registered Graduates - VACANT

Representatives of Students

1. **Mr. Hamboy Shadap**, MSc
Department of Bio-Chemistry
NEHU, Shillong
2. **Mr. Carnegie L. Nongrum**, MA
Department of Tourism and Mass Communication
NEHU, Shillong
3. **Ms. Pampee Das**, PhD
Department of ECE
NEHU, Shillong
4. **Ms. Adela Marak**, PhD
Department of RDAP
NEHU, Shillong

Representatives of the Non-Teaching Staff

1. **President**
Non-teaching Staff Association
NEHU, Shillong
2. **General Secretary**
Non-teaching Staff Association
NEHU, Shillong

Representatives of State Government (12 November 2015 to 11 November 2018)

1. **Shri C. C. M. Mihsill**, IAS
Secretary Education Department
Government of Meghalaya, Shillong
2. **A. Ch. Marak**, MCS
Director of School Education and Literary
Government of Meghalaya, Shillong

Appendix A

Remaining Members of the Executive Council, who are not otherwise members of the Court

1. **Principal**
Women's College
Shillong
2. **Principal**
Sohra College
Sohra
3. **Director**
Higher and Technical Education
Government of Meghalaya, Shillong

Other Members *(To be nominated by the Competent Authorities as prescribed by the Statutes of the University)*

1. Prof. Caroline Marak, Retd.
Ring Rey Gittim, Near L.P. School
West Garo Hills, Tura -794002

APPENDIX B

MEMBERS OF THE EXECUTIVE COUNCIL

(Constituted under Clause 11(I) of the Statutes of the University)

(All the members of the Executive Council, other than ex officio members, shall hold office for a term of three years)

1. Vice-Chancellor
 2. Pro-Vice-Chancellor
 3. Four Deans of School by rotation according to seniority
 4. One Professor, other than a Dean by rotation according to seniority
 5. One Associate Professor by rotation according to seniority
 6. Two Principals by rotation according to seniority with reference to the date of establishment of the colleges concerned
 7. Director in-charge of colleges' education in the State of Meghalaya
 8. Two members of the Court
 9. Four persons to be nominated by the Visitor
-

DETAILS

- | | |
|--|-----------------|
| 1. Prof. Sri Krishna Srivastava
Vice-Chancellor
NEHU | Chairman |
| 2. Prof. Henry Lamin
Pro-Vice Chancellor
NEHU (Shillong Campus) | Member |
| 3. Prof. G. Singaiah
Pro-Vice Chancellor
NEHU (Tura Campus) | Member |
| 4. Prof. Ramesh Sharma
Dean, School of Life Sciences
NEHU, Shillong | Member |

Appendix B

5.	Prof. B. Mishra Dean, School of Economics, Management and Information Sciences NEHU, Shillong	Member
6.	Prof. S. M. Sungoh Dean, School of Education NEHU, Shillong	Member
7.	Prof. D. K. Nayak Dean, School of Human and Environmental Sciences NEHU, Shillong	Member
8.	Prof. L. K. Jha Senior Most Professor Departmental of Environmental Studies NEHU, Shillong	Member
9.	Miss N. Ganguly Senior Most Associate Professor Department of English, NEHU, Shillong	Member
10.	Principal Women's College, Shillong	Member
11.	Principal Government College, Sohra - 793108	Member
12.	Director Higher Education Government of Meghalaya, Shillong	Member
13.	Visitor's Nominee (Two members of the Court) <i>Visitor's Nominee</i>	Awaited
14.	Shri Milind Sudharkar Marathe Associate Professor Department of Electronics Engineering K.J. Somaiya College of Engineering Vidyavihar, Mumbai-400077	Member
15.	Shri Rabi Ranjan Sen Assistant Professor (senior scale) Department of History, Katwa College Baddhaman, West Bengal-713130	Member

Members of the Executive Council

- | | |
|---|-----------------------------|
| 16. Dr. Bubul Kumar Saikia
Principal, L.T.K. College
P.O. Azad North Lakhimpur
Assam-787031 | Member |
| 17. Prof. Angila Gupta
Vice-Chancellor
Guru Ghasidas Vishwavidyalaya
Bilaspur-495009 | Member |
| 18. Finance Officer
NEHU, Shillong | Permanent Invitee |
| 19. Registrar
NEHU, Shillong | Ex Officio Secretary |

