

# I

## SCHOOL OF ECONOMICS, MANAGEMENT AND INFORMATION SCIENCES

**Dean** : Prof. Bhagirathi Panda  
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The School of Economics, Management and Information Sciences comprises seven Departments, namely Commerce, Economics, Journalism and Mass Communication, Library and Information Science and Tourism and Hotel Management, in Shillong and Department of Agri-Business Management and Food Technology and Department of Management in Tura. All the Departments offer Post Graduate and Ph.D. programmes, and the Department of Economics also offers the M.Phil. programmes.

Each Department under the School has its thrust areas of research. However, areas in which the School has established its primacy at the National level include Economics of North Eastern Region of India, Rural and Labour Economics, Public Economics and Local Finances, Environmental and Resource Economics, Sub-regional Economics, Accounting & Finance, Entrepreneurship & Small Business, Micro-Finance and Rural Credit Management, Information Technology and Social Marketing, Supply Chain Management, Hospitality and Tourism Studies, Sustainable Tourism, Agri and

Food Marketing; Food Biotechnology, Knowledge Organisation, Information Storage and Retrieval, Application of Management Concepts and Management Principles in Libraries and Information Centres, Information/Knowledge Management, Information Management, Film Studies and Culture & Media Studies. Faculty members of the School, in addition to teaching and research, have also provided crucial policy support to the central, state and local governments on issues and programmes of transformative development. The School organized a National Seminar on “Shaping of Young Minds” in collaboration with All India Management Association, Delhi and Guwahati Management Association, Guwahati on August 30, 2019. A talk on Indo-Japan Cultural Relations was also delivered by Prof. Soto on November 15, 2019 in NEHU.

Faculty members of the School have published 79 research papers in journals of National and International repute and 26 in books, book chapters and conference proceedings.

## DEPARTMENT OF AGRIBUSINESS MANAGEMENT AND FOOD TECHNOLOGY (TURA CAMPUS)

**Head** : Dr. Gino A. Sangma (Teacher-in-Charge)  
**Telephone** : +91 9612155002 (M)  
**E-mail** : ginosangma@gmail.com / hodabmft@nehu.ac.in

### Faculty: 03

Designation	Name and Qualification	Specialization
<b>Assistant Professor</b>	Dr. Gino A. Sangma, M.B.A. & Ph.D. (NEHU)	Marketing management and Agribusiness Management
	Dr. Sheena Haorongbam, M.Sc. & Ph.D. (Panjab Univ.)	Food Biochemistry & Analysis, Quality Control in Food Industry
	Dr. R. Sasikumar, M.Sc. (G.B.Pant Univ.), Ph.D. (Tezpur Univ.)	Food Engineering & Technology

### Thrust Areas of Research

Management of Small Business, Entrepreneurship, Supply Chain Management, Micro Finance, Rural Marketing, Agri and Food Marketing, Agri 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 & vegetables, Skill Development, Rural extension services, Food Analysis and Hygiene, Underutilized Forest resources, Emerging technology in food processing, Improving phytonutrients rich natural fruit juice by employing green hurdle technology.

Production of superior quality juice using state of the art non-thermal processing

technology, mitigating ultrasonication, microwave and high voltage cold plasma.

Microencapsulation technique to offer specific target delivery system of extracted phytonutrients and developing fermented nutraceutical beverages for an alternative to red grape wine.

### 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 fifteen students for the MBA programme, and seven students completed their MBA degree successfully. Faculty members of the Department have contributed two research papers published in journals, one book and two book chapters/proceedings.

## Students' Profile

Enrolment Capacity: M.B.A.- 17, Ph.D. - 03

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.B.A.	10	07	-	14	-	03	06	11	17
Ph.D.	-	03	-	01	-	02	01	02	03

### Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.B.A.	05	07	-	09	-	03	01	11	12

## Fieldwork/Educational Tour of Students

**Teacher- in-Charge** : Dr. Gino A. Sangma

**Places/Institutions visited** : Thimphu, Punakha and Paro (Bhutan)

**Duration of Tour** : 11 days (July 13 - 23, 2019)

**Purpose of Tour** : Bhutan is known for its rich natural resource and a climate resilient country. Hence, a visit to this country was considered as it would enrich the students' knowledge in understanding and learning livelihood practices and potential of sustainable business opportunities in Agri and Food sectors.

## Courses Conducted

**Postgraduate: M.B.A.**

### 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 II

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/Workshops/ Symposia/Extension Programmemes**

## **Attended**

### **Dr. Gino. A. Sangma**

Presented a paper on “Need of community-based tourism for sustaining the heritage site at Wadagokgre, Bhaitbari, West Garo Hills, Meghalaya” at the National Seminar on Archaeology of Northeast India: Retrospect and Prospect organized by Department of History and Archaeology, NEHU, Tura Campus, Tura, Meghalaya during August 26 -28, 2019 (Co-author Dr. Thrinadha Rao Bandaru).

Participated in UGC Sponsored Refresher Course in NEHU, Tura Campus, in the Area of Business Studies (Interdisciplinary) at Department of Management, NEHU, Tura Campus, Tura during November 18 - December 1, 2019.

Attended 2 days Agripreneurship and Soft Skills Development Programmeme organized by Incubation Centre, NEHU, Tura Campus during February 25-26, 2020.

### **Dr. Sheena Haorongbam**

Attended (i) Faculty Development Programmes (FDP) organized by Department of Management, NEHU, Tura in collaboration with Entrepreneurship Development Institute of India, North Eastern Regional Office, Guwahati and NSTEDB, Guwahati during March 02-14, 2020, (ii) 2 days Agripreneurship and Soft Skills Development Programmeme organized by Incubation Centre, NEHU, Tura Campus during February 25 - 26, 2020.

### **Dr. R. Sasikumar**

Presented a paper on “Process optimization of microencapsulated polyphenols from khounphal pomace by jet flow vibration technology and its evaluation as a target delivery system” in the 27th

Indian Convention of Food Scientist and Technology, RAINBOW organized by AFST-Tezpur University during January 30 - February 01, 2020.

## **Publications**

### **Research Papers**

#### ***Published in India***

Deb, U., Haorongbam, S. (2019) Minil: The Sticky Rice from the Abode of Clouds. *Journal of Horticulture and Plant Science*, 2(1): 01-02.

Sasikumar, R., Das, D., Chakaravarthi, S., Deka, S. C. (2020). GC-HRMS screening of bioactive compounds responsible for antimicrobial and antioxidant activities of blood fruit (*Haematocarpus Validus* Bakh. F. Ex Forman) of North-East India. *Archives of Microbiology*, 202 (7): 1-12. <https://doi:10.1007/s00203-020-01985-x>.

Sasikumar, R., Das, M., Deka, S. C. (2020). Process optimization for the production of blood fruit powder by spray drying technique and its quality evaluation. *Journal of Food Science and Technology*, 57(6): 2269-2282. <https://doi:10.1007/s13197-020-04264-1>.

Sasikumar, R., Das, M., Sahu, J. K., Deka, S. C. (2020). Qualitative properties of spray dried blood fruit (*Haematocarpus Validus*) powder and its sorption isotherms. *Journal of Food Process Engineering*, 43(4):1-2. <https://doi:10.1111/jfpe.13373>.

Sasikumar, R., Chutia, H., Deka, S. C. (2019). Thermosonication assisted extraction of blood fruit (*Haematocarpus Validus*) juice and process optimization through response surface methodology. *The Journal of Microbiology, Biotechnology and Food*

Sciences, 9(2). <https://doi:10.15414/jmbfs.2019.9.2.228-235>.

Sasikumar, R., Pradhan, D., Deka, S. C. (2019). Effects of thermosonication process on inactivation of *Escherichia coli* and *Saccharomyces cerevisiae* and its survival kinetics modeling in khooonphal (*Haematocarpus validus*) juice to extend its shelf life. *Journal of Food Processing and Preservation*, 43(11). <https://doi.org/10.1111/jfpp.14220>.

### Books/Book Chapters/Proceedings

Sethuraman Sivakumar, C.A. Jayaprakas I H, Kesava Kumar, I Venkatraman Bansode, A.V.V. Koundinya, M, Nedunchezhiyan, Manish Kanwat, Santosh Kumar, Sasikumar R (2020). *Tuber crops rainbow diet production and utilization of antioxidant rich sweet potato variety*. CTCRI Publishing House, Trivandrum, India.

### Research Projects

#### Ongoing

Title of Project	PI/Co-PI	Funding Agency	Amount (Rs.)
Development of Low-Cost Process Technology for Extraction of Oleoresin, Essential Oils and its Value-Added Products from Tejpatta ( <i>Cinnamomum tamala</i> ) and Creating Entrepreneurship for Tribal People of Meghalaya	Dr. R. Sasikumar (PI)	Ministry of Tribal Affairs, TRIFED, Government of India, New Delhi	26, 00,000.00

## DEPARTMENT OF COMMERCE

**Head** : Prof. K. C. Kabra  
**Telephone** : 0364-2723161 (O) / +91 9436309498 (M)  
**E-mail** : hodcom@nehu.ac.in; kckabra@nehu.ac.in

### Faculty: 06

Designation	Name and Qualification	Specialization
<b>Professor</b>	Prof. N. M. Panda, M.Com. (Utkal Univ.), Ph.D. (Manipur Univ.)	Management Accounting & Entrepreneurship
	Prof. A. P. Pati, M.Com. & Ph.D. (Utkal Univ.)	Finance
	Prof. K. C. Kabra, M.Com. & Ph.D. (JRN Raj. Vidyapeeth Univ.)	Accounting & Finance
<b>Assistant Professor</b>	Dr. R. A. J. Syngkon, M.Com. & Ph.D. (NEHU)	Managerial Economics & Entrepreneurship
	Dr. S. Kharmawphlang, M.Com. & Ph.D. (NEHU)	Entrepreneurship & Marketing
	Dr. S.G. Maji*, M.Com. & Ph.D. (Univ. of Burdwan)	Accounting & Finance

\* On lien to Department of Commerce, Tezpur University, Tezpur, Assam since December 12, 2019.

### Thrust Areas of Research

Micro finance, Banking, Capital Structure, Corporate Governance, CSR, Environmental Accounting under Accounting & Finance.

Entrepreneurship, Small Business Management, Small Enterprises Finance & Marketing under Entrepreneurship & Management.

The Department aims at Imparting education for creating and managing business enterprises in an emerging economy of NER region. Socially relevant research work, awareness programmes, etc. are also conducted from time to time.

### Brief Statement of Academic Activities

The Department has 106 students at

Master's level and 13 scholars at doctoral level. The Department conducts Seminars, Workshops, Awareness programmes, Career counselling and NET coaching. Research scholars regularly organise their presentations to share their research findings and six-monthly progress reports. Majority of scholars are now publishing their research in UGC-CARE list journals.

### Students' Profile

The students mainly come from rural Meghalaya. However, roughly 25 % students including admitted under EWS category are from other North-Eastern States. Amongst research scholars all are UGC-NET qualified and 75 % of them are with JRF

**Enrolment Capacity: M.Com.–57, Ph.D.- 04**

Degree	Male	Female	SC	ST	OBC	GEN	EWS	Meghalaya	Non-Meghalaya	Total
M.Com.	29	26	-	45	-	08	02	42	13	55
Ph.D.	02	02	-	01	-	03	-	01	03	04

**Degrees Awarded**

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.Com.	16	22	-	27	-	11	30	08	38
Ph.D.	01	01	-	-	-	02	02	-	02

**Students Awarded Ph.D. Degree**

Name of Student	Title of Thesis	Name of Supervisor & Joint Supervisor
Mitra Goswami	Intellectual Capital and Firm Performance in Indian Manufacturing Sector: An Empirical Investigation.	Dr. S.G. Maji
Rajdeep Deb	Social Entrepreneurship in Secondary Education in Assam	Prof. N.M. Panda

**Placement of Students**

Most of the passed-out students of the Department are placed in jobs like teaching, marketing, banking & insurance. Amazon, KPMG, AG, NRHM, BSNL, Govt Departments, Schools, Colleges and Banks (both National and state). Some join further studies leading to research. Few have been found joining civil services, where as some preferred to go for their own businesses.

**Research Fellowship**

UGC-NET	UGC Non-Net	Rajiv Gandhi SC/ST	ICPR Fellowship	Meritorious Fellowship	Maulana Azad Minority Fellowship	Others
03	01	-	-	-	-	-

**Fieldwork/Educational Tour of Students**

**Teacher-in-Charge** : Dr. S. Kharmawphlang & Prof. K.C. Kabra

**Places/Institutions Visited** : Jodhpur, Jaipur, Chittorgarh, Udaipur, & Jaisalmer in Rajasthan; Mangala Ispat Ltd, Jaipur; Mewar Hi-Tech Engineering Pvt Ltd; Mahaveer Green Marble Pvt. Ltd. & DNE Transformers in Udaipur.

**Duration of Tour** : 14 days (January 24 - February 6, 2020)

**Purpose of Tour** : To give exposure to the students about the operation of various industries like Tourism, Steel Manufacturing in Jaipur; Electrical equipment (Meter and Transformer) Manufacturing, Hi-Tech Engineering (Casting and Stone Crusher Making), Marble Gang Saw (Block & Slab Cutting and Polishing) in Udaipur.



## **Courses Conducted**

### **Postgraduate: M.Com.**

#### ***Semester I***

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

#### ***Semester II***

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

#### ***Semester III***

Financial Markets and Instruments, Marketing Management, Corporate Accounting, Derivatives and Risk Management, Entrepreneurship, Business Survey and Research.

#### ***Semester IV***

Management Accounting, Venture Creation, Strategic Management, International Accounting and Reporting, Security Analysis and Portfolio Management, and Management of Small Business

### **Ph.D. Courses: One semester**

Research Methodology, Management Theory & Entrepreneurship, Accounting and Finance Theory, and Literature Review in concerned area.

### **Seminars/Conferences/Workshops/Symposia/Extension Programmes (National/International)**

#### ***Organized***

The Department organized (i) a Symposium on Money Skills, A Financial Literacy Initiative of Calcutta Management Association (CMA) in the Department on August 28, 2019 in collaboration with Guwahati Management Association

(GMA). Prof. A. P. Pati delivered a lecture in the programme. (Coordinator: Prof. K. C. Kabra), (ii) a Financial Literacy Programmes in the Department on September 19, 2019 with the support from the Bombay Stock Exchange, Mumbai. (Coordinator: Prof. K. C. Kabra).

#### ***Attended***

#### **Prof. N. M. Panda**

Participated (i) in ICSSR sponsored two-day National Seminar on Industrial Development in North East India: Past, Present & Future organized by Department of Commerce & Department of History, Margherita College, and delivered the Key Note Address during March 13 – 14, 2020, (ii) as key resource person in a National Seminar organized by Talcher Autonomous College, Talcher, Odisha and delivered a talk on “Entrepreneurial Behaviour – The need of the hour” on December 24, 2019.

#### **Prof. A. P. Pati**

Presented a paper on “Transformation and mission drift in Indian microfinance” in the International conference of Business and Management in Emerging Markets, organized by Bi-Norwegian Business School, Oslo, Norway during October 18 - 19, 2019.

#### **Prof. K. C. Kabra**

Presented a paper on “Dynamics in Capital Structure Decisions: Indian Evidence” in the International Conference on Sustainable Business Management & Information Technology jointly organized by the Department of Management, Mizoram University & North Eastern Management Association during October 31 – November 01, 2019.



## **Dr. S. G. Maji**

Presented a paper on “The impacts of intellectual capital and profitability of banks in Mauritius” in the International Conference on Accounting and Finance, organized by ISERD at Port Louis during November 22-23, 2019.

## **Publications**

### **Research Papers**

#### ***Published in India***

Das, R., Panda, N. M. (2019), Credit Guarantee of Micro and Small Enterprises in Assam-An Impact Analysis, The Indian Journal of Commerce, 72(3&4): 126-139. ISSN No. 2454-6801.

Das, R., Panda, N. M. (2019), Credit Guarantee Scheme Awareness among Micro and Small Enterprises in Assam, Research Review (International Journal of Multidisciplinary), 4(11): 201-208. Nov. ISSN: 2455-3085.

Pati, A. P. (2019) Market structure and double bottom line commitments: are they aligned in Indian microfinance industry? International Journal of Rural Management (Sage), 15(1): 1-22. ISSN No: 0973-0052

Ghose, B., Kabra, K. C. (2019). Capital Structure Dynamics & Financing Imbalance: Evidence from an Emerging Economy. Emerging Economy Studies (Sage), 5(2): 103-124, ISSN: 2394-9015; eISSN: 2454-2148.

Ghose, B., Kabra, K. C. (2019). Firm Profitability and Adjustment of Capital Structure: Indian Evidence. Vision - The Journal of Business Perspective, 23(3): 297-308. <https://doi.org/10.1177/0972262919855804>. eISSN: 2249-5304.

Saha, R., Kabra, K. C. (2019). The Value Relevance of Corporate Voluntary

Disclosure: Evidence from India. The IUP Journal of Accounting Research & Audit Practices, XVIII (3): 7-27. ISSN: 0972-690X.

Topno, B., Syngkon, R. A. J. (2019). The influence of religion on entrepreneurship: A study on tribal christian entrepreneurs in Assam. International journal of business and management invention, 8(4): 1-6.

Topno, B., Syngkon, R. A. J. (2020). What determines the entrepreneurial propensity? A study on the Adivasi entrepreneurs in Assam. International journal of business and management invention, 9(1): 53-61.

Sangma, V. S., Syngkon, R. A. J. (2020). Status influence and job satisfaction of organisational members. Research review International journal of multidisciplinary, 5(1): 89-96.

Maji, S. G., Hazarika, P. (2019). Competition stability or fragility? Evidence from Indian banking Sector. SCMS Journal of Indian Management, XVI (2): 59-72.

#### ***Published Abroad***

Saha, R., Kabra, K. C. (2019). Does Corporate Governance Influence Voluntary Disclosure? Evidence from India. Indonesian Journal of Sustainability Accounting and Management (Web of Science), 3(2): 203–214. <http://dx.doi.org/10.28992/ijsam.v3i2.97>, eISSN 2597-6222.

Saha, R., Kabra, K. C. (2019). Does corporate governance influence firm performance? Evidence from India. Economics and Business Review (EBR) (Web of Science), 5(19)(4): 70-89. <https://doi.org/10.18559/ebr.2019.4.4>, eISSN: 2450-0097.

Maji, S. G. (2019). Disclosure pattern of labour practices and decent Work and its impact on corporate financial performance: evidence from Asia. *Global Business Review* (Online): 1 -17. <https://doi.org/10.1177/0972150919876523>.

Maji, S. G., Chakraborty, T. K. (2019). Heterogeneity in the intellectual capital and performance of Indian commercial banks: panel data quantile regression analysis. *Bank Parikrama: A Journal of Banking and Finance*, XLIV (1&2): 27-52

Ghosh, S. K., Maji, S.G. (2019). Profitability of banks in India: impacts of market structure and risk, *Journal of Applied Finance and Banking*, 9(6): 181-202.

### **Books/Book Chapters/Proceedings**

Maji, S. G., Bissessur, A. (2019). The Impacts of intellectual capital and competition on profitability of banks in Mauritius. *Preceedings of ISERD International Conference*, Port Louis Mauritius: 4-8.

### **Other Activities**

#### **Prof. N. M. Panda**

Delivered two lectures on “Strategic Leadership and Competency Mapping” and “Role Change: Leadership” at the training programme conducted by RTI (IA & AD), Shillong for Asst Audit Officers on December 11, 2019.

Life member of the Indian Accounting Association, Indian Commerce Association and Research Foundation, Kolkata.

**Reviewer** : Journal of Global Entrepreneurship Research (Springer).

#### **Prof. A. P. Pati**

Delivered lectures on

- (i) “Investing in the capital market:”, as resource person in the Ist MDP

program for Serving 1997 and 1999 IRS Officers organized by the School of Economics Management and Information Sciences, NEHU, Shillong at ICSSR, NERC, Shillong on April 29, 2019

- (ii) “Investing in the stock market: theories and practice”, in the Money Skills, a Financial Literacy Initiative held at NEHU, jointly organized by Guwahati Management Association (GMA) and Department of Commerce, NEHU, Shillong at NEHU, Shillong on August 28, 2019
- (iii) “Accounting for Managers” at the Department of Agri Business and Food Technology, NEHU, Tura Campus, Tura during November 21 - 23, 2019.

Chaired technical sessions at the

- (i) International Conference of Business and Management in Emerging Markets, held at Bi-Norwegian Business School, Oslo, Norway on October 18 -19, 2019
- (ii) 4<sup>th</sup> National Conference of North East India Commerce and Management Association held at Centre for Management Studies, Dibrugarh University, Dibrugarh, Assam during September 27 – 28, 2019.

Life member of the Indian Accounting Association

Founder member of North East India Commerce and Management Association (NEICMA), Department of Commerce, Gauhati University, Guwahati – 14 (Assam).

**Reviewer** : International Journal of Rural Management (Sage Publication).

#### **Prof. K. C. Kabra**

Delivered lectures as resource person on

- (i) “Research Methodology - Review of Research,” and “Reference Manager – Mendeley: Hands on Experience,” in the

ICSSR sponsored ‘Capacity Building Programme for Social Sciences Faculty Members’ at the Department of Management, Mizoram University (MZU), Aizawl on November 25, 2019.(ii) “Fundamentals of Financial Accounts,” (three lectures) in the ‘Induction Training for Newly Recruited/Promoted Inspectors of Department of Revenue, Central Board of Indirect Taxes (CBIT)’, organized at The National Academy of Customs, Indirect Taxes and Narcotics (NACIN), Zonal Campus, Shillong on May 24, 2019.

Delivered a series of lectures on (i) “Accounting for Managers” at the Department of Agri Business and Food Technology, NEHU, Tura Campus, Tura during November 7 – 12, 2019, (ii) “Goods & Services Tax (GST) and Custom Duty” at the Department of Agri Business and Food Technology, NEHU, Tura Campus, Tura during May 30 – June 02, 2019.

Co-ordinated (i) one-day Financial Literacy Program in the Department, organized by the Bombay Stock Exchange, Mumbai on September 19, 2019 (ii) one-day Symposium on Investment Opportunities in Indian Securities Markets and Opportunity & Risk Management in Commodity Markets called “Money Skills” (A Financial

Literacy Initiative) held at the Department of Commerce, organized by the Guwahati Management Association in collaboration with the Department on August 28, 2019.

Life member of the Indian Accounting Association.

Founder member of North East India Commerce and Management Association (NEICMA), Department of Commerce, Gauhati University, Guwahati – 14 (Assam).

**Reviewer** : FIIB Business Review (Sage Publication).

### **Dr. S. G. Maji**

Member of the Editorial board in the Journal of Human Resource Management, Science Publishing Group, New York, USA.

**Reviewer** : European Research on Management and Business Economics (Elsevier)

Journal of Financial Economic Policy (Emerald), Asia-Pacific Journal of Management Research and Innovation (Sage), International Journal of Indian Culture and Business Management (Inderscience), International Journal of Learning and Intellectual capital (Inderscience), Indonesian Journal of Sustainability Accounting and Management.

## DEPARTMENT OF ECONOMICS

**Head** : Prof. B. Mishra  
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**Website** : <http://nehu-economics.info>

### Faculty: 11

Designation	Name and Qualification	Specialization
<b>Professor</b>	Prof. N. Srivastav*, M.A. (Rajasthan Univ.), Ph.D. (IIT Kanpur)	Industrial Economics
	Prof. P. Nayak, M.A. (Utkal Univ.), Ph.D. (IIT Kharagpur)	Human Development, Women Empowerment
	Prof. B. Mishra, M.A. & Ph.D. (Utkal Univ.)	Public Economics, Political Economy, Fiscal and Budgetary Theory
	Prof. U.K. De, M.Phil. & Ph.D. (Univ. of Burdwan)	Applied Econometrics, Environmental and Resource Economics, Agricultural Economics, Development Economics, Empowerment of Women
	Prof. B. Panda, M.Phil. (Berhampur Univ.), Ph.D. (Utkal Univ.)	Development Economics, Act East Policy and Rural Development
	Prof. S. Umdor, M.A. & Ph.D. (NEHU)	Development Economics, North East Economy, Local Government Finance
<b>Associate Professor</b>	Dr. P.S. Suresh, M.Phil. (S.V. Univ.), Ph.D.(Univ. of Hyderabad)	Financial Economics
<b>Assistant Professor</b>	Dr. W. Tariang, M.A. & Ph.D. (NEHU)	Agriculture Economics, Gender & Poverty
	Dr. D. Nongkynrih, M.A. & Ph.D. (NEHU)	Development issues related to North East India – Employment, Unemployment
	Dr. D. W. Thangkhiew, M.A. & Ph.D. (NEHU)	Macroeconomics
	Dr. V. Pala, M.A. & Ph.D. (NEHU)	Poverty analysis, Labour market studies, intergroup disparities.

\* Superannuated on December 31, 2019

### Thrust Areas of Research

Public Economics and Local Finances, Economics of North East India with emphasis on Upland Economy, Rural Development, Human Development, Financial Economics, Environmental Economics.

### Brief Statement of Academic Activities

During the year, the Department concentrated on its Post-Graduate teaching programs and research. The faculty

members participated in a number of Regional, National and International Seminars/Conferences. One of the attainments of the Department was the awarding of annual scholarships to ten meritorious ST students of the 3rd semester batch by the EXIM bank of India for the year 2019-20. Faculties of the Department had visiting /collaborative assignments with eminent institutes like Panjabi University, Patiala and Vidya Sagar University, Medinapore, West Bengal.

### Students' Profile

**Enrolment Capacity: M.A. - 58, Ph.D. - 06**

Degree	Male	Female	SC	ST	OBC	GEN	EWS	Meghalaya	Non-Meghalaya	Total
M.A.	21	37	01	46	02	07	02	31	27	58
Ph.D.	01	05	-	05	01	-	-	02	04	06

### Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.A.	16	37	-	43	01	09	27	26	53
M.Phil.	-	01	-	-	-	01	-	01	01
Ph.D.	02	05	-	04	-	03	05	02	07

### Students Awarded Ph.D.

Sl. No	Name of Student	Title of Thesis	Name(s) of Supervisor(s)/ Joint Supervisor
1.	Mr. Manoj Kumar Talukdar	"The Economic and Social Impact of Public Expenditure: A Case Study in Assam".	Prof. B. Mishra
2.	Ms. Anika Mary Wanhun Kshiar Shadap	"Levels of Living in the North Eastern States of India: An Analysis of the Correlates and Determinants".	Dr. V. Pala
3.	Ms. Charlene M. Swer	"A Study of the Characteristics and Determinants of Rural Credit in Meghalaya".	Prof. S. Umdor
4.	Ms. Lasara M. Lyngdoh	"Rural Health Care Infrastructure and the Determinants of Access to Health Care in North-East India".	Dr. D. Nongkynrih

5.	Mr. K. Kamaljit Sing	“Subsistence Farming and the Role of Women in the Uplands: A Case Study of Nongtraï Area in Meghalaya”.	Prof. B. Panda (Supervisor) Dr. D. Das (Jt. Supervisor)
6.	Ms. Chhanda Saha Roy	“Mahatma Gandhi National Rural Employment Guarantee Act: Implementation and Evaluation in Bodoland Territorial District of Assam”.	Prof. B. Panda
7.	Ms. Pyallie D. Sangma	“Female Workforce in Agriculture in India: Trends and Determinants”.	Dr. V. Pala

### Research Fellowship: 18

CSIR-UGC-NET	UGC Non-Net	Rajiv Gandhi SC/ST	ICPR Fellowship	Meritorious Fellowship	Maulana Azad Minority Fellowship	Others
4	11	-	-	-	-	3

### Courses Conducted

#### Postgraduate: M.A.

##### *Semester I*

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

##### *Semester II*

Microeconomics II, Macroeconomics II, Techniques of Statistical Analysis, Economics of Growth & Development II.

Open Course: Budgetary Theory & Practice, Econometrics I.

##### *Semester III*

Elementary Econometrics, International Economics, Industrial Economics.

##### *Open Course*

Economics of Agriculture, Financial Economics, Economy of North-Eastern Region.

##### *Semester IV*

Fundamentals of Financial Markets, Indian Economic Problems and Policy, Environmental Economics, Economics of Social Sector, Public Economics.

### *M.Phil./Ph.D. Courses*

Research Methodology in Economics, Contemporary Economic Issues, Review of Literature

### **Publications**

#### **Research Papers**

##### *Published in India*

Basumatrary, N., Panda, B. (2019). Analysis of Development Disparity through Asset Index in Bodoland Territorial Area District of Assam: A Household Level Survey. IASSI Quarterly, 38(4): 602-19.

Basumatrary, N., Panda, B.(2019). A Study on Governance and Development in Bodoland Territorial Area Districts of Assam in India. Humanities & Social Sciences Reviews, 7(6):206-22.

Basumatary, N., Panda, B.(2019). Empirical Assessment of the Quality of Governance in Bodoland Territorial Area District of Assam in India: A Perception Based Study. Journal of Governance & Public Policy, 9(1): 12-28.

De, U. K.,Saha, B. (2020). “Trade in the

Time of COVID-19 Outbreak”, Journal of Development Policy Review, 1(1&2): 01-09. Available at <http://ojs.indrastra.com/index.php/jdpr/issue/view/39/20>.

De, U. K., Rajbongshi G.(2020). “Urbanization and Transportation: A Study of Shillong City and its Suburbs”. Journal of NEICSSR, 43, (2), 13-31. (ISSN: 0970-7913).

Hrahse, A., Umdor, S. (2019). A temporal analysis of the growth of manufacturing industries in Northeast India during 1981-82 to 2014-15. Social Change and Development, 16(2):57-77.

Nongkynrih, D. (2019). Tackling youth unemployment in North East India: Skill acquisition and employment avenues”. Man & Development, XLI (4):17-30.

Pala, V. (2019). Social exclusion and poverty in India: The case for a more decentralized approach. Indian Journal of Economics & Development, 7(4): 1-11.

Dkhar, D. S., Mishra, B., De, U. K. (2019). “Private Investment and Agricultural Output: A Case Study of Meghalaya”. International journal of basic and applied research, 9 (5): 207-220.

Nongkynrih, D., Hynniewta, S.G. (2019). An assessment of the activity status of employed youth in Meghalaya. Man and Society: A Journal of North-East Studies, XVI (2019):78-98.

### ***Published Abroad***

Maji, S.G., De, U. K., Gunardi, A. (2020). “Simultaneous Association between Quality of Corporate Environmental Performance and Financial Performance: Evidence from Select Asian Countries”. Indonesian Journal of Sustainability Accounting and Management, 4(1):DOI: <https://doi.org/10.28992/ijSAM.v4i1.206>; <https://unpas.id/index.php/>

[ijSAM/issue/view/13](https://ijSAM/issue/view/13).

Shafuda, C. P. P., De, U. K. (2020). “Government Expenditure on Human Capital and Growth in Namibia: A Time Series Analysis”. Journal of Economic Structures, 9(21): 1-14. (Springer), (ISSN: 2193-2409), <https://link.springer.com/content/pdf/10.1186/s40008-020-00196-3.pdf>.

Shafuda, C. P. P., De, U. K. (2020). “Fiscal Policy Changes in Namibia after Independence: Are Namibians Better Off under Independent Decision Making?”. Strategic Review of Southern Africa, 42(1): 69-98. (ISSN: 1013-1108), University of Pretoria. [https://www.up.ac.za/media/shared/85/Strategic%20Review/VOL%2042%20\(1\)/strategic\\_review\\_article\\_3.zp191560.pdf](https://www.up.ac.za/media/shared/85/Strategic%20Review/VOL%2042%20(1)/strategic_review_article_3.zp191560.pdf).

De, U.K., Lyngdoh, S. (2020). “Road Connectivity on Access to Healthcare in Rural Meghalaya: A Case Study”. Journal of Rural Development, 43(1): 1-35, BARD, Comilla, Bangladesh (ISSN: 1019-0341).

Shafuda, C. P. P., De, U.K. (2019). “Government Spending and Socio-Economic Development in Namibia: A Time Series Analysis”. Bank Parikrama, XLIV, (1 & 2): 128-167. BIBM, Dhaka. (ISSN: 1019-7044) [http://journal.bibm.org.bd/current\\_issue.php](http://journal.bibm.org.bd/current_issue.php).

De, U. K., Pal, M. (2019). “Impact of Climate Change on Agricultural Productivity in India’s North-Eastern Region: A Panel Data Analysis”. International Journal of Statistical Sciences, 19, 1-38, (ISSN: 1683-5603).

Dkhar, D. S., Mishra, B., De, U. K.(2019). “Private Investment and Agricultural Output: A Case Study of Meghalaya”. International Journal of Basic and Applied Research, 9, 5, 207-220, (ISSN: 2249-3352 (P) 2278-0505: (E)). <http://www.pragatipublication.com/>



assets/uploads/doc/2d578-207-220.16675.pdf.

Saji, G., Suresh, P. S. (2019). "Linkage of Size Effect and Behavioural Risk in Indian Equity Market. Romanian Journal of Economic Forecasting". 22 (3): 96-116.

#### **Books/Book Chapters/Proceedings**

De, U. K. (2020). "COVID-19 Outbreak: Integrated Production Activities and Trade Promotion as a Policy Option". In: COVID-19: Challenges for the Indian Economy - Trade and Foreign Policy Effects. AIC-EEPC (Eds.) 2020. ASEAN-India Centre (AIC) - Engineering Export Promotion Council of India (EEPC), New Delhi.

De, U. K. (2019). "Status and Empowerment of Women in India: Challenges & Opportunities", In: Women's Economic Empowerment and Inclusive

Growth, Chandan Bandyopadhyay (Ed.). New Delhi Publishers, p. 1-12. (ISBN: 978-93-88879-16-3).

Umdor, S. (2019). Role of Tribal Autonomous Councils in economic development in Sixth Schedule Areas. In: India's Scheduled Areas: Untangling Governance, Law and Politics. Varsha Bharat and Sujit Kumar (Eds.). Routledge Publications- South Asia Edition, Chapter 4, p. 63-77.

Nongkynrih, D. (2019). Potential for ecotourism circuits in Meghalaya: An exposition. In: Emerging Dynamics of Indian Tourism and Hospitality – Transformation and Innovation. U.N. Shukla and S. Kulshreshtha (Eds.). Copal Publishing Group, Uttar Pradesh, p. 225-237.

#### **Research Projects**

##### ***Completed***

<b>Title of Project</b>	<b>PI/Co-PI</b>	<b>Funding Agency</b>	<b>Amount (Rs. in lakhs)</b>
Socio-Economic Status and Working Conditions of Female Domestic Workers in Shillong.	Dr. Deigracia Nongkynrih (PI) Dr. C. J. Thomas (Co-PI)	ICSSR-NERC, Shillong	1.50
Quality of higher education in India: A study of internal and external quality assurance at the institutional level.	Dr. Deigracia Nongkynrih, Research Team Member	Centre for Policy Research in Higher Education, National University of Educational Planning and Administration (NUEPA), New Delhi	-

## **Seminars/Conferences/Symposia/ Workshops/Extension Programmes**

### **Organized**

Prof. Bhagirathi Panda organized (i) the MDP Programme for Serving 1997 and 1999 IRS Officers as Programme Director in the conference hall of ICSSR,-NERC, Shillong on April 29, 2019, (ii) the National Seminar on Shaping of Young Minds along with All India Management Association, Delhi and Guwahati Management Association, Guwahati held in the multi-use convention Hall of NEHU on August 30, 2019. (iii) a talk in collaboration with IRIS Club, NEHU on Japan-India Relation in Indo-Pacific delivered by Mr. Toshihide Ando, Deputy Chief of Mission, Embassy of Japan in India in the Conference Hall of the Vice-Chancellor, NEHU, Shillong on November 21, 2019, (iv) a talk on Indo-Japan Cultural Relations delivered by Prof. Soto from Japan in collaboration with Asian Confluence, Shillong held on November 15, 2019 in the committee room of the Dean, SEMIS, NEHU.

W. Tariang organized one-day programme on “Shaping Young Minds” organized by All India Management Association (AIMA), New Delhi in collaboration with School of Economics, Management and Information Sciences, NEHU on August 30, 2019, (Convener: Prof. B. Panda).

### **Attended**

#### **Prof. B. Mishra**

Delivered Keynote addresses (i) in a two day National Seminar on “Economic Development: Rationality vs. Populism” organized by the Department of Economics, Birala Global University, Bhubaneswar, Odisha during January 9-10, 2020, (ii) in the National Seminar on “Interdependence between State of Nature and Human Society” held by the Department of

Economics and Department of Botany, Neelamadhab Mahavidyalaya, Kantilo, Odisha on January 14, 2020.

Presented a paper on “Changing Paradigm of Economic Theories and Current trends in Economics Research” as a key speaker in XLIII Indian Social Science Congress, held at Bengaluru Central University, Bengaluru during January 17-21, 2020.

#### **Prof. U.K. De**

Delivered a key note address on “Regional Integration and Trade of India and Bangladesh with ASEAN Countries: An Empirical Investigation” in the International Seminar on Act East Policy of India and Engagement with ASEAN held at Bodoland University, Kokrajhar, Assam during January 30-31, 2020

Delivered invited talks on (i) “Does Road Connectivity Improve Access to Healthcare? - A Study in Rural Meghalaya?” in the ‘2<sup>nd</sup> International Conference on Applied Statistics (ICAS 2019)’ organized by Institute of Statistical Research and Training and also chaired a session during December 27 - 29, 2019, (ii) on “Statistical Application for the Analysis of Traffic Congestion and Its Impact in a Hill City” (Co-author: Gitumoni Rajbongshi) in the 7<sup>th</sup> International Conference on ‘Data Science and SDGs: Challenges, Opportunities and Realities’ organized by the Department of Statistics, Rajshahi University, Bangladesh and also, chaired a session during December 18-19, 2019, (iii) “Empowerment of Rural Women in Some Tribal Societies of North-East India: A Case Study” in the National Seminar on Philosophy of Tribal Culture and Religion: An Emerging Trend at Women’s College, Agartala, Tripura on February 01-02, 2020 (iv) “Climate Change and Agricultural Productivity in India’s Eastern Himalayan Region” in the ICSSR-

ERC National Conference on Challenges of Twenty First Century Management: Technology, Environment and Gender Organized by Heritage Business School and Durgapur Women's College during March 29 - 30, 2019.

Presented papers as resource person on (i) "Extreme Climatic Behaviour, its Impact and Possible Adaptation" in the Smart Cities Workshop on Sustainable Urban Development Organized by Heidelberg University, ORF, SPA and IMPRI in Collaboration with CPPR and Supported by Friedrich Naumann Foundation for Freedom at Marriot Hotel, Kochi, Kerala on September 20, 2019, (ii) "Determinants of Urban Housing Demand: An Empirical Investigation in a North-East Indian Town", in the 1st International Conference on 'Prospects and Challenges of Sustainable Development in Developing Countries' organized by Faculty of Social Science, University of Rajshahi during July 19 – 20, 2019, (iii) "Impact of Road Connectivity on Access to Healthcare in Rural Meghalaya: A Case Study of East & West Khasi Hills", in the 1st International Conference on 'Prospects and Challenges of Sustainable Development in Developing Countries' organized by Faculty of Social Science, University of Rajshahi during July 19 – 20, 2019.

Presented a paper on "Climate Change Adaptation and Diversification of Crop for Sustainable Agriculture in Eastern Himalaya" in the BER International Conference for Economists 2019 on "Inclusive Growth for Sustainable Development" held at University of Dhaka, Dhaka, Bangladesh during July 6 – 7, 2019.

### **Prof. Bhagirathi Panda**

Delivered (i) a keynote address on 'Social Entrepreneurship and Economic

Development' in the National Social Entrepreneurship Meet organized by the Agri-Incubation Centre, NEHU Tura Campus, held at Tura, Meghalaya on March 6, 2020, (ii) an invited lecture on "Act East Policy, Youth and Development of North East: A Conceptual Analysis" in the three days ICSSR-NERC Social Science Congress held at Tripura University, Agartala during March 11 – 13, 2020, (iii) a special lecture on "Ethnicity and Social Exclusion: the North-East Perspective" in the National Seminar on Development Paradigm: the emerging policy issues with special reference to North Eastern States of India organized by Department of Economics, Tripura University, Tripura during April 24-26, 2019, (iv) a special lecture on 'Entrepreneurship, Economic Development of the North East and the Act East Policy' to the students and faculties of the Department of Economics and Commerce, Martin Luther Christian University, Shillong on November 26, 2019, (v) "Rural Non-Farm Employment in India and China" in the International conference on Asia's Development Experiences in 21st Century organized jointly by Punjabi University, Patiala and Association of Asian Scholars Forum, New Delhi, held in Patiala during June 11-12, 2019.

Chaired technical sessions (i) in the National Seminar on Development Paradigm: the emerging policy issues with special reference to North Eastern States of India organized by Department of Economics, Tripura University, Tripura during April 24-26, 2019, (ii) on 'Trade, Foreign Direct Investment and Development' in the in the International conference on Asia's Development Experiences in 21st Century organized jointly by Punjabi University, Patiala and Association of Asian Scholars Forum, New Delhi, held

in Patiala during June 11-12, 2019, (iii) in the National Workshop on Massive Open Online Courses (MOOCs) organized by the MOOCs Committee, NEHU, Shillong on the May 28, 2019, (iv) on 'Change and Continuity in Policy towards North East: From Look East to Act East' in the National conference on Fifty years of India-Bangladesh Relations: Regionalism, Connectivity and the North East, organized by ICSSR-NERC, held at ICSSR-NERC, Shillong on February 14, 2020, (v) in the National Seminar on Shaping of Young Minds organized by All India Management Association, Delhi and Guwahati Management Association, Guwahati held in the multi-use convention hall of NEHU, Shillong on August 30, 2019, (vi) on Research Systems, Research Ranking and Public Policy in the Faculty Development Programme on Fostering Research Culture in Universities: Challenges, Opportunities and Ways Ahead, organized by BPS Women University, Khanpur Kalan, Sonapat, Haryana during February 19 – 20, 2020.

Presented (i) the resource person's paper on "Act East Policy and India's North East" in the MDP programme for Serving 1997 and 1999 IRS Officers organized by the School of Economics Management and Information Sciences at ICSSR-NERC, Shillong on April 29, 2019, (ii) the panelist paper on 'Research in Universities: Context and Priority' in the Faculty Development Programme on Fostering Research Culture in Universities: Challenges, Opportunities and Ways Ahead, organized by BPS Women University, Kanpur Kalan, Sonapat, Haryana on February 19, 2020.

### **Academic Collaboration**

Prof. U.K. De was a visiting scientist at the Indian Statistical Institute, Kolkata during January 09 - 27, 2020.

### **Honours/Awards/Recognitions**

Prof. Bhagirathi Panda has been elected as the vice president of the Shillong Chapter of Indian Society for Training and Development, for a period of three years (2019-2021).

### **Other Activities**

#### **Prof. B. Mishra**

Delivered 4 lectures in the 41<sup>st</sup> Orientation Programme, conducted by the UGC-Human Resource Development Centre, Sambalpur University, Sambalpur, Odisha during January 11 - 12, 2020.

Chaired a technical session in the National Conference on "Fifty Years of India-Bangladesh Relations: Regionalism, Connectivity and North-East" organized by ICSSR, NERC, Shillong on February 14, 2020.

#### **Prof. U. K. De**

Delivered an invited lecture on "Econometric Analysis of Climate Change, Agricultural Performance and Farmers' Adaptation with Reference to India's North East" at IIPS, Mumbai on May 6, 2019.

#### **Prof. B. Panda**

Moderated a technical session on 'Social Media Network: Exploring the potentiality for a Management Graduate' in the Annual HR Conclave entitled, "The Rising Social Media Networks and Employment Relationship" held at Tura and organized by the Department of Management, NEHU, Tura Campus, Meghalaya on May 11, 2019.

Acted as discussant in the technical session on Employment, Tourism and Development, in the International Conference on Asia's Development Experiences in 21st Century organized jointly by Punjabi University, Patiala and

Association of Asian Scholars Forum, New Delhi, held in Patiala during June 11-2, 2019.

Attended as a member a meeting of the Advisory Committee of the ICSSR Research Programme on “Agrarian Crisis in the Hill Regions of Manipur: Land Systems and Economic Change” held at the Department of Economics, Manipur University on April 20, 2019.

Reviewer: Millennial Asia, SAGE, Delhi; NEHU Journal, NEHU, Shillong and Assam Economic Journal (ISSN 0970-7530), DU, Dibrugarh.

#### **Prof. S. Umdor**

Presented two lectures on Institutional Challenges to Economic Development in the Tribal Areas of Northeast India in the refresher course on Tribal Studies organized by UGC-HRDC, NEHU during November 19 – 20, 2019.

#### **Dr. D. W.Thangkhiew**

Contributed to the national repository of economic resources for the use of teachers in Higher Education (National Resource Centre for Education) in a Workshop on Economics Resources for Teachers in Higher Education held at NIEPA, New

Delhi during January 13 -14, 2020.

#### **Dr. Deigracia Nongkynrih**

Delivered a lecture on Women and Work in a Refresher Course organized by UGC-HRDC, NEHU, Shillong during June 17–19, 2019.

Participated at the (i) Workshop on Massive Online Open Courses on Adoption, Promotion and Development of MOOCs through SWAYAM platform, Organized by NEHU, Shillong during May 28 – 29, 2019, (ii) North-East Regional Training Programmeme for Administrators of Plagiarism Detection Software (PDS) URKUND), organized by Central Library, NEHU and INFLIBNET Centre, Gandhinagar held at NEHU, Shillong on August 23, 2019.