APPENDIX C

MEMBERS OF THE ACADEMIC COUNCIL

(Constituted under Clause 14(I) of the Statutes of the University)

(All the members of the Executive Council, other than ex officio members, shall hold office for a term of three years)

Ex Officio Members

1. Vice-Chancellor
 2. Pro-Vice-Chancellor
 3. Dean of Schools
 4. Dean of Students' Welfare
 5. Heads of Departments and Centres of Studies
 6. Librarian
 7. Principals of Colleges maintained by the University
 8. All Professors, other than the Heads of Departments and Centres
-

DETAILS

- | | |
|---|-----------------|
| 1. Prof. Sri Krishna Srivastava
Vice-Chancellor
NEHU, Shillong | Chairman |
| 2. Prof. Henry Lamin
Pro-Vice Chancellor
NEHU, Shillong | Member |
| 3. Prof. G. Singaiah
Pro-Vice Chancellor
NEHU, Tura Campus, Tura | Member |
| 4. All Deans of Schools
NEHU, Shillong | Members |
| 5. Prof. H. Kayang
Dean, Student's Welfare | Member |

Members of the Academic Council

- | | | |
|----|---|----------------|
| 6. | All Heads of Departments/Centres
NEHU, Shillong/Tura | Members |
| 7. | Librarian (In-charge)
NEHU, Shillong | Member |
| 8. | All Professors other than Heads of Departments/
Centres in NEHU, Shillong/Tura | Members |

Six Principals of Colleges Admitted to the Privileges of the University

- | | | |
|----|---|---------------|
| 1. | Principal
St. Mary's College
Teacher of Education, Shillong-793003 | Member |
| 2. | Principal
Kazi & Zaman College
New Bhaibari-79
Tura-794002 | Member |
| 3. | Principal
Durama College, Megonggre
Rongkhon, P.O. Chanmari
Tura-794002 | Member |
| 4. | Principal
Greater Mawlai College
Shillong-793017 | Member |
| 5. | Principal
Capt. William Memorial College
Baghmara-794202, Meghalaya | Member |
| 6. | Principal
Umshyrpi College
Laban, Shillong-793004 | Member |

Representatives of Teachers of the University (27 July 2016 to 26 July 2019)

Associate Professors

- | | | |
|----|---|---------------|
| 1. | Miss N. Ganguly
Department of English
NEHU, Shillong | Member |
| 2. | Miss Nola Syiem
Department of English
NEHU, Shillong | Member |

Appendix C

Assistant Professors

- | | |
|--|---------------|
| 1. Dr. B. K. Mahopatra
Department of Political Science
NEHU, Shillong | Member |
| 2. Dr. R. C. Pandey
Centre for Distance Education
NEHU, Shillong | Member |
| 3. Smt. J. R. Marak
Department of Garo
Tura Campus, Tura | Member |

Visitor's Nominees (24 November 2015 to 23 November 2018)

- | | |
|---|---------------|
| 1. Prof. Bhaben Kalita
Department of Mathematics
Guwahati University
Guwahati, Assam-781014 | Member |
| 2. Dr. Mukul Bora, Director
Institute of Engineering and Technology
Dibrugarh University
Dibrugarh Assam-786004 | Member |
| 3. Dr. Mukunda Rajbongshi
Principal (Ret.) Lakhimpur Girls' College
MD Genius Academic
Assam-787001 | Member |
| 4. Prof. Kshiti Bhusan Das
Professor of Commerce
Utkal University
Odisha-751004 | Member |

Representatives of Teachers of Affiliated Colleges of the University (30 January 2017 to 29 January 2020)

- | | |
|---|---------------|
| 1. Shri A. R. Myrthong
Lady Keane College
Shillong | Member |
| 2. Shri S. K. Pradhan
St. Anthony's College
Shillong | Member |

Members of the Academic Council

- | | | |
|----|--|---------------|
| 3. | Dr. (Mrs.) B. H. Buam
College of Teacher Education
Shillong | Member |
| 4. | Dr. Prashanta Sarkhel
St. Edmund's College
Shillong | Member |
| 5. | E. Kharkongor
Shillong College
Shillong | Member |
| 6. | Shri Davidson Diengdoh
Jaintia Eastern College
Khliehriat | Member |