Chaired a session on “Understanding the Tribes in the Region” at the Two-day National Seminar on “The Changing Dynamics of Tribal Society in India With Special Reference to North Eastern Region” Organized by Department of Sociology and IQAC, Shillong College during November 05-06, 2019.

#### **Dr. Veronica Pala**

Member of the Doctoral Committee, Martin Luther Christian University, Shillong; Resource person in the Research Methodology Workshop conducted by Martin Luther Christian University, Shillong during January 13-14, 2020.

## DEPARTMENT OF JOURNALISM AND MASS COMMUNICATION

**Head** : Dr. Kamaljit Chirom  
**Telephone** : 0364 - 2723401 (O)  
**E-mail** : hodjmc@nehu.ac.in

**Faculty: 03**

Designation	Name and Qualification	Specialization
<b>Assistant Professor</b>	Dr. Kamaljit Chirom, M.A. & Ph.D. (MU)	Film Studies, Communication Research, Culture and Communication.
	Dr. Barath N, M.Phil. & Ph.D. (HCU)	Media and Culture Studies, Media and Minorities, Development Communication
	Ms. Karen L. Donoghue, M.A. (SMU)	Television Studies, New Media, Media Representation

### Thrust Areas of Research

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

### Brief Statement of Academic

The Department is running the M.A. (Journalism and Mass Communication)

and the first batch of students passed out in 2016. Another progress the Department made in the last one year is that the Ph.D. course has been started I 2019. The Department conducted many activities during 2018-19 period including photo exhibition programmes, and film screening and interaction programme.

### Students' Profile

**Enrolment Capacity: M.A. - 20, Ph.D. - 05**

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.A.	11	10	01	13	-	06	11	10	21*
Ph.D.	02	03	-	02	-	01	03	02	05

### Degree Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.A.	11	08	-	13	-	04	13	06	19*

\* International students (Sri Lanka) - 02 (Female)

**Seminars/Conferences/Workshops/  
Symposia/Extension Programmes  
(National/International)**

***Attended***

**Dr. Kamaljit Chirom**

Presented a paper on “Literature and Cinema: A Look at Manipuri Cinema” at the Annual Conference of Bangladesh Manipuri Sahitya Sangsad at Manipuri Cultural Complex, Kamalgang (Moulvibazar), Bangladesh on December 27, 2019.

**Publications**

**Research Papers**

***Published in India***

Barath, N. (2019). Visual Turn of North-East as an Argumentative Necessity

for The Need of New Disciplinary Trajectories. *Remarking An Analisation*, 4(9):6-10.

**Other Activities**

**Dr. Kamaljit Chirom**

Co-ordinated (i) Film Screening and Interaction Programme of the award-winning Manipuri film *Laman Ama* on September 24, 2019, (ii) a Photo Exhibition in the Department of Journalism & Mass Communication during February 27 - 28, 2020.

**Karen L. Donoghue**

Delivered a lecture on “Development of Video Content” in a Workshop on MOOCs organized by UGC-HRDC, NEHU on December 05, 2019.



## DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE

**Head** : Prof. Bikika Laloo  
**Telephone** : +91 8416076564 (M)  
**E-mail** : mosesmnaga@gmail.com

**Faculty: 06**

Designation	Name and Qualification	Specialization
<b>Professor</b>	Prof. Moses Mark Naga, M. LISc. & Ph.D. (NEHU)	Information literacy, information communication, indigenous knowledge on herbal traditional medicinal practices of North-east India, global perspective on Library and Information Science education.
	Prof. Bikika Laloo, M. LISc. (NEHU), Ph.D. (Gauhati Univ.)	User Studies, Collection Development, Library and Information Science Education, Professional Development Activities in Librarianship, Documentation of Indigenous Knowledge
<b>Associate Professor</b>	Dr. Paokholun Hangsing, M. LISc. (Univ.of Delhi), Ph.D. (NEHU)	Media Content Analysis, Digital Libraries, Library Consortia, LIS Education and Professional Competencies
<b>Assistant Professor</b>	Dr. Jacqueline Jeane Thabah, M. LISc. & Ph.D. (NEHU)	Knowledge Organisation and Professional competencies
	Dr. Jiarlimon Khongtim, M. LISc. & Ph.D. (NEHU)	Computer Applications, Research Methodology.
	Dr. S. Ravikumar, M. LISc. (Univ. of Madras), Ph.D. (Mizoram Univ.)	Scientometrics, Information Retrieval, Library Software

### Thrust Areas of Research

Information Storage and Retrieval, Information Management, Users Needs and their Information Seeking Behaviour, Computer Applications and Information Technology, Digital Libraries, Knowledge: Structure and Development, Measurement & Effectiveness of Information Services, utilization of Information Resources both in Urban and Rural Settings of North East India.

The Department has been regularly revising

and updating the syllabus keeping pace with the rapid developments of information technology (IT) and its crucial role in the library and information profession. The last revision of the syllabus was made in 2003. Partial revision and introduction of two new papers was made in 2008. Since 1986 more than 500 students have already got M. LISc. Degree from the Department and about 15 students have been awarded the Ph.D. Degree. Many of the students who passed out from this Department are well placed

and working in many senior professional positions in the university libraries as the University Librarians, College Libraries, State Libraries, R&D Institutes, Private sectors, Lecturers in the University, IIM, etc.

The Department continuously undertakes the task of improving the professional competence of the library and information personnel of the region in particular. This has been achieved through Seminars, Workshops and Refresher Courses conducted from time

to time by the Department.

### **Brief Statement of Academic Activities**

Faculty Members and Research Scholars of the Department published Research Papers and attended the Seminars and Conferences. The Department also organized One Day Workshop in collaboration with National Digital Library of India in August 2019. The Department has produced three Ph.D. s during the year 2019 – 2020.

### **Students' Profile**

**Enrolment Capacity: M. LISc. -30, Ph.D. - 08**

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M. LISc.	09	21	-	29	-	01	23	07	30
Ph.D.	05	03	-	04	01	03	03	05	08

### **Degrees Awarded**

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M. LISc.	08	21		28		01	22	07	29
Ph.D.	02	01	-	-	-	-	02	01	03*

\* International student(China)- 01 (Male)

### **Students Awarded PhD Degree**

Name of Student	Title of Thesis	Name of Supervisor
Ms. Prida Ariani Ambar Astuti	"The Cognitive Effects of Social Media Content on University Students: A Case Study of Grade 'A' University Departments in Jakarta "	Dr. P. Hangsing
Mr. Mebandabha Rabon	"Awareness about Cyber Crimes through Social Networking Sites: A Comparative Study of Master Degree Students of NEHU and Assam University."	Prof. Bikika Laloo
Mr. Subash Subedi Sharma	"Accuracy and Credibility of Information in Financial Newspaper: Review of Stock Recommendations".	Dr. S. Ravikumar

## **Placement of Students**

1. Nirmali Chakraborty, Librarian, Sipajar College, Assam, (Date of joining: January 13, 2020).
2. Adriana Shanpru-Library Assitant, Mendipathar College, North Garo Hills (Date of joining: June 1, 2019).
3. Lanhiamlun - Library Assistant, Martin Luther Christian University, Shillong (Date of joining: October 1, 2019).
4. Antonio Marak -Assistant Librarian, NERIE, Shillong.(Date of joining: September 9, 2019).
5. Rishi Kumar Sarki -Semi Professional Assistant, NERIE, Shillong.(Date of joining: July 29, 2019).
6. Amos Pungthar -Librarian, Immanuel College, Dimapur.(Date of joining: February 1, 2020).
7. ChanlangBareh - Assistant Librarian, Nagaland University.(Date of joining: March 12, 2020).
8. Brandon Lytan -Deputy Librarian, Kiang Nongbah College, Jowai.(Date of joining: March 16, 2020).

## **Fieldwork/Educational Tour of Students**

**Teacher-in-Charge** : Dr. J. Khongtim

**Places/Institutions Visited** : Kolkata and Kharagpur

**Duration of Tour** : 11 days (January 18 – 28, 2020)

**Purpose of Tour** :The study tour is part of the regular academic programme. To earn full credit in this paper, students are required to visit various types of Libraries, get exposure to the different library environments and acquire knowledge about those libraries. Students are also expected to collect vital information on the activities performed; 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. During the tour the students visited the following places: University of Calcutta Library, British Council Library, The National Library, Central Reference Library, American Information Resource Centre, Indian Statistical Institute (ISI) Library, State Central Library, Indian Institute of Management (IIM) Library, Calcutta, Raja Rammohun Roy Library Foundation, Indian Institute of Technology (IIT) Library, Kharagpur

## **Courses Conducted**

### **Postgraduate: M. LISc.**

#### ***Semester I***

Foundation 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 Organization II (Theory), Knowledge Organization II (Practice), Library Software Packages (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.

## **M.Phil. / Ph.D.**

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

## **Seminars/Conferences/Workshops/ Symposia/Extension Programmes (National/International)**

### ***Attended***

#### **Prof. Moses M. Naga**

Presented papers on (i) “Documentation of herbal medicinal knowledge on *Oroxylum indicum* as used by the Poumai Nagas”, at the National Seminar on “Effective protection of traditional knowledge and cultural expressions: National and community experiences” organized by National Law University and Judicial Academy, Guwahati, Assam in association with North East Centre, New Delhi, sponsored by Indian Council of Social Science Research (ICSSR) during May 3-4, 2019, (ii) “Social media awareness and consumption patterns among the students of St. Anthony’s College and St. Edmund’ College of Shillong: A comparative study” at the National Seminar on “Social media and librarianship: Connecting the communities” held at Mizoram University and also chaired a technical session during February 26 - 28, 2020.

Delivered a lecture on ‘Role of public libraries in community information service and information literacy’ at the DLISc, Assam University, Silchar on August 28, 2019.

Dr. Jacqueline J. Thabah

Attended (i) Awareness programme on “National Digital Library of India and basic

introduction about IDR” organized by the Department of Library and Information Science, NEHU in collaboration with IIT, Guwahati on August 9, 2019, (ii) a one-day “North-East Regional Training Programme for Administrators of Plagiarism Detection Software (PDS) URKUND” jointly organized by Central Library, NEHU, Shillong and INFLIBNET Centre, Gandhinagar under the aegis of MHRD, GOI on August 23, 2019.

Presented a paper on “Documentation of Indigenous Knowledge on Medicinal Plants in West Khasi Hills of Meghalaya” by Dr. Jacqueline J. Thabah and Betbhalin Lyngdoh at National Seminar on “The Changing Dynamics of Tribal Society in India with special reference to North-East India, organized by the Department of Sociology, Shillong College, Shillong during November 05 – 06, 2019.

#### **Dr. Jiarlimon Khongtim**

Attended (i) a one-day National Workshop on “Book Writing”, organized by NEIGHRIMS on June 27, 2019, (ii) Awareness programme on “National Digital Library of India and basic introduction about IDR”, organized by the Department of Library and Information Science, NEHU in collaboration with IIT, Guwahati on August 9, 2019, (iii) a one-day “North-East Regional Training Programme for Administrators of Plagiarism Detection Software (PDS) URKUND”, organized jointly by Central Library, NEHU, Shillong and INFLIBNET Centre, Gandhinagar under the aegis of MHRD, GOI on August 23, 2019.

#### **Dr. S. Ravikumar**

Presented a paper on (i) “A comparative

study between Omeka, DSpace and E-Print: A Special reference with Plugins” (with H J Hazarika) in the 12<sup>th</sup> International Caliber, 2019 held at INFLIBNET Centre, Gandhinagar on December 28 - 30, 2019.

## **Publications**

### **Research Papers**

#### ***Published in India***

Donoghue, K. L., Hangsing, P. (2019). Northeast on National Media: Issues of Representation *Ajanta*, 8(1): 14-20.

Thabab, J. J., Lyngdoh, B. (2019). Redefining academic libraries in the ICT era: A case study of Shillong College Library. *Echoes from the Hills*, 3(1):95-105

Ravikumar, S., Barooah, P. K., Hazarika, H. J. (2020). The Intellectual Structure of Solar Cell Research: Bibliometric Study of Most Cited Works. *KIIT Journal of Library and Information Management*, 7 (1): 37-47.

Hazarika, H. J., Ravikumar, S. (2019). Implementation of Radio - Frequency Identification System in Fakiragram College: A Practical Approach. *Library Herald*, 57 (2): 205-221.

Hazarika, H. J., Handique, A., Ravikumar, S. (2020). DICOM-based medical image repository using DSpace. *Collection and Curation*, 39 (2).

Hazarika, H. J., Ravikumar, S. (2020). Implementation and integration of radio-frequency identification system: a practical approach, *Library Hi Tech News* 36 (4): 13-16.

#### ***Published Abroad***

Chen, C., Naga, M. M. (2019). Reform on the model of Library and Information Science adults' education in Mainland

China, *Advances in Social Science, Education and Humanities Research*, 346: 583-586.

Chen, C., Naga, M. M. (2019). A survey on the evaluation of competency skills required for library and information professionals of public libraries in Mainland China, paper published in proceedings of ISER 220th International Conference, Bangkok, Thailand.

Chen, C., Naga, M. M. (2019). An analysis of Library and Information Science job market in Mainland China: Content analysis of job vacancy advertisements of library professionals. *International Journal of Scientific & Technology Research*, 8(12): 216-223.

Lyttan, B., Laloo, B. (2020) Equitable access to information in libraries: A predicament for transgender people, *Journal of Access Services*, 17(1): 46-64, DOI: 10.1080/15367967.2019.1671850

Guite, F., Hangsing, P. (2019) Identifying the Decision Makers of Women Particularly in Child Bearing and Sterilization among the Rural Women in the Villages of Kangpokpi District, Manipur, India. *Library Philosophy and Practice*, 1-11, 2019

#### **Books/Book Chapters/Proceedings**

Nongkseh, G., Naga, M. M. (2020). Social media awareness and consumption patterns among the students of St. Anthony's College and St. Edmund' College of Shillong: A comparative study. In: *Social media and librarianship: Connecting the communities*. P. Rath & A. Kumar (Eds.) New Delhi, India: Today & Tomorrow's Printers and Publishers, 57-69.

Poumai, J., Naga, M. M. (2019).

Documentation of herbal medicinal knowledge on *Oroxylum Indicum* as used by the Poumai Nagas".in proceedings of the National Seminar on "Effective protection of traditional knowledge and cultural expressions: National and community experiences" organized by National Law University and Judicial Academy, Guwahati, Assam in association with North East Centre, New Delhi, during May 03 - 04, 2019.

### **Other Activities**

#### **Prof. Moses Mark Naga**

Attended (i) Academic Council meeting of the Central University of Tamil Nadu, Thiruvavur, Tamil Nadu as an External Member on May 20, 2019, (ii) Syllabus revision committee meeting, DLISc. as the External Member of Manipur University, Imphal on May 27, 2019, (iii) Meeting of the Board of Post Graduate Studies (BPGS) in Library and Information Science as an

External Member, Assam University, Silchar on August 28, 2019, (iv) Academic Council meeting of the Central University of Tamil Nadu, Thiruvavur, Tamil Nadu as an External Member on February 19, 2020.

#### **Prof. Bikika Laloo**

Delivered two lectures on the topic 'Exploring the Information Gateways to North East India's Folklore- Potential and Perspectives, 'Refresher course conducted by the Department of Cultural and Creative Studies on March 28, 2019.

Chaired a session in the Language Fest organized by the Department of Linguistics, NEHU on October 25, 2019.

#### **Dr. Jacqueline JeaneThabah**

Delivered lectures on "Documentation of Indigenous Knowledge (a) with reference to medicinal plants; (b) Khasi's traditional attire" at the Refresher Course on "Khasi Language, Literature and Culture", UGC-HRDC, NEHU Shillong during November 11 - 24, 2019.

## DEPARTMENT OF MANAGEMENT (TURA CAMPUS)

**Head** : Prof. J. U. Ahmed (up to November 10, 2019)  
           Prof. K. C. Biswal (w.e.f. November 11, 2019)  
**Telephone** : 03651 - 224566(O) / +91 8414077901 (M)  
**E-mail** : kcbiswal@rediffmail.com, hodmng@nehu.ac.in

### Faculty: 10

Designation	Name and Qualification	Specialization
<b>Professor</b>	Prof. G. Singaiah, M.Com. (Andhra Univ.), Ph.D. (Utkal Univ.)	Cross Cultural Management, Marketing and Entrepreneurship Development
	Prof. J. U. Ahmed, M.Com. & Ph.D. (Assam Univ.)	Finance, Banking and Statistical Methods
	Prof. K. C. Biswal, M.Com. & Ph.D. (Berhampur Univ.)	Accounting and Finance, Management Information System and E-commerce, Micro-finance
<b>Associate Professor</b>	Dr. A. Bhattacharjee, M.Com. & Ph.D. (Gauhati Univ.)	Human Resource Management and Development, Behavioural Studies, Rural Marketing.
<b>Assistant Professor</b>	Dr. D. Bhagat, M.B.A. (Assam Agri Univ.), Ph.D. (Gauhati Univ.)	Agribusiness Management, Marketing, Supply Chain Management
	Dr. Kh. Devananda Singh, M.B.A. (IGNOU), Ph.D. (Manipur Univ.)	Entrepreneurship, Project Management and Institutional Finance
	Dr. S. B. A. Mazumder, M.B.A. & Ph.D. (Assam Univ.)	Marketing and Finance
	Dr. S. L. S. Akoijam, M.B.A. (Amity Univ.), Ph.D. (Manipur Univ.)	Marketing, Strategy and Tourism
	Dr. Thrinadha Rao Bandaru, M.B.A. & Ph.D. (Pondicherry Univ.)	Tourism, Human Resource Management and International Business
	Dr. Bimal Deb Nath, M.B.A. (Devi Ahilya Univ.), Ph.D. (NEHU)	Information Technology, E-commerce and Data analysis



### Thrust Areas of Research

Entrepreneurship development, small business management, behavioural studies, cross-cultural management, International business, tourism management, supply chain management, micro-finance and rural credit management, business process re-engineering, agri-business, food security, e-commerce, corporate finance, bank finance, portfolio management, information technology and social marketing.

### Brief Statement of Academic Activities

During the period under report, 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 organized Seminars/Workshop/Symposiums/Conferences/MDPs and participated in FDPs, Refresher Courses, and Orientation Programmes. To boost the supply chain management education in the region, the North-Eastern Region Chapter of the Institute for Supply Management (NERC-ISM): An affiliate of ISM (USA), which was started in the Department on April 05, 2013, has carried out its activities by increasing its membership and partners with Dr. Deepak Bhagat as President. The Department has also published two issues of the International Journal of Applied Management Research with Prof. J. U. Ahmed as Chief Editor and Dr. Deepak Bhagat as Managing Editor.

### Students' Profile

**Enrolment Capacity: M.B.A.- 66, Ph.D. - 10**

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.B.A. (GEN)	18	12	00	10	09	11	09	21	30
M.B.A. (Services)	03	04	00	03	01	03	03	04	07
Ph.D.	04	06	01	04	02	03	07	03	10

### Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.B.A. (GEN)	18	14	04	06	-	19	07	25	32
M.B.A. (Services)	05	06	02	04	-	05	04	07	11
Ph.D.	02	01	01	01	-	01	-	-	03

### Students Awarded PhD Degree

Name of Student	Title of Thesis	Name(s) of Supervisor (s)/ Joint Supervisor
Mr. Dan A. Sangma	Role of Support Institutions for Micro-enterprise Development in Garo Hills Districts of Meghalaya”	Dr. Kh. Devananda Singh.
Mr. Mridul Barman	A Study on Local Haat System in the Garo Hills Districts of Meghalaya	Dr. A. Bhattacharjee
Ms. Sahnaj Rahmatulla Laskar	Perspectives and Practices of Social Marketing: A study of West Garo Hills Community Resource Management Society and BAKDIL in West Garo Hills, Meghalaya	Prof. G.Singaiiah

### Placement of Students

Name of student	Department	Date of selection	Posts held	Place of work
Kalyanee Rajkhowa	Management	September 13, 2019	TSM (Rural) and Store Manager	Bharti Airtel Ltd
Suraj Pokhrel	Management	September 13, 2019	TSM (Rural) and Store Manager	Bharti Airtel Ltd
Mohan Sharma	Management	September 13, 2019	TSM (Rural) and Store Manager	Bharti Airtel Ltd
Kalpajit Baruah	Management	February 21, 2020	Executive in Grade H2	IIFCO-TOKIO General Insurance

### Fieldwork/Educational Tour of Students

**Teacher-in-Charge** :Dr.Abhigyan Bhattacharjee

**Places/Institutions Visited:** Shimla, New Delhi

**Duration of Tour** :11 days (January 26 –February 05, 2020)

**Purpose of Tour** :Industrial Tour for practical exposure to the MBA First Semester Students

### Research Fellowship

**Rajiv Gandhi (SC/ST): 02**

### Courses Conducted

**Postgraduate: M.B.A. (General) and MBA (Service Management)**

### M.B.A. (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 specialization groups are to be pursued. The dual specialization courses are based on four functional areas of management, viz., Financial Management, Marketing Management, Human Resource Management and Agri-Business Management.

### **M.B.A. (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 specialization 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.

### **Ph.D. Courses**

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

### **Seminars/Conferences/Workshops/ Symposia/Extension Programmemes**

#### ***Organized***

The Department organized (i) SYNERGOS' 2019 an HR Conclave of Department of Management, NEHU, Tura Campus on "The Rising Social Media Networks and Employment Relationship" May 11, 2019 (Convener: Dr Abhigyan Bhattacharjee), (ii) Faculty Development Programme organized sponsored by Entrepreneurship Development Institute of India, Guwahati Regional Office was organized during March 02- 14, 2020 (Coordinator: Dr. Abhigyan Bhattacharjee), (iii) Refresher Course in Business Studies sponsored by UGC-Human Resource Development Centre, NEHU was conducted at Department of Management, NEHU, Tura Campus during November 18 – December 01, 2019 (Coordinator: Dr. Deepak Bhagat; Joint- Coordinator: Dr. S. L. S. Akoijam), (iv) Case Study Workshop was organized by Department of Management, NEHU,

Tura Campus during June 03-04, 2019 (Coordinator: Dr. Deepak Bhagat), (v) Research Methodology Workshop was organized by Department of Management, NEHU, Tura Campus with Sampling and Official Statistics Unit (SOSU), Indian Statistical Institute, Kolkata during February 24 - 28, 2020 (Coordinator: Dr. A. Bhattacharjee), (vi) Research Methodology Workshop was organized by Department of Management, NEHU, Tura Campus during May 13 - 17, 2019 (Coordinator: Dr. Deepak Bhagat), (vii) Case Study Workshop for MBA 1<sup>st</sup> & 3<sup>rd</sup> semester students and Ph.D. scholars of the Department from November 22 -December 04, 2019 (Co-ordinator: Dr.Thrinadha Rao Bandaru).