Representatives of the Postgraduate Students of the University

Postgraduate Students

- | | | |
|----|---|---------------|
| 1. | Md. Atiqur Rahman , MSc
Department of ECE
NEHU, Shillong | Member |
| 2. | Ms. Yavitsono Nakhro , MA
Department of Geography
NEHU, Shillong | Member |

Research Scholar

- | | | |
|----|---|---------------|
| 1. | Ms. Algracia Kharbuki
Department of Mathematics
NEHU, Shillong | Member |
|----|---|---------------|

Permanent Invitees

- | | | |
|----|--|---------------|
| 1. | Director
College Development Council
NEHU, Shillong | Member |
| 2. | Controller of Examinations
NEHU, Shillong | Member |

Registrar , NEHU, Shillong	Secretary, Ex Officio
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APPENDIX D

MEMBERS OF THE BOARD OF RESEARCH STUDIES

(Constituted under Clause OA-6(I) of the Ordinances of the University)

- | | |
|---|-----------------------------|
| 1. Prof. Sri Krishna Srivastava
Vice-Chancellor
NEHU, Shillong | Chairman, Ex Officio |
| 2. Prof. Henry Lamin
Pro-Vice Chancellor
NEHU, Shillong | Member |
| 3. Prof. G. Singaiah
Pro-Vice Chancellor
NEHU, Tura Campus | Member |
| 4. All Deans of Schools
NEHU, Shillong | Ex Officio Members |
| 5. All Heads of Departments/Centres
NEHU, Shillong/Tura | Ex Officio Member |
| 6. All Professors other than Heads of Departments/
Centres in NEHU, Shillong/Tura
NEHU, Shillong/Tura | Ex Officio Members |

Six Readers, three of whom are from Humanities and Social Sciences and three from Sciences

- | | |
|--|---------------|
| 1. Dr. Lapynshai Syiem
Department of Creative & Cultural Studies
NEHU, Shillong | Member |
| 2. Dr. B. P. Tripathi
Department of Hindi
NEHU, Shillong | Member |
| 3. Dr. A. Bhattacharjee
Department of Management
NEHU, Tura | Member |

Members of the Board of Research Studies

- | | | |
|----|--|---------------|
| 4. | Dr. S. S. Khatri
Department of Physics
NEHU, Shillong | Member |
| 5. | Dr. Dinesh Bhatia
Department of Biomedical Engineering
NEHU, Shillong | Member |
| 6. | Dr Y. Kumar
Department of Botany
NEHU, Shillong | Member |

Four external experts – two representing Humanities and Social Sciences and two representing Sciences

- | | | |
|----|--|---------------|
| 1. | Prof. M. M. Chaturvedi
Dean, Research (Life Science)
Department of Zoology
University of Delhi
Delhi -110007 | Member |
| 2. | Prof. T. Lhungdim
Department of Education
Rajiv Gandhi University
Rono Hills Doimukh
Arunachal Pradesh-791112 | Member |
| 3. | Prof. S. C. Channa
Department of Anthropology
University of Delhi
Delhi-110007 | Member |
| 4. | Prof. Rajib Mall
Department of CSE
Indian Institute of Technology
Kharagpur, West Bengal-721302 | Member |

Secretary Registrar NEHU, Shillong	Ex Officio Secretary
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ABBREVIATIONS AND ACRONYMS

ACSE	Asian Council of Science Editors
ADTU	Assam Down Town University
AICTE	All India Council for Technical Education
AIDU	Allahabad Agricultural Institute Deemed University
AIIMS	All India Institutes of Medical Sciences
AIPC	All India Poetess Conference
AISHE	All India Survey on Higher Education
AMI	Association of Microbiologists of India
AMC	Asset Management Company
AMU	Aligarh Muslim University
ANOVA	Analysis of Variance
AOGS	Asia Oceania Geosciences Society
AQAR	Annual Quality Assurance Report
ASC	Academic Staff College
ASEAN	Association of Southeast Asian Nations
ATDS	Agricultural Technology Development Society
BA	Bachelor of Arts
BArch	Bachelor of Architecture
BARD	Bangladesh Academy for Rural Development
BBIN	Bangladesh, Bhutan, India, Nepal
BBMC	Bir Bikram Memorial College
BBS	Buddha Bhanu Saraswati
BCA	Bachelor in Computer Application
BCKV	Bidhan Chandra Krishi Viswavidyalaya

Abbreviations and Acronyms

BCom	Bachelor of Commerce
BE	Bachelor of Engineering
BEd	Bachelor of Education
BEd-SEDE	BEd Special Education
BHU	Banaras Hindu University
BIET	Bundelkhand Institute of Engineering & Technology
BINC	Bioinformatics National Certification
BIOREHAB	Biomechanics and Rehabilitation Engineering
BMD	Bone Mineral Density Test
BME	Biomedical Engineering
BRI	Basic Rate Interface
BRNS	Board of Research in Nuclear Sciences
BSNL	Bharat Sanchar Nigam Ltd
BSSS	Basic Sciences and Social Sciences
BTech	Bachelor of Technology
BU	Bilaspur University
BUGS	Board of Under-Graduate Studies
BVoc	Bachelor of Vocational Studies
CAD	Computer-Aided Drafting
CAIAG	Central-Asian Institute for Applied Geosciences
CAPART	Council for Advancement of People's Action and Rural Technology
CAS	Career Advancement Scheme
CBC	Complete Blood Count
CBCS	Choice Based Credit System
CC	Climate Change
CCC	Career and Counselling Cell
CCMB	Centre for Cellular & Molecular Biology
CCME	Canadian Council of Ministers of the Environment

Abbreviations and Acronyms

CCRT	Centre for Cultural Resources and Training
CCS HAU	Chaudhary Charan Singh Haryana Agricultural University
CCTV	Closed Circuit TV
CDAC	Centre for Development of Advanced Computing
CDC	College Development Council
CDE	Centre for Distance Education
CIIL	Central Institute of Indian Languages
CIMPA	Centre International de Mathématiques Pures et Appliquées
CMC	Christian Medical College
CrPC	Code of Criminal Procedure
CRSI	Chemical Research Society of India
CSE	Computer Science and Engineering
CSIR	Council of Scientific and Industrial Research
CSIR-CDRI	CSIR-Central Drug Research Institute
CSR D	Centre for the Study of Regional Development
CSSTE	Centrally Sponsored Scheme for Teacher Education
CTEs	Colleges of Teacher Education
DAE	Department of Atomic Energy
DBT	Department of Biotechnology
DDMA	District Disaster Management Authority
DeICON	DBT e-Library Consortium
DE RT	Directorate of Educational Research and Training
DGM	Deputy General Manager
DIC	Design Innovation Center
DID	Direct Inward Dialing
DIETs	District Institutes of Education and Training
DIT	Directorate of Information Technology
DLP	Digital Light Processing

Abbreviations and Acronyms

DPhil	Doctor of Philosophy
DPS	Delhi Public School
DPSIR	Driving Forces-Pressures-State-Impacts-Response
DRDO	Defence Research and Development Organisation
DRS	Departmental Research Support
DSP	Deputy Superintendent of Police
DST	Department of Science and Technology
DSW	Dean of Students' Welfare
DTP	Desktop Publishing
DU	Delhi University
ECE	Electronics and Communication Engineering
EDII	Entrepreneurship Development Institute of India
EE	Energy Engineering
EFLU	English and Foreign Languages University
ELTAI	English Language Teachers' Association of India
ENDS	Electronic Nicotine Delivery System
ENT	Elementary Number Theory
Env Sc	Environmental Science
ENVIS	Environmental Information System
ESA	Email Appliance Security
FC-SEDE	Foundation Course on Education of Children with Disability
FCT	Forum on Contemporary Theory
FDP	Faculty Development Programme
FINER	Federation of Industries & Commerce of North-Eastern region
FIST	Fund for Improvement of S&T Infrastructure
FT-NMR	Fourier Transform Nuclear Magnetic Resonance
GBPIHD	G. B. Pant Institute of Himalayan Environment and Development
GBPUA & T	G. B. Pant University of Agriculture and Technology