#### ***Attended***

#### **Prof. J. U. Ahmed**

Presented papers on (i) "A Study on Perceived Customers' Satisfaction Towards Innovative Services of Meghalaya Rural Bank" in the International Conference on Sustainable Business Management and Information Technology, organized by North Eastern Management Association in collaboration with Department of Management, Mizoram University during October 31-November 01,2019 (Co-authored with Chelsea Ch. Momin); (ii) "Competency Mapping of Private Sector Bank Employees: A Study in HDFC Bank Ltd. Operating in Meghalaya" in the International Conference on Sustainable Business Management and Information Technology, organized by North Eastern Management Association in collaboration with Department of Management, Mizoram University during October 31 – November 01, 2019 (Co-author: D. Chakroborty), (iii) "Customer Relationship Management in Banking Sector: A Review of Literature" in the National Seminar on New Paradigm in

Commerce and Management: Opportunities and Challenges, organized by School of Business, Kaziranga University, Jorhat, Assam during April 05-06, 2019 (Co-author: M. Sultana), (iii) “Entrepreneurial Orientation: Its Components, Measurements and Effects on Performance: A Review of Literature” in the National Seminar on New Paradigm in Commerce and Management: Opportunities and Challenges, organized by School of Business, Kaziranga University, Jorhat, Assam during April 05-06, 2019 (Co-author: A.H.T. Shamsan).

#### **Prof. K. C. Biswal**

Presented papers on (i) “Entrepreneurship in Tourism Industry in India” in International Seminar on “entrepreneurship challenges in 21st century organized by KIIT Deemed to be University, Bhubaneswar and 40<sup>th</sup> All Odisha Commerce Conference on December 20 - 21, 2019, (Co-author: Sahil Raj), (ii) “An Analysis of Trade Between India and USA at the 72nd All India Commerce Conference of the Indian Commerce Association and International Seminar organized by KIIT Deemed to be University, Bhubaneswar in the technical session Global Business: Emerging Issues and challenges during December 22 - 24, 2019 (Co-author: Dikki N. Marak), (iii) “A Study on the Potentiality of Jackfruit in contributing towards Global Business and National Income in India” at the 72nd All India Commerce Conference of the Indian Commerce Association and International Seminar organized by KIIT Deemed to be University, Bhubaneswar in the technical session Global Business: Emerging Issues and challenges during December 22 - 24, 2019 (Co-author: J. T. Sangma).

#### **Dr. Abhigyan Bhattacharjee**

Presented a paper on “Community Based Tourism through Village Panchayat

Intervention in Assam: The Case of Rangsapara Village” in the International Conference on ‘Sustainable Business Management and Information Technology’ jointly organized by Department of Management, Mizoram University and North Eastern Management Association (NEMA) during October 31 - November 01, 2019.

#### **Dr. Deepak Bhagat**

Presented a paper on (i) “Growth and Instability in Area, Production and Productivity of Spices Produced in Meghalaya” in Regional Seminar of Indian Society of Agricultural Economics (ISAE) on Perspectives of Horti- Business in Development of North Eastern Region, organized by College of Horticulture and Forestry, Central Agricultural University (Imphal), Pasighat during February 24-25, 2020, (ii) “Gender Dynamics of Work Participation in Patrilineal and Matrilineal Societies: Evidences from Rural North-East India” in National Seminar on New Paradigms of Commerce and Management: Opportunities and Challenges, organized by Kaziranga University, Jorhat, Assam during April 05 - 06, 2019.

#### **Dr. Sunildro. L. S. Akoijam**

Presented a paper on “A Study on Competitiveness of Sualkuchi Silk Products of Assam” in the International Conference on Sustainable Business Management and Information Technology, organized by North Eastern Management Association (NEMA) and Mizoram University during November 31 - December 01, 2019.

#### **Dr. Sultana B. A. Mazumder**

Presented papers on (i) “End-use of Worker’s remittances in Cachar District in Assam” in an International Conference on ‘Sustainable Business Management and Information

Technology’ organized by Department of Management, Mizoram University & North Eastern Management Association (NEMA) during October 31 - November 01, 2019, (ii) “Migration from Assam and the pattern of consumption of the remittances” in the International Conference on Management, Economics and Social Science (ICMESS)’ organized by Research for a Goa during December 30 - 31, 2019, (iii) “Remittances and Household Sector Development” in the third International Conference on ‘Global Business and Social Issues, 2020’ organized by Department of Business Administration, Assam University in association with Youth Empowerment and Research Association (YEAR), Varanasi during January 10 - 11, 2020.

### **Dr. Thrinadha Rao Bandaru**

Presented papers on (i) Virtual and real experience of tourists in Pondicherry destination: a comparative study ( in absentia) at 5<sup>th</sup> International Tourism Research Conference organized by Tourism Study Programme, Department of Economics, Faculty of Arts, University of Colombo on September 28, 2019 (Co-author : Dr. Venkata Rao Yedla); (ii) Need of community-based tourism for sustaining the heritage site at Vadagokuri (Bhaitbari) at the National Seminar on Archaeology of Northeast India: Retrospect and Prospect organized by Department of History and Archaeology, NEHU, Tura Campus, Tura, Meghalaya during August 26 -28, 2019 (Co-author : Dr. Gino A. Sangma).

### **Publications**

#### **Research Papers**

##### ***Published in India***

Singaiiah, G. (2020). Understanding Tourist Behaviour: A Critical Perspective Tourism Innovations. International Journal of Indian Tourism

and Hospitality Congress (ITHC) 10, (1): ISSN No. 2278-8379.

Singaiiah, G. (2019). Impact of Responsible Tourism on Socio-Economic Sustainability with Special Reference to Mawlynnong Village in Meghalaya. Restaurant Business, 118 (12): ISSN:0097-8043.

Ahmed, J. U., Sultana, M. (2019), Issues Relating to Customer Relationship Management in Banking Sector: An Exploration. International Journal of Applied Management Research, 5 (1 & 2):102-112.

Ahmed, J. U. (2019), Behavioural Finance as a New Paradigm in Finance: A Synopsis of its Related Themes and Mediated Biases. International Journal of Applied Management Research, 5(1 & 2):78-87.

Biswal, K. C., Narzary, D. (2019). Recent trends in entrepreneurship (Start-Ups) development with reference to North East-India. Orissa Journal of Commerce, 40 (3): 75-89.

Singh, M., Bhattacharjee, A. (2020). A study to measure job satisfaction among academicians using Herzberg’s theory in the context of northeast India, Global BusinessReview,21(1):197–218.<https://doi.org/10.1177/0972150918816413>

Debnath, S., Bhattacharjee, A.(2019). Users’ perspectives of Human Resource Information System (HRIS) and its applications in higher education institutions (HEIS) of north east India. Think India Journal, VicharNyas Foundation, 22 (14): 9897-9910.

Debnath, S., Bhattacharjee, A. (2019). Uses and Applications of Computerized Human Resource Information System (HRIS) in the Central Universities of

North-East India. *Journal of the Gujarat Research Society*, 21(11): 517-526.

Bhagawati, A., Banerjee, A.K., Bhattacharjee, A. (2019). The side effects of financial indicators and analyses of bank finance under Nayak committee method for a small-scale industry, *International Journal of Research in Social Sciences*, 9 [4(1)]: 543-552.

Tiwari, S., Bhagat, D. (2020). The Role of Emotional Intelligence in Health Care Setting. *Optimization: Journal of Research in Management*, 12(1): 64-72.

Changde Catherine, L. H., Bhagat, D. (2019). Agribusiness Prospects and Challenges of Black Rice Produced in North- East India. *Journal of Rice Research*, 12(1): 60-66.

Marak, T. R., Bhagat, D., Borah, S. (2019). Physical Characteristics and Physical Fitness of Indigenous Garo Tea Plucking Women: A Study in Small Tea Plantations of Meghalaya (India). *International Journal of Current Microbiology and Applied Sciences*, 8(4), 1472-1481.

Marak, T. R., Bhagat, D., Borah, S. (2020). Musculo skeletal Disorders of Garo Women Workers Engaged in Tea-Plucking Activity: An Ergonomic Analysis. *Indian Journal of Occupational and Environmental Medicine*, 24 (2): 60-65.

Sangma, D. A., Singh, K. D. (2019). Enterprise development training programmes in Garo Hills Districts of Meghalaya –an analysis. *International Journal of Applied Management Research*, 5 (I & II): 25-34.

Singh, T. S., Akoijam, S. L.S. (2020). Supply Chain Management of Food Processing Industry in Manipur:

Challenges and Perspectives. *International Journal on Emerging Technologies*, 11(1): 36-42.

Akoijam, S. L. S. (2019). Challenges to Rural Livelihood Practices: A comparative study among Garos & Non-Garos in West Garo Hills District of Meghalaya, India. *International Journal on Emerging Technologies*, 10(4): 283-288.

Akoijam, S. L.S. (2019). Socio Economic Impact of Weekly Markets: An assessment of farmers in Garo Hills of Meghalaya. *International Journal of Recent Technology and Engineering*, 8 (3): 8331-8337.

Akoijam, S. L.S. (2019). Challenges in Talent Acquisition and Retention: A Study of Non-Profit Sector in India. *International Journal of Scientific and Technology Research*, 8 (9): 1743-1748.

Mazumder, S. B., Nath, B. D. (2020). Determinants of consumption of remittances by the families of the International migrants in Assam. *International journal of scientific & technology research*, 9(1): 1630-1636.

Thrinadha Rao, B., Venkata Rao, Y. (2019). Influence of organizational motivation on performance of Andhra Pradesh tourism development corporation limited, Visakhapatnam division. *International Journal of Applied Management Research*, 5(I&II):137-152.

Dey, M., Debnath, B.(2020). Demographic Determinants of Top Management Team of SMEs in adoption and use of Ecommerce in North East India, *Studies in Indian Place Names*, 40(50): 2575 – 2588.

Dey, M., Debnath, B.(2020). Factors Affecting Adoption of E-Commerce in



Small and Medium Enterprises in India, Test Engineering Management, ISSN: 0193-4120, 11195 – 11202.

Sarkar, L., Debnath, B.(2020). Key Factors Influencing Smes To Use E-Marketing. Assam, Our Heritage: 68(1), 1780-1787.

Sarkar, L., Debnath, B.(2020).A Model of E-Marketing for Growth of Small and Medium Enterprises (SMEs) in North-East India, International Journal of Advanced Science and Technology, 29, (5): 1595-1607.

### **Books/Book Chapters/Proceedings**

Sharma, L. S., Akoijam, L.S.S, Ahmed, J. U. and Singh, W.C. (2019). Sustainability and Business Management. Excel India Publisher, New Delhi, ISBN:978-93-8823-78-71.

Biswal, K.C. editors.(2019). Sustainable Entrepreneurship in India. Research Forum: India, Publications, New Delhi, ISBN: 978-81-937493-8-8.

Mazumder, S. B. (2020).Impact of Migrant Remittances on Household Savings and Investment. Sunmarg Publications, ISBN: 978-93-82606-97-0

Biswal, K.C., Stresha, S.(2019). Customer Satisfaction and Performance: A study on Safar Apna Travel Agency, Guwahati, Assam. In: Sustainable Entrepreneurship in India (Eds). Published by Research Forum: India, New Delhi, Chapter 3, p.27-56. ISBN: 978-81-937493-8-8.

Biswal, K. C.(2019). Socio-Economic Profile and Working of SHGs in Garo Hills of Meghalaya. In: Sustainable Entrepreneurship in India. Biswal, K. C. (Ed.). Published by Research Forum: India, New Delhi, Chapter 4, p.57-87.

ISBN: 978-81-937493-8-8.

Raj, S., Biswal, K.C.(2019). Management of Micro- Enterprises: A Study on the Performance of Micro- Enterprises in West Garo Hills District, Meghalaya. In: Sustainable Entrepreneurship in India. Biswal, K. C. (Ed.). Published by Research Forum: India, New Delhi, Chapter 11, p.152-158. ISBN: 978-81-937493-8-8.

Bhattacharjee, A., Barman, M. (2019). Developing indigenous haat of Garo Hills as potential tourist hotspots. In: Emerging Trends in Indian Tourism and Hospitality: Transformation and Innovation. U. N. Shukla and Sharad Kumar Kulshreshtha (Eds.). Copal Publishing Group. New Delhi, Chapter 24, p.238-245.

Bharali, D., Akoijam, S. L. S. (2019). A Study on Competitiveness of Sualkuchi Silk Products of Assam. In: Sustainability and Business Management. Sharma, L.S. et al (Eds.), Excel India Publisher, New Delhi, Chapter 11, India, p. 132-144

Bharali, D., Akoijam, S. L. S. (2019). Culinary Tourism as a Destination Branding: A Case Study of Assam, In: Emerging Dynamics of Indian Tourism and Hospitality. Sukhla, U. N., Kulshreshtha, S. K. (Eds.). Copal Publisher, Ghaziabad, India, Chapter 23, p. 225-232

Thrinadha Rao B. (2019). Evolution of destination marketing organizations – a critical analysis. In: Sustainable Entrepreneurship in India. K.C. Biswal, (Ed.). Research Forum: India, New Delhi, Chapter 6, p. 104-117.

Akoijam, S. L. S., Khan, T. (2019). Prospects and Challenges of Medical Tourism: Evidences from Manipur. In:



## Research Projects

### *New Projects*

Title of Project	PI/Co-PI	Funding Agency	Amount (Rs. in lakhs)
Application of Big Data in Agriculture Development in rural areas: A Study on three rural districts of Garo Hills, Meghalaya	Dr. Bimal Deb Nath	ICSSR, New Delhi	7.00

### *Ongoing*

Title of Project	PI/Co-PI	Funding Agency	Amount (Rs. in lakhs)
Mapping the Vulnerability of Indigenous Hill People of Meghalaya to Food Insecurity	Dr. Deepak Bhagat	ICSSR, New Delhi IMPRESS Project	10.00

### *Completed*

Title of Project	PI/Co-PI	Funding Agency	Amount (Rs. in lakhs)
Socio Economic Impact of Weekly markets in rural areas: A study of farmers in Garo Hills of Meghalaya	Dr. Sunildro L. S. Akoijam	ICSSR, New Delhi	6.00
Work Education and Entrepreneurial Intention among the Students of Higher Secondary Schools in Imphal West District, Manipur	Dr. Khundrakpam Devananda Singh	NCERT, New Delhi	4.20

## **Honours/Awards/Recognitions**

### **Dr. Sultana B. A. Mazumder**

Received Best Paper Award for the paper entitled “Migration from Assam and the pattern of consumption of the remittances” in the International conference on Management, Economics and Social Science (ICMESS)’ organized by Research for a Goa during December 30 - 31, 2019.

### **Other Activities**

#### **Prof. G. Singaiah**

Invited as (i) foreign expert by UGC Nepal under QAA programme during September 2019, (ii) Chief Guest for National Seminar on “Digital Marketing” organized by Acharya Nagarjuna University, Guntur and “Management Students Meet “ organized by RVR and JC College of Engineering during April 2019, (iii) Guest of Honour for International Tourism Day organized by Jiwaji University, Gwalior during Dec, 2019.

#### **Prof. J. U. Ahmed**

Chaired a technical session on “CSR and Corporate Governance” in the International Conference on Sustainable Business Management and Information Technology, organized by North Eastern Management Association in collaboration with Department of Management, Mizoram University during October 31 - November 1, 2019.

Delivered concept note address on “Factoring the Skill Development with Reference to Act East Policy in the Context of India’s Changing Global Priorities” and chaired one technical session in the Maulana Abul Kalam Azad Institute of Asian Studies sponsored National Seminar on Skill Development Programme with Special Reference to Act East Policy

of India: Employment Generation and Empowerment held at MCD College, Sonai, Silchar during September 25- 26 2019.

Participated as resource person and delivered a talk on “Behavioural Finance: A New Paradigm in Finance” in the Panel Discussions and chaired one Technical session entitled, ‘Marketing and E-Commerce’ in the National Seminar on New Paradigm in Commerce and Management: Opportunities and Challenges, organized by School of Business, Kaziranga University, Jorhat, Assam during April 05-06, 2019.

#### **Prof. K. C. Biswal**

Delivered lectures on (i) “Corporate Social Responsibility and companies Act 2013” in the National Seminar on Companies Act, 2013 & CSR Activities, organized by Department of Commerce P.N Autonomous College, Khordha in Association with The Institute of Cost Accountants of India, Bhubaneswar Chapter on January 22, 2020, (ii) ‘Corporate Saving in Power Industry in India’ in the UGC-Refresher Course in Business Studies, sponsored by the UGC-HRDC, NEHU, Shillong, at Department of Management, NEHU, Tura Campus. Meghalaya during November 18 – December 01, 2019.

#### **Dr. Abhigyan Bhattacharjee**

Organized (i) “Shaping Young Minds Programmeme”, a flagship programme by AIMA and GMA in Collaboration with NEHU, Shillong on August 30, 2019. (Co-ordinator: Dr. Abhigyan Bhattacharjee), (ii) 5 Days Workshop-Cum-Training Programme on Application of Statistics in Social Sciences Using SPSS& R, jointly Organized by Department of Management, NEHU, Tura Campus, Meghalaya in

collaboration with Sampling and Official Statistics (SOSU), Indian Statistical Institute, Kolkata. (Co-ordinator: Dr. Abhigyan Bhattacharjee) during February 24 - 28, 2020.

Associate Editor of International Journal of Applied Management Research, An International Journal of Department of Management, NEHU, Tura Campus, Meghalaya

Invited as a delegate member at the Indo-Bangladesh Stakeholders Meet Organized by the Indian Chamber of Commerce, Guwahati on 22- October 23, 2019 at Hotel Radisson Blue, Guwahati, Assam.

Delivered lectures as a resource person on ‘Hypothesis testing’ in the Training Programme on Research Methodology at Department of Education, NEHU, Tura Campus, Meghalaya, organized by Department of Education, NEHU, Tura Campus, Meghalaya during October 14 - 19, 2019.

**Reviewer** : Sage Open publications

Delivered lectures on ‘Mindfulness-1’ and ‘Mindfulness-2’ in the UGC-Refresher Course in Business Studies, sponsored by the UGC-HRDC, NEHU, Shillong, conducted at Department of Management, NEHU, Tura Campus, and moderated and judged the Seminar presentations of the participants during November 18 - December 1, 2019.

Acted as a resource person in the one-day Executive Development Programme at IOCL, Bongaigaon Refinery (A Maharatna Company), Dhaligaon, Bongaigaon, Assam on November 18, 2019.

**Dr. Deepak Bhagat**

Participated in the (i) “Faculty Development Programme” organized by

Entrepreneurship Development Institute of India, Ahmedabad at Department of Management, NEHU, Tura Campus during March 02 - 14, 2020, (ii) Workshop on “Design Innovation and Adaptation for Tourism” organized by Chulalongkorn University, Bangkok and NEHU, Shillong during June 17 -18, 2019.

**Dr. Kh.Devananda Singh**

Delivered lectures as a resource person on (i) “Nature, Difficulties, Importance and Scope of Research in Social Science” & “Research: Its Types & Ethics” in the Training Programme on Research Methodology at Department of Education, NEHU, Tura Campus, Meghalaya, organized by Department of Education, NEHU, Tura Campus, Meghalaya during October 14 - 19, 2019, (ii) “Nature, Difficulties, Importance and Scope of Social Science Research in India” in the Seven Days Workshop on Research Methodology, organized by Department of Humanities & Social Sciences, Sikkim Manipal University, Gangtok during September 16 – 22, 2019.

**Reviewer** : Journal of Global Entrepreneurship Research (Springer).

**Dr. Sultana B. A.Mazumder**

Participated in (i) a Workshop on Research Methodology, organized by Department of Management, NEHU, Tura campus during May 13-17, 2019, (ii) UGC Sponsored Refresher Course in Business studies organized by, Department of Management, NEHU, Tura during November 18 – December 01, 2019.

Teacher-in-Charge for the Annual Management fest MOSAIC-2019 held during November 15 – 16, 2019.

**Reviewer** : Sage Open publications Journal

**Dr. Sunildro L. S. Akoijam**

Invited for a guest lecture by the Centre of Entrepreneurship and Skills Development and MIMS, Manipur University and delivered 6 lectures on “Services Marketing, Tourism Marketing and Marketing Strategy” during December 28 - January 16, 2019.

Participated in the Workshop on “Design Innovation and Adaptation for Tourism” organized by Chulalongkorn University, Bangkok and NEHU, Shillong during June 17 -18, 2019.

**Dr. T. R. Bandaru**

Teacher-in-Charge for (i) Volleyball (Men & Women) during February 26 - 28, 2020, (ii) Basketball (Men & Women) during September 16 - 18, 2019, (ii) Department of Management fest MOSAIC-2019 held during November 15 – 16, 2019.

Participated in the (i) UGC Sponsored Refresher Course in NEHU, Tura

Campus, in the Area of Business Studies (Interdisciplinary) at Department of Management, NEHU, Tura Campus, Tura, Meghalaya during November 18 - December 1, 2019 (ii) Faculty Development Programme sponsored by Entrepreneurship Development Institute of India, Ahmedabad and NSTEDB, Department of Science and Technology, Govt. of India at the Department of Management, NEHU, Tura Campus, Tura during March 02 – 14, 2020

**Dr. Bimal Deb Nath**

Participated in the (i) UGC Sponsored Refresher course in Business Studies (interdisciplinary), organized by UGC-HRDC, NEHU Shillong during November 18 -December 01, 2019, (ii) NIMAT sponsored Faculty Development Programme, organized by Entrepreneurship Development Institute of India during March 02 – 14, 2020.

## DEPARTMENT OF TOURISM AND HOTEL MANAGEMENT

**Head** : Dr. Punit Gautam (up to May 19, 2019)  
Dr. Saurabh Kumar Dixit (w.e.f. May 20, 2019)  
**Telephone** : 0364 - 2723441 (O), +919436565964 (M)  
**E-mail** : saurabh5sk@yahoo.com, saurabhdixit@nehu.ac.in

### Faculty: 04

Designation	Name and Qualification	Specialization
<b>Associate Professor</b>	Dr. Saurabh Kumar Dixit, MTM (IGNOU, New Delhi), Ph.D. (BU, Jhansi)	Hospitality / Tourism Management, Consumer Behaviour, Gastronomic Tourism, Tourism Experiential Marketing
	Dr. Punit Gautam, MTA (KU, Haryana), D.Phil. (HNBGU, Garhwal)	Tour Packaging, Eco and Sustainable Tourism, Tourism Impacts
<b>Assistant Professor</b>	Dr. Benjamin F. Lyngdoh, M.Com. (GU, Assam), Ph.D. (NEHU)	Management, Human Resource Management, Marketing, Finance, Tourism Entrepreneurship, Small Business Management, Tourism Impacts
	Dr. Sharad Kumar Kulshreshtha, MTA (AMU, Aligarh), Ph.D. (BRA. Univ., Agra)	Event & MICE Management, Emerging Concepts of Tourism & Hospitality Industry, Indigenous Tourism Practices

### Thrust Areas of Research

Hospitality and Tourism Studies in General; Sustainable Tourism; Gastronomic Tourism; Entrepreneurship; Emerging Tourism Trends; MICE and Events Tourism; 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 offers postgraduate degree in Master of Tourism and Travel Management (MTTM) and Ph.D. degree in Tourism and Hotel Management. During the period under report, 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.

### Students' Profile

**Enrolment Capacity: MTTM- 30, Ph.D. - 05**

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MTTM	16	14	01	25	-	04	20	10	30
Ph.D.	02	03	-	03	-	02	02	03	05

**Research Fellowship**

CSIR-UGC-NET	UGC Non-Net	Rajiv Gandhi SC/ST	ICPR Fellowship	Meritorious Fellowship (UGC-NET- JRF)	Maulana Azad Minority Fellowship	Others (NFST)
02	03	-	-	04	-	03

**Courses Conducted****Postgraduate:M.T.T.M.****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.

Specializations: 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.

Specializations: 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.

**Ph.D. Courses**

Research Methodology, Contemporary Issues in Tourism and Hospitality Management, Literature Review

**Seminars/Conferences/Workshops/Symposia/Extension Programmes (National/International)****Organized**

The Department has organized series of events such as Panel Discussion, Tourism Quiz, Debate Competition and Eco - Tourism Awareness cum Cleaning Drive to reveal World Tourism Day from September 26-28, 2019. The students showcased the rich cultural tradition of the North – East India through their cultural performances. The students went for Eco - Tourism Awareness cum Cleaning Drive at the Laitlum Canyons (Shillong).

### ***Attended***

#### **Dr. S. K. Dixit**

Delivered (i) keynote lecture on 'Developing Sustainable Food Tourism Product' in the International Food Travel Summit Food TreX, Kathmandu held at Park Village Resort, Budhanilkantha, Govindpuri, Kathmandu, Nepal during May 24 - 26, 2019, (ii) an invited lecture on the 'Technological Implications in Tourism and Hospitality Industry' in the Tourism Management Conclave held at IIM Sirmaur Campus, Paonta Sahib, Himachal Pradesh, India on August 20, 2019.

Participated (i) in a two-day Workshop on Massive Open Online Courses (MOOCs) on the theme "Adoption, Promotion Development of MOOCs through SWAYAM Platform" organized by NEHU, Shillong during May 28-29, 2019 (ii) as a resource person in the International conference on "Responsible Tourism Practices in India: Issues and Challenges held at Department of Tourism Studies, Pondicherry University, Puducherry during December 07 - 09, 2019.

Presented a paper on 'Gastronomy and Destination Branding: A Case of Meghalaya' in the 8th ICFAI Conference on Marketing & Business Strategy (ICOMBS-2019), organized by ICFAI Business School (IBS), Hyderabad, Telangana State (India) during November 15 - 16, 2019,

Chaired a session in the International conference on Sustainable Developmental Goals and Management Practices in Tourism & Hospitality Sector held at School of Hotel Management & Tourism, Lovely Professional University, Phagwara (Punjab), India during November 01 - 02, 2019.

#### **Dr. S. K. Kulshreshtha**

Participated in a two-day Workshop on Massive Open Online Courses (MOOCs) on the theme "Adoption, Promotion Development of MOOCs through SWAYAM Platform" organized by NEHU, Shillong during May 28-29, 2019.

Presented paper on 'Consumption Culture of Indigenous Beverages: An Explorative Study of Fruit Wines of Meghalaya (India)', in International conference on Wine Market and Cultures of Consumption, School of Hotel and Tourism Management, The Hong Kong Polytechnic University, Hong Kong (SAR) China on June 02- 05, 2019.

Attended (i) World Tourism Day 2019 on the theme 'Tourism and Jobs: A better future for all', organized by the Tourism Department, Government of Meghalaya with association with NEC, UNWTO and Outlook Responsible Tourism - Future Forum initiative at the State Convention Centre, Shillong on September 27, 2019, (ii) National Seminar on ICT Solutions for India's North-East Heritage, organized by CDAC, Ministry of Electronics and Information Technology, Govt. of India, ICSSE-NERC, Conference Hall, NEHU, Shillong (Meghalaya) on September 25, 2019, (iii) ATAL Workshop on Energy Management & Audit organized by Department of Energy Engineering, NEHU, Shillong during October 14-18, 2019, (iv) ATAL Workshop on Artificial Intelligence organized by Department of Electronics and Communication Engineering, NEHU, Shillong during October 21-25, 2019, (v) ATAL Workshop on 3 D Printing organized by Department of Bio-Medical Engineering, NEHU, Shillong during March 02- 06, 2020.



Invited to deliver talk on ‘How business activities could be promoted in the tourism sector of North East?’ during the Plenary Session” of the conference on North-East as a Gateway to Foreign Tourists from South East Asian Countries, organized by Indian Chamber of Commerce at Hotel Pinewood, Shillong, Meghalaya on August 23, 2019.

## **Publications**

### **Research Papers**

#### ***Published in India***

Das, R., Panda, N.M., Lyngdoh, B.F. (2019). Credit Guarantee Scheme of Micro and Small Enterprises in Assam: An Impact Analysis. *The Indian Journal of Commerce*, 72(3&4): 126-39.

Chaudhury, R. R., Dixit, S. K. (2019). Coordination Between Administrative Announcement and Ground Level Management in Tourism Development: Evidence from Chilika Lake, Odisha, *Tourism Innovations: A Journal of Indian Tourism and Hospitality Congress (ITHC)*, 9(2):70-76.

#### ***Published Abroad***

Dixit, S. K (2020). Managing hospitality organizations: achieving excellence in the guest experience, *Annals of Leisure Research*, 23:2, 266-268.

Dixit, S. K. (2020). Editorial, Special issue: tourism in India, *Anatolia: An International Journal of Tourism and Hospitality Research*, 31:2:177-180.

Dixit, S. K. (2020). Contemporary Cases in Heritage, Tourism Culture and Communication, 20 (1):57-58.

### **Books/ Book Chapters / Proceedings**

Dixit S. K., editor. (2020). *The Routledge Handbook of Tourism Experience Management and Marketing*. Routledge

Publications, UK.

Lyngdoh, B. F. (2019). *Tourism-related Micro and Small Enterprise and Entrepreneur’s Socio-economic Outcomes*. New Delhi: Bharti Publications.

Paul, S., Kulshreshtha, S. K. (2019). *Global Developments of Healthcare and Medical Tourism*. IGI Global Publication, USA.

Chaudhury, R. R., Dixit, S. K. (2019), *Rural Tourism in India: Exploring the Travel Blogger’s Perspective*, In: *Rurality, Ruralism and Rural Tourism*. Aggarwal, Sumedha et al. (eds.), New Delhi: Ane Books Pvt. Ltd., Chapter 5, p. 51-64.

Dixit, S. K. (2020). Introduction, In: *The Routledge Handbook of Tourism Experience Management and Marketing*. Dixit, S. K. (ed.). London: Routledge, p. 1-11.

Sundbo, J., Dixit, S.K. (2020). Conceptualisations in Tourism Experience, In: *The Routledge Handbook of Tourism Experience Management and Marketing*. Dixit, S. K. (ed.). London: Routledge, p. 15-25.

Dixit, S. K. (2020). Marketing Gastronomic Tourism Experiences, In: *The Routledge Handbook of Tourism Experience Management and Marketing*. Dixit, S. K. (ed.). London: Routledge, p. 322-335.

Chaudhury, R. R., Dixit, S. K. (2020). Guest and Host Relationship in Tourism Experience Building, In: *The Routledge Handbook of Tourism Experience Management and Marketing*. Dixit, S. K. (ed.), London: Routledge, p. 496-507.

Abraham, A., Dixit, S. K. (2020). Tourism Experience and Destination Competitiveness, In: The Routledge Handbook of Tourism Experience Management and Marketing. Dixit, S. K. (ed.), London: Routledge, p. 560-568.

Dixit, S. K. (2020). Conclusion: Some Reflections on Experiential Tourism Management and Marketing, In: The Routledge Handbook of Tourism Experience Management and Marketing. Dixit, S. K. (ed.), London: Routledge, p. 590-594.

Kulshreshtha, S. K. (2019). Utsav EvmParv; Atuliniya Bharat ka Jivant Sanskritik Darshan. In: Purvottar Bharat: Bhasha, Sahitya aur Sanskrati. Kumar, Sunil and Singh, Alok (eds.). Yash Publisher and Distributors, New Delhi, p. 275-278.

Kulshreshtha, S. K., Tynsong, I. (2020). Event Tourism: An Emerging Entrepreneurial Practice in North East

India, In: Building an Effective Support system for Entrepreneurial Growth in North East India., Bora, Bhaskarjyoti, Das, T. C., and Borththakur, S., Department of Commerce, Printed & Published at Assam Book Depot, Guwahati -1, Chapter-1, p. 5-20.

Kulshreshtha, S. K., Kumar, A. (2020). Tourism Entrepreneurship in the State of Meghalaya: Prospects and Challenges, In: Building an Effective Support system for Entrepreneurial Growth in North East India. Bora, Bhaskarjyoti, Das, T. C., and Borththakur, S., Department of Commerce, Printed & Published at Assam Book Depot, Guwahati -1, Chapter-10, p. 145-160.

### **Honours/Awards/Recognitions**

Appointed as Associate Editor (Hospitality and Tourism Management), Journal of Global Scholars of Marketing Science: Bridging Asia and the World (ABDC Ranked Journal), Taylor & Francis Publications, UK.

## II

### SCHOOL OF EDUCATION

**Dean** : Prof. S. M. Sungoh (up to July 21, 2019)  
Prof. C. Nongbri (w.e.f. July 22, 2019)  
**Telephone** : 0364 - 2723590 / 2723591 (O)  
**E-mail** : deanedu@nehu.ac.in

The School of Education consists of three Departments, namely Department of Adult & Continuing Education (DACE), Department of Education (Shillong and Tura Campus) and Centre for Distance Education.

Both Departments of Education and Adult & Continuing Education offer Post Graduate & Ph.D. programmes both at Shillong and Tura Campuses. Besides the Education Department, NEHU, Shillong, offers MED programme and DACE offers various kinds of training activities. The thrust areas of the Education Department are System of Education in North East, Test Construction, Teacher Education, Educational Psychology, Environmental Education, Special Education & Inclusive Education, Value and Peace Education, Early Childhood Education and Elementary

Education and Higher Education and the thrust areas of DACE are 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 Abled, Environment, Social Security. The Centre for Distance Education offers Foundation Course on Education of Children with Disabilities.

The faculty members of the School are involved in Teaching, Research and Extension activities in various fields of Education.

## DEPARTMENT OF ADULT AND CONTINUING EDUCATION

**Dean** : Prof. E. Jyrwa (up to May 16, 2019)  
 Prof. B. P. Sahu (w.e.f. May 17, 2019)  
**Telephone** : 0364-2723321 (O)/ 9436302933/9485106057 (M)  
**E-mail** : hodcace@nehu.ac.in, bishnusw@gmail.com

### Faculty: 7

Designation	Name and Qualification	Specialization
<b>Professor</b>	Prof. B. P. Sahu, M.S.W. & Ph.D. (Kurukshetra Univ.)	Human Resource Development, PMIR Group Work in Adult Education, Disaster Management
	Prof. E. Jyrwa, M.Phil. & Ph.D. (NEHU)	National, Regional and International Perspective of Adult Education, Philosophy of Adult Education, Rural Development
<b>Associate Professor</b>	Dr. J. Mawthoh, M.A. & Ph.D. (NEHU)	Environmental Education, Disaster Management, Research Methodology, Entrepreneurship and Skill Development
<b>Assistant Professor</b>	Dr. W. S. Myllemngap, M.Phil. & Ph.D. (NEHU)	Policies and Programmes of Adult Education in India, Material Development in Vernacular Language for Non-Formal Education Intervention
	Dr. J.I. Rapthap, M.S.W. (Bombay Univ.), Ph.D. (NEHU)	Guidance & Counselling, Women Empowerment, Inclusive Education, Disaster Management, Community Organization & Development
	Dr. E. Syngkon, M.A. & Ph.D. (NEHU)	Population Education, Adult Psychology, Women Education, Research Methodology
	Ms. N. S. Devi, M.Sc. (NEHU)	Rural Development, Extension Education, Communication methods in Adult Education

### Thrust Areas of Research

Literacy, Post-Literacy and Continuing Education, Study on Women SHG, Women Empowerment Entrepreneurship, Child Protection, Street Vendors, A study on Accredited Social Health Activist, Guidance and Counselling, Mass Media, Vocational Training, Skill Development, Family Life Education, Rural Tourism, Challenged/ Differently Abled, Environment, Social

Security, Adult Education, Perspectives of Adult and Lifelong Learning, Philosophy of Adult Education, and Rural Development.

### Brief Statement of Academic Activities

The Department of Adult and Continuing Education is offering courses for the MA and Ph.D. programmes. The current intake capacity for MA is 55. Life long Learning and Skill Development has emerged as the 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, 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: M.A. – 55**

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.A.	11	25	-	34	-	2	33	03	36

### Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.A.	06	17	0	23	0	0	23	-	23
Ph.D.	-	-	01	-	-	-	-	01	01

### Students Awarded Ph.D. Degree

Name of Student	Title of Thesis	Name of Supervisor
Amiya Bhaumik	"Environmental Impact Assessment of Daitari Iron Ore mine in Keonjhar and Jaipur Districts of Odisha"	Dr. J. Mawthoh, (Supervisor), Prof. R. N. Rai (Jt. Supervisor)

### Research Fellowships

CSIR-UGC-NET	UGC Non-Net	Rajiv Gandhi SC/ST	ICPR Fellowship	Meritorious Maulana Azad Minority Scholarship	Any other	Others
2	12	1	-	-	Teacher Fellowship under faculty development programme, NERO- 1 NFST- 1	ICSSR - 1 UGC Fellowship SRF- 03

## **Courses Conducted**

### **Postgraduate: M.A.**

#### **Semester I**

Foundation of Adult and Continuing Education; Adult Psychology and Learning; Communication in Adult Education; Environmental Education; Research Methodology.

#### **Semester II**

National and International Perspective of Adult and Lifelong Learning; Policies and Programmes of Adult Education in India; Human Relationship: Group Dynamics, Leadership and Management; Inclusive Education; Extension Education and Development.

#### **Semester III**

Guidance and Counselling; Women Literacy and Empowerment; NGO: Concept and Management; Human Resource Development; Rural Development; Sustainable Development.

#### **Semester IV**

Population Education; Community Organization and Empowerment; Entrepreneurship and Skill Development; Material Development in Vernacular Language; Disaster Management.

### **Ph.D. Courses**

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

### **Seminars/Conferences/Symposia/Workshops Organized**

#### **Prof. B. P. Sahu**

Organized (i) two-day National Workshop on “Life Skill Education for Teacher Educators” in collaboration with Abhigyan Academy, Jorhat, Assam during August 19-20, 2019, (ii) two-day National Workshop on “Innovative Pedagogy and

Effective Teaching Learning Strategies” in collaboration with Sazolie College of Teacher Education, Jotsoma, Kohima during August 26-27, 2019, (iii) two-day National Workshop on “ICT Enabled Learning” in collaboration with Department of Education, Rajiv Gandhi University, Itanagar during September 30 – October 01, 2019, (iv) two-day National Workshop on “Value Based Education: Importance of Mind Mental System” in collaboration with Jaintia Eastern College, Khliehriat during October 04-05, 2019, (v) two days Training Programme on “Curriculum Formulation, Curriculum Implementation and Curriculum Evaluation” at University of Science and Technology Management (USTM), Shillong during October 11-12, 2019, (vi) Capacity Building Programme for Pre- Service, In- Service and Teacher Educators in collaboration with Nongstoin College, Nongstoin during December 3-4, 2019, (vii) Capacity Building Programme for Pre-Service, In-Service and Teacher Educators in collaboration with St. Peter’s Higher Secondary School, Pomlakrai, Rangbhibih during January 30-31, 2020, (viii) Capacity Building Programme for Pre- Service, In- Service and Teacher Educators in collaboration with College Teacher Education, Tihu, Nalbari during February 17-18, 2020, (ix) Extension Education Programme on “Disaster Management” in collaboration with Jaintia Eastern College at Mookhaialong Village, East Jaintia Hills District on February 21, 2020, (x) Extension Education Programme on “Community Health Sanitation” in collaboration with Jaintia Eastern College at Lumshyrmit village, East Jaintia Hills District on February 24, 2020, (xi) Extension Education Programme on “Sustainable Environment” in collaboration with Jaintia Eastern College at Motong village, East

Jaintia Hills District on February 28, 2020, (xii) Extension Education Programme on “Consumer Rights” in collaboration with Prof. Qoumrul Hoque School of Education, USTM, Baridua, Meghalaya, at Amphur village, Ri-Bhoi District on March 12, 2020, (xiii) Extension Education Programme on “Students Counselling” in collaboration with Prof. Qoumrul Hoque School of Education, USTM, Baridua, Meghalaya, at Pillangkata village, Ri- Bhoi District on March 16, 2020.

#### **Dr. J. Mawthoh**

Organized two-day “Faculty Development Programme on Assessing the Education Policy Environment: Implications for Pre-Service and In-Service Teachers” at the Institute of Advanced Studies in Education (IASE), Aizawl, Mizoram during September 26-27, 2019.

#### **Dr. W. Mylliemngap**

Organized two-day training programme on “Curriculum Formulation, Curriculum Transaction and Curriculum Evaluation for Teacher Educators” at Prof. Qoumrul Hoque School of Education, University of Science and Technology Meghalaya, Baridua, Ri-Bhoi District during October 10-11, 2019.

#### **Dr. J. I. Raptap**

Organized two-day programme on Capacity Building of Teacher Educators on the theme “Communication Skills for Pre- and In-Service Teachers/ Teacher Educators” held at College of Education, Rangkhon, Tura during September 24-25, 2019.

#### **Attended**

#### **Prof. B. P. Sahu**

Delivered keynote addresses on the eve of (i) “Life Skill Education for Teacher Educators” held at Jorhat, Assam on August 19, 2019, (ii) “Innovative Pedagogy and

Effective Teaching Learning Strategies” at Sazolie College of Teacher Education held at Jotsoma, Kohima on August 26, 2019, (iii) “Value Based Education: Importance of Mind Mental System” held at Jaintia Eastern College, Khliehriat on October 04, 2019, (iv) “Curriculum Formulation, Curriculum Transaction and Curriculum Evaluation for Teacher Educators” held at Prof. Qoumrul Hoque School of Education, University of Science and Technology Meghalaya, Baridua, Ri-Bhoi District on October 11, 2019, (v) Capacity Building Programme for Pre- Service, In- Service and Teacher Educators held at Nongstoin College, Nongstoin during December 03-04, 2019, (vi) Capacity Building Programme for Pre- Service, In- Service and Teacher Educators held at College of Teacher Education, Tihu, Nalbari, on February 18, 2020, (vii) Extension Education Programme on “Community Health Sanitation” in collaboration with Jaintia Eastern College held at Lumshyrmit village, East Jaintia Hills District on February 24, 2020, (viii) Extension Education Programme on “Sustainable Environment” in collaboration with Jaintia Eastern College held at Motong village, East Jaintia Hills District on February 28, 2020.

Delivered lectures on (i) ‘A Study of Factors Contributing to Teacher and Student Absenteeism at Elementary School Level in Hill Areas of Manipur’ at NERIE, NCERT, Umiam on June 27, 2019, (ii) ‘Life Skills’ on the eve of two days National Workshop on “Life Skill Education for Teacher Educators” at Jorhat, Assam held on August 19, 2019, (iii) ‘Professional Code of Ethics of Teachers’ and ‘Synopsis Writing’ in a two days National Workshop on “Innovative Pedagogy and Effective Teaching Learning Strategies” at Sazolie



College of Teacher Education held at Jotsoma, Kohima during August 26-27, 2019, (iv) 'Life Skill Education for Teachers' in a Two Days Programme on Capacity Building Programme of Teacher Educators on the theme, "Communication Skills for Pre and In-Service Teachers/Teacher Educators" held at College of Education, Rangkhon, Tura on September 25, 2019, (v) 'Value based Education-Implication for the Teachers' on eve of two days National Workshop on "Value Based Education: Importance of Mind Mental System" held at Jaintia Eastern College, Khliehriat on October 04, 2019, (vi) 'Integration of Life Skills in Curriculum Framework' in the Training Programme "Curriculum Formulation, Curriculum Transaction and Curriculum Evaluation for Teacher Educators" held at Prof. Qoumrul Hoque School of Education, University of Science and Technology Meghalaya, Baridua, Ri-Bhoi District on October 11, 2019, (vii) "Qualitative Research I and Qualitative Research II" on the eve of 'Capacity Building Programme on Research Methodology in Social Sciences and Social Work" held at Assam University, Silchar during November 09-11, 2019, (viii) 'Training needs of the Teachers' in a Capacity Building Programme for Pre-Service, In-Service and Teacher Educators held at Nongstoin College, Nongstoin during December 03 - 04, 2019, (ix) Capacity Building Programme for Pre-Service, In-Service and Teacher Educators held at St. Peter's Higher Secondary School, Pomlakrai, Rangbhibih, on January 31, 2020, (x) Quantitative Research Method-I", "Quantitative Research Method-II" and "Quantitative Research Method-III" on February 04, 2020 for the Training of Key Resource Persons on Resource Methodology for the States of

Mizoram and Meghalaya held at NERIE, Umiam, Barapani, Meghalaya during February 03 - 07, 2020, (xi) 'Child Rights' in a Capacity Building Programme for Pre-Service, In-Service and Teacher Educators held at St. Peter's Higher Secondary School, Pomlakrai, Rangbhibih, on January 31, 2020, (xii) 'Paradigms for Research in Teaching' on the eve of Capacity Building Programme for Pre-Service, In-Service and Teacher Educators in the College of Teacher Education, held at Tihu, Nalbari on February 18, 2020, (xiii) "Community Participation in School development: A study of Schools of Kyrdem CRC under Bhoirymbong Block of Meghalaya" in the One Day Workshop for tool development for institutional level research on community participation and for the development of Schools in Bhoirymbong Block of Meghalaya held at NERIE, Umiam, Shillong on the March 09, 2020.

### **Dr. J. Mawthoh**

Delivered a lecture as resource person at the one-day National Seminar on the theme "Dr. B. R. Ambedkar on the Rights of Minorities and Social Justice: Contemporary Challenges" organized by the Shillong Law College in collaboration with the NSS Shillong Law College Unit at Shillong Law College, Dhankheti on November 26, 2019.