Abbreviations and Acronyms

GBPUA	Govind Ballabh Pant University of Agriculture
GEN	General
GEOPIC	Geo-data Processing & Interpretation Center
GGSIPU	Guru Gobind Singh Indraprastha University
GIAN	Global Initiative of Academic Networks
GIS	Geographic Information System
GMM-UBM	Gaussian Mixture Model-Universal Background Model
GNRC	Guwahati Neurological Research Centre
GoI	Government of India
Govt	Government
GPS	Global Positioning System
GSI	Gesellschaft für Schwerionenforschung (Germany)
GSTF	Global Science and Technology Forum
GU	Gauhati University
GUINES	Gauhati University Institute of North East India Studies
HCU	Hyderabad Central University
HDFC	Housing Development Finance Corporation
HIV/AIDS	Human Immune Deficiency Virus Infection and Acquired Immune Deficiency Syndrome
HNYP	Hynniewtrep National Youth Front
HPDC	Human Potential Development Centre
HR	Human Resource
HRDC	Human Resource Development Centre
HSG	Harisingh Gour University
HWWE	Humanizing Work and Work Environment
IAAP	India Academy of Applied Psychology
IAEA	International Atomic Energy Agency
IARI	Indian Agricultural Research Institute

Abbreviations and Acronyms

IAS	Indian Administrative Services
IASST	Institute of Advanced Study in Science and Technology
IBIN	Indian Biodiversity Information Network
IBMRD	Institute of Business Management & Rural Development
IBSD	Institute of Bioresources and Sustainable Development
ICAP	Internet Content Adaptation Protocol
ICAR	Indian Council of Agricultural Research
ICARE	The Society for Informed, Conscious and Responsible Existence
ICHR	Indian Council for Historical Research
ICMR	Indian Council of Medical research
ICPR	Indian Council of Philosophical Research
ICRB	International Conference on Radiation Biology
ICRC	Indian Council of Red Cross
ICSSR	Indian Council of Social Science Research
ICSSR-NERC	Indian Council of Social Science Research for North-Eastern Region Centre
ICT	Information and Communication Technologies
ICTP	International Centre for Theoretical Physics
ICWA	Indian Council of World Affairs
IDSK	Institute of Development Studies Kolkata
IEEE	Institute of Electrical and Electronics Engineers
IEL	Institute for Educational Leadership
IESO	International Earth Sciences Olympiad
IFEAMA	International Federation of East Asian Management Associations
IGCAR	Indira Gandhi Centre for Atomic Research
IGNOU	Indira Gandhi National Open University
IGRMS	Indira Gandhi Rashtriya Manav Sangrahalaya
IIRS	Indian Institute of Remote Sensing
IISc	Indian Institute of Science

Abbreviations and Acronyms

IIT	Indian Institute of Technology
ILI	Indian Law Institute
ILMS	Integrated Library Management System
IMC	Intelligent Management Center
IMTECH	Institute of Microbial Technology
INCSW	Indian National Committee on Surface Water
INFLIBNET	Information and Library Network
INSA	Indian National Science Academy
IOCL	Indian Oil Corporation Limited
IOT	Internet of Things
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
IPS	Intrusion Prevention System
IQAC	Internal Quality Assurance Cell
ISBN	International Standard Book Number
ISDN	Integrated Services Digital Network
ISHS	International Society for Horticultural Science
ISI	Indian Statistical Institute
ISM	Indian School of Mines (Also Institute for Supply Management)
ISSN	International Standard Serial Number
IT	Information Technology
IUCN	International Union for Conservation of Nature
JEC	Jabalpur Engineering College
JISCE	JIS College of Engineering
JM	Jamia Millia
JMC	Journalism and Mass Communication
JNCASR	Jawaharlal Nehru Centre for Advanced Scientific Research
JNU	Jawaharlal Nehru University