Attended (i) as resource person "Need of Quality Research in Northeast" on the First National Workshop on applications of SPSS in ICT Integrated Educational Research organized by Centre for Pre-Service Teacher Education, School of Education, NEHU at Computer Centre, NEHU, Shillong during October 29-30, 2019, (ii) Symposium organized by Ranikor constituency Development Committee and delivered a lecture on "Importance of Education and

its value” at Ranikor, South West Khasi Hills on October 15, 2019, (iii) a Block Level Neighbourhood Youth Parliament and delivered a talk on “Environment Conservation and Volunteerism” organized by Seng Samla Bhalang Nongkhyriem (SSBN) in collaboration with the Nehru Yuva Kendra Sangathan (NYKS) at Dinet Manik Syiem Higher Secondary School, Nongthymmai on September 06, 2019.

#### **Dr. J. I. Rapthap**

Delivered a lecture on ‘Communication Skills and Counselling’ in a Two Days Programme on Capacity Building Programme of Teacher Educators on the theme, “Communication Skills for Pre- and In-Service Teachers/ Teacher Educators” held at College of Education, Rangkhon, Tura on September 25, 2019.

Acted as a resource person on ‘Trauma Counselling’ during the Awareness Programme on Suicide Prevention held at Bellefonte Community College on September 10, 2019.

#### **Honours/Award/Recognitions**

##### **Dr. E. Syngkon**

Received the Bharat Vikas Award Inspiring Citizens Award, Janardandhan Pharma Award organized by the Institute of Self Reliance, 103/B, HIG, BDA Duplex Baramunda, Bhubaneshwar, Odisha.

#### **Publications**

##### **Research Papers**

##### ***Published in India***

Passah, M.I, Mawthoh, J. (2019). Career

counselling needs of unemployed youth in Shillong. International Journal of Research and Analytical Reviews (IJRAR), 6(2):649-652.

#### ***Academic Collaborations***

##### **Prof. B. P. Sahu**

Collaborated with (i) Abhigyan Academy, Jorhat, Assam, (ii) Sazolie College of Teacher Education, Jotsoma, Kohima, (iii) Rajiv Gandhi University, Itanagar, (iv) Jaintia Eastern College, Khliehriat, (v) Nongstoin College, Nongstoin, (vi) St. Peter’s Higher Secondary School, Pomlakrai, Rangbihibi, (vi) College of Teacher Education, Tihu, Nalbari (vii) University of Science and Technology, Meghalaya.

##### **Dr. J. Mawthoh**

Collaborated with Institute of Advanced Studies in Education (IASE), Aizawl, Mizoram in conducting Faculty Development Programme.

##### **Dr. W. Myllemngap**

Collaborated with Prof. Qoumrul Hoque School of Education, University of Science and Technology Meghalaya.

##### **Dr. J. I. Rapthap**

Collaborated with College of Education, Rangkhon, Tura, Meghalaya.

## DEPARTMENT OF EDUCATION

**Head** : Prof. C. Nongbri (up to July 21, 2019)  
 Prof. S. M. Sungoh (w.e.f. July 22-28, 2019)  
 Prof. I. Syiem (w.e.f. July 29, 2019)

**Telephone** : 0364 - 2723341(O), +91 9436104631(M)

**E-mail** : hodedu@nehu.ac.in

### Faculty: 09

Designation	Name and Qualification	Specialization
<b>Professor</b>	Prof. S. M. Sungoh, M.Phil. & Ph.D. (NEHU)	Teacher Education, Teaching at Tertiary Level, Measurement & Evaluation, Educational Psychology, Guidance & Counseling, Research Methodology.
	Prof. C. Nongbri, M.Ed. & Ph.D. (NEHU)	Educational Management and Change, Curriculum Development and Instruction, System of Teacher Education in India and Educational System in India
	Prof. Ibadani Syiem, M.A. & Ph.D. (NEHU)	Psychology of Education, Early Childhood Education, Guidance and Counselling, Environmental Education, Research Methodology, Educational testing & Evaluation.
	Prof. B. Bazeley, Kharbiryumbai M.A. & Ph.D. (NEHU)	Educational Technology, Philosophy of Education, Research Methods, Curriculum Development, Educational Testing & Evaluation, Higher Education, Economics of Education
<b>Assistant Professor</b>	Dr. Rihunlang Rymbai, M.Ed. & Ph.D. (NEHU)	Teacher Education, Science Education, Methods of Teaching, Environmental Education. Research Methodology
	Dr. Ashok Kumar, M.Ed. & Ph.D. (Andhra Univ.)	Educational Psychology, Sociology of Education, Educational Testing
	Dr. Vandana M.Ed. & Ph.D. (BHU)	Research Method in Education, Sociology of Education, Teaching Pedagogy: Languages (English, Hindi)
	Dr. Euodia B. Myrthong, M.A. & Ph.D. (NEHU)	Educational Psychology, Guidance & Counseling, Educational Research, Mental Health
	Dr. Naraginti Amareswaran, M.Ed. & Ph.D. (Sri Venkateswara Univ.)	Value Education, Educational Philosophy, Educational Technology, ICT in Education

**Thrust Areas of Research**

System of Education in North East, Test Construction, Teacher Education, Educational Psychology, Environmental Education, ICT in Education.

**Brief Statement of Academic Activities**

The Department of Education has been

offering courses for MA, MEd and Ph.D. Programmes. The Department admitted 51 Students in the MA Programme and 46 in the MEd Programme. At present, the MEd programme is enhanced to Two Years Course comprising of four semesters as per the NCTE Regulations, 2014.

**Students' Profile**

**Enrolment Capacity: M.A.- 51, M.Ed. - 50, Ph.D. - 15**

Degree	Male	Female	SC	ST	OBC	GEN	EWS	Meghalaya	Non-Meghalaya	Total
M.A.	11	40	01	48	01	01	-	38	13	51
M.Ed.	13	33	01	43	01	01	-	39	7	46
Ph.D.	07	08	-	08	04	01	02	07	08	15

**Degrees Awarded**

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.A.	03	45	-	48	-	-	46	02	48
M.Ed.	01	16	-	15	-	02	14	03	17
Ph.D.	02	05	-	07	-	-	06	01	07

**Students Awarded PhD Degree**

Name of Student	Title of Thesis	Name(s) of Supervisor(s)/ Joint Supervisor
Ms. Riyameka Lapasam	"Teaching Competency of Secondary School Teachers in relation to their Interest and Attitude towards Teaching profession in Jaintia Hills, Meghalaya"	Prof. B. B. Kharbiryim-bai
Ms. Bamonlang Dkhar	"School Environment and Level of Educational Aspiration in relation to Academic Achievement of Secondary School Students in Jaintia Hills, Meghalaya"	Prof. B. B. Kharbiryim-bai
Mr. Elevenstone Synrem	"Scientific Aptitude and Study Habits in relation to Achievement in Science Subject Among Secondary School Students in Ri-Bhoi District of Meghalaya"	Prof. Ibadani S. Syiem

Ms. Genevieve Ngasainao	“Enhancing Mathematics Learning through Ethno- Mathematics: A Study on Tangkhul Tribe of Manipur”	Dr. Vandana
Ms. Wandaka Nikhla	“Status and Problems of Pre-School Education in East and West Khasi Hills Districts of Meghalaya”	Prof. C. Nongbri
Ms. Careen E. G. Marbaniang	“Stress Level, Coping Strategies and Mental Health of Women Teachers of Secondary Schools of Meghalaya”	Dr. Yododa Bhutia (Supervisor) Prof. C. Nongbri (Jt. Supervisor)
Mr. Teibor Papang	“Teacher Effectiveness in relation of Work Motivation and Job Satisfaction among Secondary School Teachers in East and West Jaintia Hills Districts”	Dr. Ashok Kumar

#### Research Fellowship

CSIR-UGC-NET	UGC Non-Net	Rajiv Gandhi SC/ST	ICPR Fellowship	Meritorious Fellowship	Maulana Azad Minority Fellowship	Others
19	18	3	-	-	-	11

#### Courses Conducted

##### Postgraduate: M.A.

##### *Semester I*

Philosophical Foundations of Education, Advanced Educational Psychology, Educational Management and Change, Research Methodology in Education (I&II)

##### *Semester II*

Curriculum Development and Instruction, Sociology of Education, Educational Testing & Evaluation, Environmental Education and Mental Health Education

##### *Semester III*

Information & Communication Technology (ICT) in Education, Comparative Education, Elective I: Experimental Research Designs in Education, Early Childhood Education, Open Learning and Distance Education, Elective II: Inclusive Education I, Educational Thought I (Indian), Teacher Education I, Education in

Political Perspective.

##### Semester IV

Laboratory Practical, Higher Education in India, Elective III: Guidance & Counselling, Women Studies and Education, Education for Rural Development, Elective IV: Inclusive

Education II, Educational Thought II (Western), Teacher Education II, Economics of Education.

##### *M.Ed.*

##### **Semester I**

Introduction to Educational Studies, System of Teacher Education in India, Psychology of Learning & Development, Research Method-I, Research Method-II, Development of Communication Skills.

##### *Semester II*

Theory & Practice of Teaching, Educational Testing, Teacher Education Programme, Internship in DIET's/CTE's for Four

weeks (with report), Academic Writing & Presentation, Mental Health Education.

### ***Semester III***

Education in Philosophical Perspective, Elective – Development of Elementary Education,

Development of Secondary & Higher Secondary Education, Optional – ICT in Education, Inclusive Education, Educational Planning, Management & 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 & Counseling, Women's Education, Environmental Education, Dissertation.

### **Ph.D. Courses**

Higher Education, Research Methodology, Statistical Analysis & Computer Applications.

### ***Organized***

#### **Prof. S. M. Sungoh**

Convener of a (i) two-day Workshop on Preparation of Four Year Integrated BA BEd; and BSc BEd Syllabus (Professional Component) during July 2-3, 2019, (ii) Workshop on MOOC, Swayam and OER for Teacher Education in Collaboration with College of Teacher Education (PGT), Shillong, on August 21, 2019, (iii) two-day pre-service training Workshop on Curriculum Planning and Curriculum Reforms, NEHU campus, Shillong on August 27, 2019, (iv) Workshop on MOOC, Swayam and OER for Teacher Education

in collaboration with College of Teacher Education, Tura on August 30, 2019, (v) two-day Workshop on Development of Training Module on Digital Skills for Pre-Service Teachers, in NEHU Campus, Shillong, on September 03, 2019, (vi) Workshop on MOOC, Swayam and OER for Teacher Education in Collaboration with St. Mary's College of Teacher Education, Shillong on September 06, 2019, (vii) two-day Workshop on Quality Assurance, NEHU campus, Shillong on September 11, 2019, (viii) two-day pre-service training Workshop on MOOC, Swayam and OER for Teacher Education in Collaboration with Don Bosco College of Teacher Education, Tura on September 16, 2019, (ix) two-day Workshop on Accountability System in Education for Pre-Service Teachers in Department of Education, NEHU campus, Shillong on September 20, 2019, (x) one-day Workshop on Preparation of Four Year Integrated BA BEd; and BSc BEd Syllabus (General Component) on September 24, 2019, (xi) two-day Workshop on Innovative Methods of Teaching for Pre-Service Teachers, Department of Education, NEHU, Tura on November 4, 2019, (xii) one-day National Workshop on Continuing Professional Development of Teacher Educators through Blended Learning Approach at Department of Education, NEHU, Shillong on November 09, 2019.

Invited lectures on (i) Periodic student Teacher Assessment at NEHU campus, Shillong on September 13, 2019. (ii) Constructivist Pedagogy for Pre-Service Student Teachers on November 19, 2019 at Department of Education, NEHU, Shillong. (iii) Knowledge, Understanding and Reflective Levels of Teaching, DIET, Nongpoh, on December 04, 2019.



**Prof. C. Nongbri**

Organized (i) two-day Workshop for Principals and faculty members, CTEs, Meghalaya for Preparation of Four Years Integrated BEd Syllabus held in NEHU, Shillong during July 02-03, 2019,(ii) one-day Workshop for Principals and faculty members, CTEs, Meghalaya for finalization of the Professional Component of the Course at Kiang Nangbah Guest House, NEHU, Shillong on August 23, 2019,(iii) one-day Workshop for Heads, Department from the General colleges for Preparation of the Syllabus General Component of BA BEd/ BSc BEd for Heads, Department from the General colleges at Cluster of Classrooms other than Science, NEHU, Shillong on September 12, 2019, (iv) two-day Workshop for faculty members CTEs and general colleges for finalization of the General and Professional Components of BA BEd / BSc BEd Syllabus at Multi –Use Convention during November 05-06, 2019.

**Prof. B.B. Kharbirymbai**

Organized (i) a two-day Workshop on the theme-Accountability System in Education for Pre-Service Teachers, at Department of Education, NEHU Shillong under MHRD Scheme PMMMNMTT during September 20-23, 2019, (ii) a two-day Workshop on the theme- Innovative Methods of Teaching for Pre-Service Teachers, at St. Mary's College of Teacher Education, Shillong by Department of Education, NEHU Shillong under MHRD Scheme PMMMNMTT during October 31-November 01, 2019.

Co-ordinated a programme to celebrate the National Education Day on the Theme- Dr. Ambedkar's contribution to Education, Department of Education, NEHU Shillong held at the Cluster classroom, NEHU Shillong on November 11, 2019.

**Dr. Rihunlang Rymbai**

Convener in the two-day pre-service teachers' training Workshop on Curriculum Planning and Curriculum Reform held at Department of Education, NEHU, Shillong during August 27-30, 2019.

**Dr. Ashok Kumar**

Organized (i) two-day National Workshop on Quality Assurance: Constructivist Pedagogy for Pre-service Student Teachers Under the MHRD Scheme of PMMMNMTT on September 12, 2019 & November 11, 2019,(ii) invited lecture on (a) 'Periodic Student Teacher Assessment' Under the MHRD Scheme of PMMMNMTT on September 13, 2019,(b) Constructivist Pedagogy for Pre-service Student Teachers Under the MHRD Scheme of PMMMNMTT on November 19, 2019,(c) 'Knowledge, Understanding and Reflective Levels of Teaching' Under the MHRD Scheme of PMMMNMTT on December 04, 2019.

**Dr. Vandana**

Organized (i) National Workshop on Development of Training module on Digital Skills for Pre-service Teachers (Under MHRD Scheme of PMMMNMTT) during September 03-04, 2019, (ii) two-day National Workshop on Research Methodology ((Under MHRD Scheme of PMMMNMTT)) during November 13-14, 2019.

**Dr. Euodia BahunMyrthong**

Organising secretary for the (i) two-day National Workshop on "Development of Training Module on Digital Skill for Pre-service Teachers" (Under MHRD Scheme of PMMMNMTT) in U Tirot Sing Syiem Guest House, NEHU, Shillong held during September 03-04, 2019, (ii) two-day



National Workshop on “Research Paper Writing and Publication Research Paper Writing and Publication” in U Tirot Sing Syiem Guest House held during December 05-06, 2019.

**Dr. Naraginti Amareswaran**

Organized (i) one-day National Workshop on MOOC, SWAYAM and OER for Teacher Education organized by Department of Education, NEHU in collaboration with College of Teacher Education (PGT), Shillong on August 21, 2019, (ii) one-day National Workshop on MOOC, SWAYAM and OER for Teacher Education organized by Department of Education, NEHU in collaboration with College of Teacher Education (CTE), Tura on August 30, 2019, (iii) one-day National Workshop on MOOC, SWAYAM and OER for Teacher Education organized by Department of Education, NEHU in collaboration with St. Mary College of Teacher Education (CTE), Shillong on September 6, 2019, (iv) one-day National Workshop on MOOC, SWAYAM and OER for Teacher Education organized by Department of Education, NEHU in collaboration with Don Bosco College of Teacher Education, Tura on September 16, 2019, (v) first National Workshop on Applications of SPSS in ICT Integrated Educational Research organized by Department of Education, NEHU, Shillong during October 29-30, 2019, (vi) one-day National Workshop on Continuing Professional Development of Teacher Educators through Blended Learning Approach organized by School of Education, SPPU, Pune in collaboration with School of Education, NEHU, Shillong on November 09, 2019, (vii) one-day National Workshop on Research Methodology in Education through Flipped Learning Approach organized by Department of Education in collaboration with SPPU,

Pune on November 11, 2019, (viii) one-day National Workshop on Integration of Theory and Practice of Education through ICT organized by Department of Education, NEHU at NEHU, Tura on November 19, 2019, (ix) one-day National Workshop on Integration of Theory and Practice of Education through ICT organized by Department of Education, NEHU in collaboration with District Institute of Education & Training, Rongkhon, Tura on November 19, 2019, (x) Second National Workshop on Applications of SPSS in ICT Integrated Educational Research organized by Department of Education, NEHU, Shillong on November 21-22, 2019.

***Attended***

**Prof. I. Syiem**

Attended (i) two-day Workshop on MOOCs on the theme-Adoption, Promotion and Development of MOOCs through SWAYAM platform organized by NEHU, Shillong during May 28-29, 2019, (ii) one-day Workshop on Preparation of 4 years integrated B.Ed syllabus, organized by Department of Education, NEHU Shillong under MHRD Scheme PMMMNMTT on the August 23, 2019, (iii) two-day National Workshop on Curriculum Planning and Curriculum reform organized by organized by Department of Education under MHRD Scheme PMMMNMTT on August 30, 2019, (iv) two-day National Workshop on Development of Training Module on Digital Skills for Pre-Service Teachers organized by Department of Education under MHRD Scheme PMMMNMTT during September 03-04, 2019.

Chaired a session on “Language gender & discourse in International language fest on Indigenous and Endangered Language organized by Department of Linguistic, NEHU, Shillong October 26-27, 2019.

**Prof. B. B. Kharbirymbai**

Presented a paper on “Indigenous curriculum to enhance traditional knowledge” at the two-day National Seminar on-The Changing Dynamics of Tribal Society in India with special reference to North Eastern Region, organized by Shillong College, Shillong during November 05-06, 2019.

**Dr. Ashok Kumar**

Attended (i) two-day Workshop on Professional Component of the Course under the MHRD Scheme of PMMMNMTT during July 02-03, 2019, (ii) one-day Workshop for finalisation of the Professional Component of the Course under the MHRD Scheme of PMMMNMTT on August 23, 2019, (iii) two-day pre-service teachers’ training Workshop on Curriculum Planning and Curriculum Reform, under the MHRD Scheme of PMMMNMTT during August 27-30, 2019, (iv) one-day Workshop for Preparation of the Syllabus General Component of BA BEd/ BSc.BEd, under the MHRD Scheme of PMMMNMTT on September 12, 2019.

**Dr. Euodia BahunMyrthong**

Presented papers on “Socio-economic status in relation to academic interest of secondary School students” and “Teachers’ Burnout with special reference to college teachers of Nagaland” in the National Seminar on Recent Trends in Educational Psychology, Sikkim University during November 11-12, 2019 and also chaired a session

**Dr. Naraginti Amareswaran**

Presented a paper on “7 S’s Model of learning and teaching through online” at International conference on Innovation in Education and Industry, organized by IRDP on February 23, 2020.

Attended two-day Workshop on Professional component of the course organized by Department of Education, NEHU, Shillong during July 02-03, 2019.

**Publications****Research Papers*****Published in India***

Sungoh, S. M., Kharmalki, C.Y. (2019). Perception of self-concept by higher secondary students of Shillong coming from different streams. *International Journal of Sciences and Applied Research*, 6(10): 15-23. [www.ij sar.in](http://www.ij sar.in) ISSN 2394- 240.

Kharmalki, C. Y., Sungoh, S.M. (2019). Frustration tolerance between sexes belonging to different community of Higher secondary students in Meghalaya. *International Journal of Advanced Research. (IJAR)*, 7(9): 985-999 (ISSN: 2320-5407) <http://dx.doi.org/10.21474/IJAROI/9746>

Soanes, D. G., Sungoh, S.M. (2019). Emotional intelligence in relation to their teaching attitude among secondary School science teachers of East Khasi Hills District, Meghalaya, *International Journal of Research and Analytical Reviews (IJRAR)*. [www.ijrar.org](http://www.ijrar.org) E-ISSN 2348-1269, P-ISSN 2349-5138.

Soanes, D. G., Sungoh, S.M. (2019). Influence of Emotional intelligence on teacher effectiveness of science teachers, *Psychology*, 2019. (10): 1819-1831. <http://www.scirp.org/journal/psych> ISSN online-2152-7199; ISSN print: 2152-7180.

Sumer, B. B., Syiem, I. (2019). Professional ethics and its implications. *Journal of Northeast Indian Cultures*, 49(2):90-98.

Kharbi, R. (2019). Teacher shortage

in Kenya-trends and implications, The online International Interdisciplinary Research Journal, 9(5):128-137. ISSN-2249-9598.

Kharbi, R. (2020). Coping with administrative working conditions by Kenyan principals and head teachers The International Journal of Innovative Science and Research Technology 5(3):559-563. ISSN-2456-2165.

Rymbai, R. (2019). Student teachers' attitude towards teaching and interest in teaching. International Journal of Basic and Applied Research, 9(7):432-439.

Rymbai, R. (2019). Attitude of teachers towards information technology. The research journal of social sciences, 10(7):172-178.

Wallang Pahsyntiew, A., Rymbai, R. (2020). Self-concept of higher secondary students in Meghalaya. International Journal of Research Culture Society, 4(2):103-106. <https://ijrcs.org/wp-content/uploads/ijrcs202002023>.

Vandana, Rai, K.K. (2019). Life Skills in relation to academic achievement of senior secondary students of Sikkim. Think India Journal, 22 (14): 9919-9937.

Amareswaran, N. (2019). 7 S's Model of Learning and Teaching through Education. Journal of Educational Research and Extension, 2(1): 52-59.

### **Books/Book Chapters/Proceedings**

Syiem, I. (2019). Linguistic and Emotional Intelligence. In: Glimpse of some of the Austro-Asiatic Languages. S. K. Singh, S. Lyngdoh and B. Khyriem (Eds.). Eastern Book Publishing House, Guwahati, Chapter X, p. 88-93.

Kharbiryumbai, B. B. (2019). "MOOCs and Higher Education". In: Recent

Trends in Education. Utpal Kalita and Phunu Das Sarma, (Eds.). Akhand Publishing House, Delhi, Chapter 1, p.1-11.

Kharbiryumbai, B. B. (2019). Open Educational Resources, MOOCs, Swayam for professional Development of Teachers in North East India, In: ODL: Issues and Perspectives: from East and North East India" Anirban Ghosh and Pranab Saikia, (Eds.). Krishna Kanta Handiqui State Open University Guwahati & Netaji Subhas Open University, Kolkata p.110-123

Kharbiryumbai, B. B. (2019) Cross Cultural Communications-Effects in Today's society. In: Glimpse of some of the Austro-Asiatic Languages. S.K. Singh, S. Lyndoh, B. Khyriem (Eds.). Eastern book publishing house (EBH) Guwahati, Chapter-14, p. 119-124.

Kharbiryumbai, B. B. (2020). Sustainable use and conservation of forest resources in Meghalaya. In: Environment and Society. Rekha M. Shangpliang (Ed.). Concept Publishing Company Pvt Ltd, New Delhi, Chapter 9, p.101-111.

Rymbai, R. (2019). Positive emotions and personality traits. Lakshi Publishers and Distributors, New Delhi, ISBN: 978-93-82120-98-8.

Rymbai, R., Mukhim, B. M. (2019). Khasi in School and attitude of students towards ML-Khasi. In: Glimpse of some of the Austro-Asiatic Languages. S. K. Singh, S. Lygdoh and B. Khyriem (Eds.). Eastern Book Publishing House, Guwahati, Chapter 17, p. 146-155).

Amareswaran, N. (2019). Teaching Profession in Meghalaya. M. R. Books, Guwahati, ISBN: 9789383403226.

Amareswaran, N. (2019). Value

Oriented Education. M. R. Books, Guwahati, ISBN: 9789383403233.

Amareswaran, N. (2019). Guidance Need of Higher Secondary School Students. M. R. Books, Guwahati, ISBN: 9789383403196.

Amareswaran, N. (2019). ICT in Teacher Education. M. R. Books, Guwahati, ISBN: 9789383403202.

Amareswaran, N. (2019). Teacher Education in Meghalaya. M. R. Books, Guwahati, ISBN: 9789383403219.

## Research Projects

### Ongoing

Title of Project	PI/Co-PI	Funding Agency	Amount (Rs. in lakhs)
Pre-Service Teacher Education	Prof. S.M. Sungoh	PMMMNMST Ministry of Human Resource Development, New Delhi	50.00 (first instalment)

### Completed

Title of Project	PI/Co-PI	Funding Agency	Amount (Rs. in lakhs)
Continuing Professional Development of Teacher Educators and Teachers in Meghalaya: Policies, Programmes and Practices	Dr. Rihunlang Rymbai	Inter University Centre for Teacher Education (IUCTE), M. S. University of Baroda	6.60
Exclusion of Scheduled Tribes from Secondary Education in Meghalaya	Dr. Ashok Kumar	ICSSR, New Delhi	8.00

## **Honours/Awards/Recognitions**

### **Prof. S. M. Sungoh**

Member of the (i) Editorial Board of the North-East India Education Journal, (ii) Member of the task force of the State Education Policy of Meghalaya, (iii) Member of the Governing Body of NERIE-NCERT, Barapani, Shillong (iv) Member of the Meghalaya State Legal Services Authority, Meghalaya

President & Vice-President of the North-East India Education Society, Shillong & Alumni Association, NEHU, Shillong, respectively.

Online course completion certificates on (i) Digital Skills: Social Media, Accenture (2019), (ii) Digital Skills: User Experience, Accenture (2019), (iii) Digital Skills: Mobile, Accenture (2019), and (iv) Digital Skills: Grow your Career, Accenture (2019).

### **Prof. I. Syiem**

Member of the (i) Advisory Board for INTERVIEWS: An Interdisciplinary Journal in Social Sciences. St. Claret College, Ziro. ISSN: 2349-400X.

Life Member of the (i) North-East India Education Society (NEIES) & also Treasurer of NEIES (ii) Indian Academy of Social Science, Allahabad.

Presiding Officer of Internal Complaint Committee (ICC), NEHU, Shillong

### **Prof. B. B. Kharbirymbai**

Member of the (i) North East India Educational Society (NEIES), (ii) Association of Indian University, New Delhi (Life membership and Joint Secretary), (iii) All India Association of Educational Research, Bhubaneswar, (iv) National University of Educational

Planning and Management (NUEPA), (v) Indian academy of social sciences, Allahabad (Life fellowship) & (vi) Indian Association of Gerontology, Banaras (Life membership).

Editorial Board member (i) NEIES Journal, (ii) Tetso Journal of Educational Research, and (iii) Red Flower publications, New Delhi.

Student Counsellor - Department of Education, NEHU, Shillong

### **Dr. Naraginti Amareswaran**

IRDP Academic Excellence Award-2019, IRDP, Chennai, India.

4 Future Learn Awards-2020, UK (International Awards).

## **Other Activities**

### **Prof. C. Nongbri**

Delivered two lectures on (i) "Curriculum Development at the Higher Education Level" on July 08, 2019 in the 48th Orientation Programme organized by UGC-HRDC, NEHU, Shillong during June 24 - July 14, 2019, (ii) "Curriculum Development at the Higher Education Level" on October 25, 2019 in the 49th Orientation Programme (General) for College & University teachers organized by UGC-HRDC, NEHU, Shillong during October 14-November 03, 2019.

### **Prof. I. Syiem**

Resource Person in "Emotional Intelligence" in the Short-Term Course in Soft Skills for College and University Teachers and Research scholars, organized by UGC-HRDC, NEHU, Shillong during September 23 -28, 2019.

Participated in the International women's day celebration on the theme "I am Generation Equality: Realizing Women's



Rights”, organized by NEHU, Shillong on March 08, 2020.

External Examiner for Evaluation of Ph.D. Theses for (i) Gauhati University on September 13, 2019, and (ii) University of Jammu on January 08, 2020.

### **Prof. B. B. Kharbirymbai**

As a resource person delivered lectures on (i) “Introduction to MOOCs and SWAYAM” in the refresher course conducted by Guwahati University UGC-Human Resource Development Centre, Guwahati on July 11, 2019, (ii) “Development of Training Module on Digital Skills for pre-service teachers” organized by Department of Education, NEHU Shillong under MHRD scheme Pandit Madan Mohan Malaviya (PMMMNMNTT) on September 04, 2019, (iii) “Life Skills in teaching learning” at the short-term course organized by UGC-HRDC NEHU Shillong on September 23, 2019, (iv) “Khasi Folk lore and pedagogy” at the refresher course organized by UGC-HRDC NEHU Shillong on September 24, 2019, (v) “Mental Health and Life Skills” at Orientation Programme organized by UGC-HRDC, NEHU Shillong on September 27, 2019, (vi) “ICT in Higher Education” at the Orientation Programme organized by UGC-HRDC, NEHU Shillong on October 15, 2019, (vii) “Mental Health of Teachers” at the Orientation Programme organized by UGC-HRDC, NEHU Shillong on October 16, 2019, (viii) “Relevance of Gandhi’s Philosophy on Education” at the National conference on Relevance of Gandhian Philosophy of Universal, uplift (Sarvodaya) in the contemporary world organized by William Carey University, Meghalaya during October 17-18, 2019, (ix) “Reforms in Higher Education” at the Orientation programme organized by UGC-HRDC,

NEHU Shillong on October 25, 2019, (xii) “Computational Techniques in Research Methodology” at the Refresher course in Teacher Education (Interdisciplinary) organized by Department of Education, Tezpur University, Tezpur, Assam on September 18, 2019, (xiii) “Introduction to Innovative Methods of Teaching- Learning” at the two-day National Workshop on Innovative Methods of Teaching for Pre-Service Students Teachers organized by Department of Education, NEHU Shillong under the MHRD Scheme (PMMMNMNTT) at St. Marys CTE Shillong” during October 31- November 01, 2019, (xiv) “ICT in Higher Education” at the Orientation Course organized by UGC-HRDC, NEHU Shillong on March 11, 2020, (xv) “Micro Teaching Skills” for the BEd course organized by USTM, Baridua Meghalaya on March 13, 2020.

Participated in the (i) two-day Workshop on MOOCs on the theme-Adoption, Promotion and Development of MOOCs through SWAYAM platform organized by NEHU, Shillong on the May 28 – 29, 2019, (ii) one-day Workshop on Preparation of 4 years integrated B.Ed. syllabus, organized by Department of Education, NEHU Shillong under MHRD Scheme PMMMNMNTT on August 23, 2019, (Iii) two-day National Workshop on Curriculum Planning and Curriculum Reform organized by organized by Department of Education under MHRD Scheme PMMMNMNTT on August 30, 2019, (iv) two-day National Workshop on Development of Training Module on Digital Skills for Pre-Service Teachers organized by Department of Education under MHRD Scheme PMMMNMNTT during September 03-04, 2019, (v) North East Regional Training programme for administration



of plagiarism detection software (PDS)-URKUND jointly organized by Central Library, NEHU Shillong & INFLIBNET Centre, Gandhinagar under MHRD, and Government of India on November 11, 2019.

Presented papers on (Jointly) (i) “A qualitative Analysis of the Coping Strategies of Kenyan Teachers” (jointly), (ii) “Coping with Administrative Working Conditions by Kenyan Principals and Head Teachers” (jointly) in the two-day International conference on “Implementation of Sustainable Development Goals: Strategies, Barriers and Remedies” held at Mwenge Catholic University (main campus-Moshi) Tanzania, organized by society of Educational Research and Evaluation, Kenya during February 13-14, 2020, (iii) “Environmental Awareness in Relation to Pro-Environmental Behaviour of Higher Secondary School Students in East Khasi Hills District, Meghalaya” at the two-day National Seminar on Present Trends and Issues in Environmental and Occupational health organized by Department of Education, Manipur University during April 24-26, 2019.

#### **Dr. Rihunlang Rymbai**

Delivered a lecture on “Micro Teaching – Theory and Practical” in the 49th Orientation Programme, organized by UGC-HRDC, NEHU, Shillong during October 14 - November 03, 2019, (ii) invited talk on “Development of Soft Skills” held at St. Mary’s College, Shillong, on March 02, 2020.

Resource Person in a Workshop on “Development of Handbook on Experiments and Learning Outcome in Science at Secondary Level” held at North-

East Regional Institute of Education, NERIE, Nongsder during February 24-28, 2020.

#### **Dr. Ashok Kumar**

As a resource person delivered lectures on (i) “Education Policies of Tribes in the context of North-East India” in Refresher Course in Tribal Studies organized by UGC-HRDC, NEHU, Shillong on November 21, 2019, (ii) ‘Team-teaching’ in Two-day National Workshop on ‘Innovative Methods of Teaching of Pre-service Teachers’, organized by Department of Education NEHU, Shillong Under the MHRD Scheme of PMMMNMTT on October 31, 2019, (iii) ‘Descriptive statistics using SPSS’ in Short-Term Course on SPSS organized by UGC-HRDC, NEHU, Shillong during September 3-6, 2019.

#### **Dr. Euodia Bahun Myrthong**

As a resource person delivered a lecture on “Need and importance of developing module for digital skills in Pre-Service Teacher Education Programme” for teacher-educators of DIETs Organized by the Department of Education, Shillong under PMMMNMTT, MHRD Scheme during September 3-6, 2019.

#### **Dr. Vandana**

Delivered lectures on (i) Referencing Style in a two-day National Workshop on Research paper writing and publication, Organized by Department of Education, NEHU, Shillong on December 05, 2019, (ii) Team Teaching-A participatory teaching technique in a two-day National Workshop on Innovative Methods of Teaching for Pre-Service Teachers Organized by the Department of Education, NEHU, Shillong, in St. Mary’s College of Teacher Education, Shillong (Under the MHRD Scheme of PMMMNMTT) on October 31, 2019.

**Dr. Naraginti Amareswaran**

Delivered (i) two lectures on MOOC, SWAYAM: Issues and Relevance at National Workshop on Accessibility of Massive Open Online Courses (MOOCs) through SWAYAM: Issues and Relevance organized by Behali Degree College, Bargang, Assam on April 29, 2019, (ii) three lectures on Massive Open Online Courses, SWAYAM, OER for Learning, Teaching and Research lectures at National Workshop on MOOC, SWAYAM and OER organized by West College of Education, Guwahati, Assam during June 01- 02, 2019, (iii) three lectures on MOOC, SWAYAM & OER, Digital Initiatives of Govt of India at National Workshop on MOOC-SWAYAM & OER (Digital Initiative of GOI) organized by SMD College of Education, Charing, Assam during June 14-15, 2019, (iv) four lectures at Refresher Course on ICT & MOOC (IDC) organized by UGC-HRDC, GU, Guwahati during July 04 -17, 2019, (v) two lectures on MOOC & SWAYAM, Digital Initiatives of Govt of India at 120th OP organized by UGC-HRDC, GU, Guwahati on August 08, 2019, (vi) two lectures on MOOC, SWAYAM at National Workshop on MOOC, SWAYAM and OER organized by Department of Education, NEHU at PGT College, Shillong on August 21, 2019, (vii) two lectures on MOOC & SWAYAM, Digital Initiatives of Govt of India at National Workshop on MOOC, SWAYAM and OER organized by Department of Education, NEHU at CTE Tura on August 30, 2019, (viii) two lectures on MOOC & SWAYAM, OER for Teaching, Learning and Research at 121 OP organized by UGC HRDC, GU, Guwahati on September 03, 2019, (ix) two lectures on MOOC, SWAYAM lectures at National

Workshop on MOOC, SWAYAM and OER organized by Department of Education, NEHU at St. Mary College of Education, Shillong on September 06, 2019, (x) lectures on Digital Initiatives of GoI at Guest Lecture Series at Department of Economics, Karimganj College, Krimganj during September 06 - 09, 2019. (xi) two lectures on Digital Initiatives of Govt. of India, OER for Teaching, Learning and Research lectures at RC on Language and Literature of India organized by UGC HRDC, GU, Guwahati on October 21, 2019, (xii) seven lectures on MOOC, SWAYAM, OER, Digital Initiatives of Govt of India, Blended Learning, Future Learn, ICT integrated Teaching at Two Day National Workshop on ICT and MOOCs and Blended Learning in Higher Education organized by Moran College, Moran, Assam on October 25 and 26 October, 2019, (xiii) four lectures on ICT integrated educational research, SPSS: Naming of the variables and data entry, SPSS: Descriptive statistics and bivariate statistics, ICT integrated application of SPSS in educational research at First National Workshop on Applications of SPSS in ICT Integrated Educational Research organized by Department of Education, NEHU, Shillong during October 29-30, 2019, (xiv) four lectures on Continuing professional development, Blended learning, Massive Open Online Courses (SWAYAM & Future Learn), 7 S's Model of learning and teaching through online at one-day National Workshop on continuing professional development through blended learning approach organized by SPPU, Pune in collaboration with School of Education, NEHU on November 09, 2019, (xv) four lectures on Research

methodology in education, Research in education through flipped learning approach, Massive open online courses (SWAYAM & Future Learn), Applications of SPSS in educational research at Research methodology in education through flipped learning approach organized by School of Education, SPPU in collaboration with Department of Education, NEHU, Shillong on November 11, 2019 (xvi) two lectures on Digital initiatives of GoI, 7 S's model of learning and teaching through online at National Workshop on Integration of theory and practice of education organized by Department of Education, NEHU at Department of Education, NEHU, Tura Campus, Tura on November 19, 2019, (xvii) two lectures on Digital initiatives of GoI, 7 S's model of learning and teaching through online at National Workshop on Integration of theory and practice of education organized by Department of Education, NEHU at DIET, Tura on November 19, 2019, (xviii) three lectures on Friedman Test, Regression (Types), Factor analysis and reliability of a test (types) at Second National Workshop on Applications of SPSS in ICT integrated educational research organized by Department of Education, NEHU, Shillong

during November 21 - 22, 2019, (xix) five lectures Digital Initiatives of GoI, MOOC & SWAYAM, OER for Teaching, Learning and Research, Future Learn, 7 S's Model of Teaching and Learning through Online at STC on MOOC organized by UGC HRDC, NEHU, Shillong during December 2-7, 2019, (xx) two lectures on MOOC & SWAYAM, OER for Teaching, Learning and Research at 122 OP organized by UGC HRDC, GU, Guwahati on December 25, 2019. (xxi) two lectures on MOOC & SWAYAM, OER for Teaching, Learning and Research at STC on Educational Technology organized by UGC HRDC, GU, Guwahati on January 28, 2020, (xxii) two lectures on Digital Initiatives of Govt of India, ICT integrated Teaching, Learning, and Research at RC in Education organized by UGC HRDC, GU, Guwahati on February 29, 2020, (xxiii) ten lectures on Digital initiatives of GoI, Online learning: SEARCH & Select, Online Learning: SEARCH & Select, Online Learning: Study, Online Learning: Skilful, Online Learning: Store & Share, Online Learning: SMART, MOOCs & SWAYAM, MOOC on MOOCs, Development of MOOCs lectures at MOOC Workshop organized by IUCTE, MS University during March 12-14, 2020.

## DEPARTMENT OF EDUCATION (TURA CAMPUS)

**Head** : Prof. (Mrs.) Nikme S. C. Momin  
**Telephone** : +91 9436315571, +91 9862045603 (M)  
**E-mail** : edntcnehu2016@gmail.com

**Faculty: 04**

Designation	Name and Qualification	Specialization
Professor	Prof. Nikme S. C. Momin, M.A. & Ph.D.(NEHU)	Educational Psychology, Teacher Education & Environmental Education
	Prof. B. C. Das, M.Phil. (DAV), Ph.D. (BHU)	Educational Technology, Teacher Education, Research Methodology
Associate Professor	Dr. S. C. Subudhi, M.Phil. & Ph.D. (Kurukshetra Univ.)	Research Methodology in Education, Educational Testing & Measurement and Special Education
	Dr. Madhusudan. J. V*, M.Phil. & Ph.D. (Gulbarga Univ.)	Sociology of Education, Early Childhood Education & Higher Education in India

\* On lien to Univ. Of Hyderabad

### Thrust Areas of Research

Educational Psychology, Educational Management and Change, Curriculum Development and Instruction, Value and Peace Education, Environmental Education, Teacher Education & Methods of Teaching, Special Education & Inclusive Education, Research Methodology, Early Childhood Education & Elementary Education, Higher Education & 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 two years MA and Ph.D. Programmes in Education. Besides regular teaching and research work, the Department conducted course Seminars in which students presented papers on various topics.

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

### Students' Profile

**Enrolment Capacity: MA-30, PhD -Variable**

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.A.	04	25	-	27	-	02	27	02	29
Ph.D.	02	02	-	02	-	02	02	02	04

***Degrees Awarded***

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.A.	03	28	-	29	-	02	30	01	31
Ph.D.	02	01	-	03	-	-	03	-	03

***Students Awarded PhD Degree***

Name of Student	Title of Thesis	Name of Supervisor & Joint Supervisor
Ms. Geetam Chetry	Career Maturity and Occupational Aspirations amongst the Academic and Vocational Students of West Garo Hills, Meghalaya.	Prof. Nikme S. C. Momin
Mr.Namseng R.Marak	“Problem Behaviour and Guidance and Counselling needs amongst the Adolescent Students of Select Secondary Schools of East and West Garo Hills”	
Mr. Aldrin B. Marak	“Professional Commitment in Relation to Work Motivation, Job Satisfaction and Self Efficacy of Elementary School Teachers.”	Dr. S. C. Subudhi

***Research Fellowship***

CSIR-UGC-NET	UGC Non-Net	Rajiv Gandhi SC/ST	ICPR Fellowship	Meritorious Malana Azad Minority Fellowship	JRF	Other
-	05	-	-	-	03	-

***Courses Conducted******Postgraduate: M.A.******Semester I***

Philosophical Foundations of Education, Advances in Educational Psychology, Educational Management and Change, Research Methodology in Education I & II.

***Semester II***

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

***Semester III***

Information & Communication Technology (ICT) in Education,

Comparative Education, Elective I,

Experimental Research Designs in Education, Early Childhood Education, Open Learning and Distance Education, Elective II, Inclusive Education I, Educational Thought I (Indian),

Teacher Education 1, Education in Political Perspective.

***Semester IV***

Laboratory Practical, Higher Education in India, Elective III, Guidance and Counselling, Women Studies and Education, Education for Rural Development, Elective-IV, Inclusive Education II, Educational Thought II (Western) Teacher Education II, Economics of Education.

***Ph.D. Courses***

Higher Education, Research Methodology,

Statistical Analysis and Computer Application

**Seminars/ Conference/ Symposia/ Workshops**

**Prof. Nikme S. C. Momin**

Coordinated a one-day Workshop on “MOOC, SWAYAM and OER for Teacher Education” with the Centre for Pre-Service Teacher Education, North-Eastern Hill University, Shillong under the MHRD Scheme of Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNM TT) on November 19, 2019

**Dr. S. C. Subudhi**

Organized two-week training programme on “Research Methodology for Research Scholars” during November 14-19, 2019”, funded by ICSSR-NERC and NEHU (Worked as Coordinator).

**Prof. Nikme S. C. Momin**

Attended (i) a two-day Workshop on “Four Year Integrated BEd Programme” organized by Department of Education, NEHU, Shillong in the Department of Education, NEHU, Shillong during July 2-3, 2019, (ii) a one-day Workshop on “North-East Regional Training Programme for Administrators of Plagiarism Detection Software (PDS) URKUND” organized by the Centre Library, NEHU, Shillong in collaboration with INFLIBNET Centre, Gandhinagar under the aegis of the Ministry of Human Resource Development, Government of India at the Multi-Use Conventional Hall, NEHU Campus, Shillong on August 23, 2019, (iii) a “National Workshop on Conservation of Biodiversity (NWC B, 2018)”, organized by Department of Horticulture, NEHU, Tura in collaboration with the Department

of Botany, Goalpara College, Assam and Department of Zoology, Don Bosco College, Tura, Meghalaya and NEHU, Tura on November 28, 2019.

As a resource person participated in (i) a one-day Workshop on “MOOC, SWAYAM and OER for Teacher Education”, organized by the Department of Education, NEHU, Shillong in collaboration with and at CTE, Tura under the MHRD Scheme of Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNM TT) on August 30, 2019, (ii) a one-day Workshop on “MOOC, SWAYAM and OER for Teacher Education” organized by the Department of Education, NEHU, Shillong in collaboration with and at Don Bosco College CTE, Tura under the MHRD Scheme of PMMMNM TT on September 16, 2019, (iii) ‘Micro Teaching (Theory)’ and ‘Micro Teaching (Practical including Evaluation)’ on a “Refresher Course on Business Studies” organized by Department of Management, NEHU, Tura Meghalaya during November 18 – December 01, 2019.

Presented papers on (i) “Social Constructivism” in one-day Workshop on “MOOC, SWAYAM and OER for Teacher Education” organized by the Centre for Pre-Service Teacher Education, NEHU, Shillong in collaboration with and at Department of Education, NEHU, Tura-Campus, Tura under the MHRD Scheme of PMMMNM TT on November 19, 2019, (ii) “Open Educational Resources (OER) of Theory and Practice of Learning” in a one-day Workshop on “MOOC, SWAYAM and OER for Teacher Education” organized by the Centre for Pre-Service Teacher Education, NEHU, Shillong in collaboration with the Department of Education, NEHU,



Tura-Campus, Tura under the MHRD Scheme of PMMMNMTT on November 19, 2019, (iii) “Open Educational Resources (OER) of Theory and Practice of Learning” in a one-day Workshop on “MOOC, SWAYAM and OER for Teacher Education” organized by the Centre for Pre-Service Teacher Education, NEHU, Shillong in collaboration with the District Institute of Education and Training (DIET), Rongkhon, Tura, Meghalaya under the MHRD Scheme of PMMMNMTT on November 19, 2019.