Abbreviations and Acronyms

JRM	Joint Review Mission
JSM	Joint Statistical Meetings
KGMIPE	Keshav Dev Majviy Institute of Petroleum Exploration
KIIT	Kalinga Institute of Industrial Technology
KVA	Kilo-Volt-Ampere
LAN	Local Area Network
LDAP	Lightweight Directory Access Protocol
LIS	Library and Information Science
LLB	Bachelor of Laws
LLM	Master of Laws
LNMU	Lalit Narayan Mithila University
LOI	Letter of Intent
LU	Lucknow University
MA	Master of Arts
MACS	Meghalaya AIDS Control Society
MATI	Meghalaya Administrative Training Institute
MBA	Master of Business Administration
MBBS	Bachelor of Medicine
MBDA	Meghalaya Basin Development Authority
MBOSE	Meghalaya Board of School Education
MCA	Master of Computer Applications
MCom	Master of Commerce
MCTA	Meghalaya College Teachers Association
MD	Doctor of Medicine
MDP	Management Development Programmes
ME	Master of Engineering
MEd	Master of Education
MES	Mahatma Education Society

Abbreviations and Acronyms

MGNREGA	Mahatma Gandhi National Rural Employment Guarantee Act
MHRD	Ministry of Human Resource Development
MICE	Meetings, Incentives, Conferences, and Events
MIFF	Mumbai International Film Festival
MIL	Major Indian Languages
MLCU	Martin Luther Christian University
MLISc	Master of Library & Information Science
MLitt	Master of Letters
MLSC	Manipal Life Science Centre
MMNIT	Motilal Nehru National Institute of Technology
MNS	Microsoft Network
MoEF	Ministry of Environment & Forests
MoEFCC	Ministry of Environment, Forest and Climate Change
MoST	Ministry of Science and Technology
MoU	Memorandum of Understandings
MPhil	Master of Philosophy
MS	Master of Surgery
MSCW	Meghalaya State Commission for Women
MSMEs	Micro, Small, and Medium Enterprise
MSU	Maharaja Sayajirao University
MSW	Master of Social Work
MTA	Master of Tourism Administration
MTech	Master of Technology
MTS	Multi-Tasking Staff
MTTM	Master of Tourism and Travel Management
MU	Mumbai University
NAAC	National Assessment and Accreditation Council
NABARD	National Bank for Agriculture and Rural Development

Abbreviations and Acronyms

NAM	National Agriculture Market
NBDB	National Bioresources Development Board
NBHM	National Board for Higher Mathematics
NCBS	National Centre for Biological Science
NCMEI	National Commission for Minority Educational Institutions
NCTE	National Council for Teacher Education
NDL	National Digital Library
N-DPF	National Post-Doctoral Fellowship
NDUAT	Narendra Dev University of Agriculture & Technology
NDVN	NEHU Data and Voice Network
NEBI_{net}	North-East Bioinformatics Network
NEC	North Eastern Council
NEEPCO	North Eastern Electric Power Corporation Limited
NEFT	National Electronic Funds Transfer
NeGD	National E-Governance Division
NEHU	North-Eastern Hill University
NEHUSU	NEHU Students' Union
NEICSSR	North East India Council for Social Sciences Research
NEIGRIHMS	North Eastern Indira Gandhi Regional Institute of Health and Medical Sciences
NEIHPID	North-East India Helminth Parasite Information Database
NEIRA	North Eastern Institute for Research in Anthropology
NEQIP	North East Quality Improvement Program
NERC	North-Eastern Regional Centre
NERIE	North East Regional Institute of Education
NERIST	North Eastern Regional Institute of Science and Technology
NERO	North-Eastern Regional Office
NERTS	North Eastern Regional Transmission System

Abbreviations and Acronyms

NESAC	North-Eastern Space Applications Centre
NET	National Eligibility Test
NEWS	Nature Environment and Wildlife Society
NFHE	National Fellowship for Higher Education to ST
NGCT	Next Generation Computing Technologies
NGO	Non-Governmental Organizations
NGT	National Green Tribunal
NIDM	National Institute of Disaster Management
NIMAS	National Institute of Mountaineering and Allied Sports
NIRDPR	North Eastern Regional Centre of the National Institute of Rural Development & Panchayati Raj
NISER	National Institute of Science Education and Research
NIT	National Institute of Technology
NKN	National Knowledge Network
NLCPR	Non-Lapsable Central Pool of Resources
NMEICT	National Mission on Education through Information and Communication Technology
NSD	National School of Drama
NSS	National Service Scheme
NTPC	National Thermal Power Corporation
NTU	Nanyang Technological University
NU	Nagaland University
NUEPA	National University of Educational Planning and Administration
NUEPA	Nehru Yuva Kendra
OBC	Other Backward Communities
ODE	Ordinary Differential Equation
OFDM	Orthogonal Frequency Division Multiplexing
OIL	Oil India Limited
OKDISCD	Omeo Kumar Das Institute of Social Change and Development

Abbreviations and Acronyms

ONGC	Oil and Natural Gas Corporation Limited
OP	Orientation Programme
OPAC	Online Public Access Catalogue
ORF	Observer Research Foundation
PANE	Physics Association of North East
PBX	Private Branch Exchange
PCB	Printed Circuit Board
PDE	Partial Differential Equation
PG	Postgraduate
PGDCA	Post-Graduate Diploma in Computer Application
PGSU	Postgraduate Students' Union
PhD	Doctor of Philosophy
PLANNER	Promotion of Library Automation and Networking in North-Eastern Region
PRADAN	Professional Assistance for Development Action
PRI	Primary Rate Interface
PU	Panjab University
PVC	Pro-Vice-Chancellor
PWD	Persons with Disabilities
QA	Quality Assurance
QE	Quality Enhancement
QMS	Quality Management System
QoS	Quality of Service
QR	Quick Response Code
R&D	Research and Development
RC	Refresher Course
RCD	Radiological Controls Division
RCI	Rehabilitation Council of India
RDAP	Rural Development and Agricultural Production

Abbreviations and Acronyms

REC	Regional Engineering College
RF	Radio Frequency
RFBR	Russian Foundation for Basic Research
RGNIYD	Rajiv Gandhi National Institute of Youth Development
RGTS	Real Time Gross Settlement
RSC	Royal Society of Chemistry
RUSA	Rashtriya Uchchatar Shiksha Abhiyan
SAC	St. Anthony's College
SAI	Sports Authority of India
SAIF	Sophisticated Analytical Instrument Facilities
SAP	Special Assistance Programme
SBI	State Bank of India
SBLs	School Board of Life Sciences
SBTC	State Blood Transfusion Council
SC	Schedules Castes
SCERT	State Council of Educational Research & Training
SCSTE	State Council of Science, Technology and Environment
SDGs	Sustainable Development Goals
SEAC	State Level Expert Appraisal Committee
SEC	St. Edmund's College
SEMIS	School of Economics, Management and Information Sciences
SeMT	State e-Governance Mission Team
SERB	Science and Engineering Research Board
SHEC	State Higher Education Council
SHG	Shillong
SILOAM	Facilitation Center for Psycho-Spiritual Experience for Individuals
SJCE	Sri Jayachamarajendra College of Engineering
SMELC	Social Mobilization Experimentation and Learning Centre

Abbreviations and Acronyms

SMEs	Small and Medium Enterprises
SMO	Senior Medical Officer
SMU	Sikkim Manipal University
SOT	School of Technology
SPSS	Statistical Package for the Social Sciences
SRM	Sri Ramaswami Memorial University
SSA	Sarva Shiksha Abhiyan
SSB	Single Side Band
ST	Scheduled Tribes
STA	Senior Technical Assistant
SVU	Sri Venkateswara University
TDM	Time Division Multiplexing
TIKM	The International Institute of Knowledge Management
TISS	Tata Institute of Social Sciences
TOT	Training of Trainers
UAC	University Advisory Committee
UAS	University of Agricultural Sciences
UBKV	Uttar Banga Krishi Viswavidyalaya
UD	Undergraduate
UGC	University Grants Commission
UGC-HRDC	UGC-Human Resource Development Centre
UMS	University Management System
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
UNIDO	United Nations Industrial Development Organization
Univ	University
UPES	University of Petroleum and Energy Studies

Abbreviations and Acronyms

USTM	University of Science and Technology, Meghalaya
UTM	University of Technology and Management
VBSPU	Veer Bahadur Singh Purvanchal University
VC	Vice-Chancellor
VLAN	Virtual Local Area Network
VLSI	Very-Large-Scale Integration
VSAT	Very Small Aperture Terminal
WB	West Bengal
WBUT	West Bengal University of Technology