### **Dr. S. C. Subudhi**

Presented a paper on “Issues and Challenges of Higher Education in North East India” at the National Seminar on “Quality control; in Higher Education: An analysis” organized by Immanuel College, Dimapur, Nagaland during March 14-15, 2019 (Funded by ICSSR, New Delhi).

Delivered (i) four lectures on ‘Research Methodology’ for research scholars at Department of Management, NEHU, Tura campus during May 13 - 17, 2019, (ii) two lectures on ‘Curriculum Formulation’, and ‘Curriculum Transaction’ in a PMMMNMTT teacher training programme at USTM, Meghalaya, organized by the Adult & Continuing Education, NEHU during October 10-11, 2019, (iii) six lectures on ‘Sampling, Tools construction and Errors in Research’ in a Research Methodology Training Programme for research scholars of Social Science and Humanities, organized by the Department.

of Education, NEHU, Tura Campus, Tura, Meghalaya during October 14-19, 2019, (iv) two lectures on ‘Hypothesis’ and ‘Tools standardization’ in a Research Methodology Training Programme for Ph.D. research scholars of Social Sciences, organized by the Department. of Education, Nagaland University, Kohima, Nagaland on November 18, 2019, (v) three lectures on ‘Focused group discussion’ ‘Case study’ and ‘Interview method’ in a training programme on Research Methods in Rural Development for research scholars, faculties, officials of M&E, , SIRD&PR, ETCs, SRLM(M&E) and Executives of NGOs, organized by the National Institute of Rural Development & Panchayat Raj-NERC, Ministry of Rural Development, Govt. of India, Guwahati, Assam on November 23, 2019, (vi) two lectures on ‘Project Preparation I’ and ‘Project Preparation II’ in the UGC-sponsored Refresher course in Business Studies for the college teachers, organized by the HRDC, NEHU, Shillong at MBA Department. of NEHU, Meghalaya during November 18 - December 01, 2019, (vii) a talk on ‘Invisible Education’ at Department of Education, RD Women’s University, Bhubaneswar, Odisha on January 09, 2020.

### ***Other Activities***

#### **Prof. Nikme S. C. Momin**

Member of the (i) Meghalaya Board of School Education, Meghalaya, (ii) Directorate of Educational Research and Training, Government of Meghalaya.

## CENTRE FOR DISTANCE EDUCATION

**Head** : Prof. R. N. Rai  
**Telephone** : 0364 – 2226822 / 2228705(O), +91 9436303111 (M)  
**E-mail** : rnrai1957@yahoo.co.in

Designation	Name and Qualification	Specialization
<b>Professor</b>	Prof. R. N. Rai, M.A. & Ph.D. (Kashi Vidyapith, Varanasi)	Psychological Testing and Social Psychology of Aging
<b>Assistant Professor</b>	Dr. R. C. Pandey*, M.A. & Ph.D. (Nainital Univ.)	Experimental Psychology & Statistics

\* Superannuated on December 31, 2019

### Thrust Areas of Research

To offer General, Certificate, Diploma and Degree Courses in distance mode to all those who have for some reason or other been deprived of formal education and are seeking higher education irrespective of age or region where they reside.

### 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 learning on disabilities areas in the entire North Eastern Region of India through the distance mode. In the disability areas,

the Centre for Distance Education, NEHU presently offers the Foundation Course on Education of Children with Disability (FC-SEDE). The programme coordinators and counsellors have been exposed to the new techniques of distance mode of education through Orientation Programmes.

The Centre is hosting the IGNOU Study Centre, Shillong. Under this Centre, Master and Bachelor Degree Programmes, Diploma and Certificate Programmes are offered to students of different categories. More than 1200 distance learners are enrolled under this Study Centre.

### Students' Profile

**Enrolment capacity:** FC-SEDE – 300

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
FC - SEDE	46	71	01	99	04	13	94	23	117

### ***Degrees Awarded***

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
BEd - SEDE	01	02	-	02	-	01	02	01	03
FC -S EDE	20	45	01	57	02	05	54	11	65

Students Awarded Ph.D. Degree

Name of Student	Title of Thesis	Supervisor /Joint Supervisor
Mr. Amiya Bhaumik	"Environmental Impact Assessment of Daitari Iron Ore Mine in Keonjhar and Jajpur Districts of Odisha"	Prof. R. N. Rai. (Jt. Supervisor), Dr. J. Mawthoh (Supervisor)

### **Placement of Students**

Successful students of Disability Programmes are placed under SSA and special Schools of the North-East Region of the Country and all over the country. The students have also joined various NGOs to cater to 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.

### **B.Ed. – Special Education (BEd - SEDE)**

#### **B.Ed. - 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 & 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 & Appliances, Training in Visual Impairment, Mental Retardation and Hearing Impairment, Teaching Practice in English/Hindi/ Regional Language, Teaching Practice in Inclusive School

#### **B.Ed. - SEDE 2nd Year**

##### ***Theory***

Educational Planning and Management, Curriculum designing & 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

### **Academic Collaborations**

The Centre is conducting the FC-SEDE course in collaboration with Rehabilitation Council of India, New Delhi.

### ***Other Activities***

#### **Prof. R. N. Rai**

Delivered Lectures in NEIGRIMS for BSc Nursing 1st Year students during July 2019 -February 2020.

### III

## SCHOOL OF HUMANITIES

**Dean** : Prof. Streamlet Dkhar  
**Telephone** : 0364-2723501/3305 (O) / +91 9436117479 (M)  
**E-mail** : sohdean17@gmail.com, s.kharsyntiew@gmail.com

The School of Humanities consists of seven academic Departments, out of which five Departments, namely English, Philosophy, Khasi, Linguistics and Hindi, are in Shillong and the other two Departments, English and Garo, are in Tura. All Departments offer MA & Ph.D. programmes as part of their academic mandate. Besides the Departments of Khasi, Hindi and Linguistics also offer M.Phil. programme. Each Department undertakes several research activities in identified thrust areas of research. Faculty members of the School are actively involved in teaching and research and have successfully produced many M.Phil. and Ph.D. scholars. Few teachers have also organized number of literary

programmes for students and teachers, poets and writers. Faculty members of the School have also published their research work in reputed journals, and in the form of book chapters and books. Faculty members have been invited to present their research in various Seminars/Workshops/symposia and Conferences and have acted as Resource persons, Keynote speakers and Chairpersons. The Departments have organized different Refresher Courses for the college and university teachers at the UGC-HRDC, NEHU besides organizing field works/ educational tours for students. A large number of MA students also participated in several Debates, Quiz and Poetry competitions, organized by different literary organizations.

## DEPARTMENT OF ENGLISH

**Dean** : Prof. Mala Renganathan  
**Telephone** : 0364 2723503/ 2723513  
**E-mail** : malareng@yahoo.co.in

**Faculty:** 12

Designation	Name and Qualification	Specialization
<b>Professor</b>	Prof. Esther Syiem, M.Phil. & Ph.D. (NEHU)	American Literature, Indian Writing in English, Folklore Studies
	Prof. Moon Moon Mazumdar, M.A. & Ph.D. (NEHU)	Shakespeare Studies, British Fiction, Postcolonial Literature and Tagore Studies
	Prof. Sukalpa Bhattacharjee, M.Phil. & Ph.D. NEHU)	Critical Theory, Postcolonial Literature and Gender Studies
	Prof. Mala Renganathan, M.Phil. (Pondicherry Univ.), Ph.D. (MKUniv.)	Drama / Theatre, Indian Writing in English, Terror & Literature Studies
	Prof. Utpala G. Sewa, M.Phil. & Ph.D. (NEHU)	British Poetry and Diasporic Writing
	Prof. Jyotirmoy Prodhani, MA (Pune Univ), Ph.D. (NEHU)	Theatre and Performance, Translation, North East Studies and Dalit Literature
	Prof. Kynpham Sing Nongkynrih, M.A. & Ph.D. (NEHU)	World Poetry in English Translation, English Poetry, Indian Poetry in English Translation, Northeast Poetry in English Translation, Classical Criticism and English Literary Criticism up to the Romantics
<b>Associate Professor</b>	Shri Rabindra Singh Ngangom, M.A. (NEHU)	Indian Poetry in English, Northeast Poetry in English, World Literature in English Translation
<b>Assistant Professor</b>	Shri Lang Kupa K. War, M.A. (NEHU)	Modern Fiction, Postcolonial Literature and Visual Studies
	Dr. Suranjana Choudhury, M.Phil. (Jadavpur Univ.), Ph.D. (Calcutta Univ.)	Women's Writing, British Fiction, South Asian Literature, Partition Narratives, Popular Culture Studies



	Dr. Rimi Nath, MA & Ph.D. (Gauhati Univ.)	Indian Writing in English, Partition Narratives, Migration and Diaspora Studies and South Asian Literature
	Dr. Somjyoti Mridha, M.Phil. & Ph.D. (JNU)	Indian Writing in English, Ideas of Nation and Nationalism, Post-Colonial Studies and Literatures of Kashmir Conflict

### **Thrust Areas of Research**

Contemporary Literatures including North East Literature Studies, South Asian Literature, New Literatures in English, Drama, Theatre and Performance Studies, Comparative Literatures and Gender/Ethnic/Cultural Studies with special focus on the literary traditions of Europe, America and India in general and North East India in particular.

### **Brief Statement of Academic Activities**

The Department of English, NEHU, Shillong, in collaboration with ZUBAAN, New Delhi and Shillong Forum for English Studies organized a Drama Performance on August 16, 2019, performed by Ms. Lapdiang Syiem at the Multi-Use Convention Centre, NEHU, Shillong on 'Speak Up and Act!' on "Sexual Violence and Impunity". There was a post-performance discussion and interaction with the audience with two trained counsellors who responded to the different queries and issues raised by the audience, facilitated by a resource person on Sexual Violence and Impunity within the region.

Class Representatives of both 1st semester and 3rd semester classes participated in the Awareness Programme on Ragging and its ill-effects "Sensitisation Programme on Ragging" on September 19, 2019, organized by the Proctor, Convener, Anti-Ragging Committee, NEHU, Shillong.

MA students participated in the Debate

and Quiz competitions organized by the Department of Tourism & Hotel Management, NEHU, Shillong to celebrate World Tourism Day 2019, on September 26, 2019. Ms. Lipokmenla Ao and Ms. Benidamika Jones Latam as debate participants and Kyntiewborlang Kharakor and Korlin Shylla as Quiz participants. Ms. Jyotismita Kalita and Neeharika Tahbilda also participated in the programme.

Special lecture delivered by Professor Harshana Rambukwella (Director of the Postgraduate Institute of English (PGIE), Open University of Sri Lanka and Honorary Assistant Professor, School of English, The University of Hong Kong) organized by the Department of English on "The politics of authenticity: Culture and Sinhala Nationalism in Sri Lanka", in the English Department's Cluster Classroom on November 06, 2019. (Coordinator: Dr. S. Choudhury).

Mr. Ricky Meitei, Research Scholar, was selected for IRIS Programme 2020 to visit Japan during February 01-08, 2020.

Research Scholars and MA students of the Department attended/participated in the celebration of Matribhasha Diwas (Mother Tongue Day) organized by the Department of Linguistics, NEHU, Shillong in collaboration with National Council for Promotion of Sindhi Language, New Delhi on February 21, 2020.

Ms. Merininla Jamir, MA (English) student has been nominated as member of the

Academic Council, NEHU, Shillong for a period of one year.

Teacher member of PG Admission Committee attended a training programme conducted by UMS, NEHU, Shillong for Admission Process held at NEHU Administrative building on July 25, 2019.

Prof. Mala Renganathan, Head of the Department of English and Dr. Suranjana Choudhury attended a two-day Workshop on Massive Open Online Courses (MOOCs) during May 28-29, 2019 organized by NEHU, Shillong.

### Students' Profile

**Enrolment Capacity: M.A. - 54, Ph.D. - 08**

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.A.	11	43	01	44	01*	08*	31	23	54
Ph.D.	03	05	--	07	01	-	01	07	08

\* Female - 1 (EWS)

### Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.A.	08	39	01	41	01	04	25	22	47
Ph.D.	01	03	-	03	-	01	04	-	04

### Students Awarded PhD Degree

Name of Student	Title of Thesis	Name(s) of Supervisor(s)/ Joint Supervisor
Ms. Amanda C. Tongper	The Confluence of Grand Narratives and Postmodern Techniques: A Study of the Poetry of Mahmoud Darwish and Pablo Neruda	Prof. Esther Syiem
Mr. Lalnunsanga Ralte	Science Fiction as Social Commentary: An Analytical Study of the Major Writers	Prof. Kynpham Sing-Nongkynrih
Ms. Mutum Roshni Devi	Flora Nwapa's Novels: A Gynocritical Study	Prof. Sukalpa Bhattacharjee
Ms. Daiarisa Rumnong	The Play of Self: A Study of Select Asian Women's Memoirs	Prof. Esther Syiem

### Research Fellowship

UGC NET: 20

JRF: 1

Rajiv Gandhi SC/ST: 2

NEHU Non-NET Fellowship: 1

Others: 2 (PG Merit Scholarship)

## **Courses Conducted**

### **Postgraduate: M.A.**

#### ***Semester I***

Poetry (Chaucer to Pope), Fiction (19th Century to the Beginning of the 20th Century), Drama (Renaissance to Restoration), Classical Literary Theory and Criticism, Nineteenth Century American Literature

#### ***Semester II***

Poetry (Blake to Browning), Fiction (Early Twentieth Century to Mid-Twentieth Century), Environment & Indian Writing in English, The Beginnings of English Literary Criticism, World Literature in Translation (Option A), South Asian Literature (Option B), Modern Indian Drama (Option C).

#### ***Semester III***

Poetry (Yeats to Duffy), Shakespeare I, Literary Theory and Criticism: Romantic Age to Structuralism, Contemporary Indian Fiction in Translation (Option A), Women and Travel (Option B) Drama in Performance (Option C), Women's Writings (Option A), River Narratives from India (Option B), Literature from India's North East (Option C)

#### ***Semester IV***

Fiction: Late Twentieth Century and Beyond: Option Contemporary American Literature (Option A), Postcolonial Literatures (Option B), Shakespeare II, Contemporary Theory, Modern Drama

### **M.Phil./Ph.D. Courses**

Research Methodology, Research Writing and Presentation, The Literature of North-East India (Option D)

### **Seminars/Conferences/Workshops/Symposia/Extension Programmes**

#### ***Organized***

#### **Dr.Suranjana Choudhury**

Organized a special lecture delivered by

Professor Harshana Rambukwella (Director of the Postgraduate Institute of English (PGIE), Open University of Sri Lanka and Honorary Assistant Professor, School of English, The University of Hong Kong) organized by the Department of English on "The politics of authenticity: Culture and Sinhala Nationalism in Sri Lanka" on November 06, 2019.

Convened a performance and a panel discussion on sexual violence and impunity titled "Speak Up and Act" sponsored by Zubaan, New Delhi in collaboration with the SFES and Department of English, NEHU on August 16, 2019.

#### ***Attended***

#### **Prof. Sukalpa Bhattacharjee**

Presented papers on (i) "Visualizing the Nation: A Feminist Perspective" at the Two-Day National Seminar on "Contesting the Site of Sights: The Discourse of Visual Media Cultures with Special Reference to Northeast India", organized by the English and Foreign Language University, Shillong Campus during June 10-11, 2019, (ii) "Gendering Conflict: Whose War? Whose Peace?" at the International Seminar on "Eye for an Eye: Conflicts in South-East Asia" organized by the Department of English, Synod College Shillong during November 06 - 07, 2019, (iii) 'The Map is not the Territory': Tale (iv) And Other History" at the National Seminar on "Responsibility, Guilt, Forgiveness: Affective Dimensions of Border Crossing Events" organized by the Department of English and Cultural Studies at the University of Burdwan on January 27, 2020.

#### **Prof. Mala Renganathan**

Attended a two-day Workshop on Massive Open Online Courses (MOOCs) organized by NEHU, Shillong during May 28 - 29, 2019.

**Prof. Jyotirmoy Prodhani**

Delivered plenary lectures on (i) “Oral Narratives and their Cultural and Historical Significance” in the International Conference on Intersections of Literature and History for Social Change COIN – 2019 (Coining New Ideas – Transcending New Horizons) Organized by Department of Humanities and Social Sciences National Institute of Technology Meghalaya in collaboration with ICSSRNERC during October 19-20, 2019, (ii) “Present Shock’ and the Visual Realms of Singular Immensities” in the National Seminar on Contesting the Site of Sights: The Discourse of Visual Media Cultures With Special Reference to Northeast India, organized by the Department. of ELE and the Department. of JMC, The English and Foreign Languages University, (EFLU) Shillong Campus during June 10-11, 2019, (iii) “The State of Rajbanshi Language in Assam’ in the National Seminar on Linguistic Aspects and Development of Teaching Materials in Rajbanshi Language at Coochbehar Panchanan Barma University, Coochbehar, organized by CPB University in collaboration with Asiatic Society during November 08-09, 2019.

**Dr. Suranjana Choudhury**

Presented a paper on “Home as the remembered subject: Food and nostalgia in select Partition memoirs” in International Conference on Role of Language, Literature and Culture at NIT Raipur during February 22-23, 2020.

Chaired two sessions in ICSSR-TEQIP III sponsored ‘International Conference on Interdisciplinarity: Intersections of Literature and History for Social Change’ at NIT, Meghalaya during October 19-20, 2019.

**Dr. Rimi Nath**

Presented a paper on “Long shadow’ of Bangladeshi liberation war and the National question: a reading of Tahmima. Anam’s Bengal Trilogy” in the Third Annual Conference on South Asia, Ireland India Institute, Dublin City University, Dublin, Ireland, during April 24-26, 2019.

**Dr. Somjyoti Mridha**

Presented papers on (i) “Knowledge-Power Nexus and the Colonial World: A Study of Alfred Assolant’s Once Upon a Time in India.” at National Seminar Foreign Languages, Literatures and Cultures: The Interfaces, With Special Reference to the North-East organized by EFLU, Shillong during September 19-20, 2019, (ii) “Writing the End of the Empire, Writing Kashmir: A Study of Three Post-War British Novels” at the UGC Sponsored National Seminar on Contemporary British Fiction: Texts and Contexts organized by the Department of English, Dibrugarh University during March 03-04, 2020.

Delivered special lectures on (i) “Literary Cultures and Nationalism” to the Post Graduate and Doctoral Students of the Department of English, Vijayanagara Sri Krishnadevaraya University (VSKU), PG Centre, Koppal, Karnataka on January 16, 2020, (ii) “Nationalism and its Discontents: A Literary Perspective” at the Department of English, Manohari Devi Kanoi Girl’s College (MDKG), Dibrugarh March 05, 2020.

Conducted a Workshop on Academic Writing and Research Methodology with the Post Graduate and Doctoral Students of the Department of English, Vijayanagara Sri Krishnadevaraya University (VSKU), PG Centre, Koppal, Karnataka on January 17, 2020.

## **Publications**

### **Research Papers**

#### ***Published in India***

Nongkynrih, K. S. (2020). "He Dreams about His Own Death; A Letter to the Sky". Poetry at Sangam. July 2019. N. Pag.

Nongkynrih, K. S. (2020). "The Lesson of the Quilt." *Bl Ink*. Jan. 2020.

Nath, R. (2019). "A Keynote Speaker" (poem). *Muse India: the literary ejournal*, feature: the madness of the word (85). [http://www.museindia.com/Home/View\\_Content\\_Data?arttype=feature&issid=85&menuid=8341](http://www.museindia.com/Home/View_Content_Data?arttype=feature&issid=85&menuid=8341)

Prodhani, J. (2019) "Orality, historiography and literary Imaginations: The Interfaces of Narratives." *The Clarion* 8 (2): 33-39. ISSN: 2277-1697.

#### ***Published Abroad***

Nath, R. (2019). 'Since / Then', 'Paris of East' and 'Benaras' (poems). *Setu: Bilingual Monthly Journal* (Pittsburgh, USA), 3(11). <http://www.setumag.com/2019/04/poetry-rimi-nath.html>

Nongkynrih, K. S. (2019). *Waiting for the Militants*. *Cordite Poetry Review*. 93.

Nongkynrih, K. S. (2020). *The Miraculous Prayers of Liaw*. *Cafe Dissensus*.

#### **Books/Book Chapters/Proceedings**

Renganathan, M., (2020), Editor. *Violence and Terror: Narratives from North East India*. DVS Publishers, New Delhi & Guwahati, ISBN: 9789385839351.

Sewa, U. G. (2020). *Beyond Rituals: Looking at Traditional Customs of the Gorkhas of Shillong*. In Q. Marak and S. K. Chaudhuri (eds.), *The Cultural Heritage of Meghalaya*. Bhopal/New Delhi: IGRMS/Manohar, 351-366.

Nongkynrih, K.S. (2019). *Ri Pnar; Jalebi; For You, Explaining a Few Things; Happiness; Canine Lesson; Waiting for the Militants*. Eastern Muse. Authors Press, New Delhi, ISBN 978-93-89110-21-0.

Prodhani, J. (2019). "Translating Theatre: Anxiety of Dramatic Narratives as Text and Performance" in *Narrative Cultures and Textual Traditions of North-East India (Essays in Honour of Prof. K. C. Baral)*. A. Ara, D. Sarma and B. Jyoti Gogoi (Eds.), *Purvayan Publishers*, Guwahati, Assam.

Bhumika, R., Choudhury, S., editors., (2020). *Poetics and politics of the 'everyday': Engaging with India's northeast* (Issue 53) [https://cafedissensus.com/2020/03/21/content-poetics-and-politics-of-the-everyday-engaging-with-indias-northeast-issue-53/ISSN 2373-177X](https://cafedissensus.com/2020/03/21/content-poetics-and-politics-of-the-everyday-engaging-with-indias-northeast-issue-53/ISSN%202373-177X)

Choudhury, S. (2019). "A world more humane" Review of Roy, Sumana(ed.) *Animalia Indica: The finest animal stories in Indian Literature*. <https://biblio-india.org/showart.asp?inv=25&mp=JM20>.

Nath, R. (2020). 'Bookstores' and 'Uzanbazar and Brahmaputra' (poems). *Cafe Dissensus*, 'Poetics and politics of the 'everyday': Engaging with India's Northeast (53). <https://cafedissensus.com/2020/03/21/two-poems-by-rimi-nath/>.

#### ***Academic Collaborations***

##### **Dr. Rimi Nath**

Member of the advisory board for the book project, *Melange*, edited by Dr Ashima Sharma Borah, Dr Shrabani Bhadra and Dr Ananta Pegu, Guwahati, IQAC, K. C. Das Commerce College, Guwahati, Assam, 2019.

##### **Honours/Awards/Recognitions**



Prof. Sukalpa Bhattacharjee

Advisory Board Member, Dibrugarh University Journal of English Studies, Member, Society for the History of Emotions (SHE) Australia, Life Member, North East India History Association (NEIHA).

Awarded Scholarship by the Centre for the Study of Citizenship, for presenting a research paper at the 17th Annual International Conference on Citizenship (2020) at Wayne State University, Detroit, Michigan, U.S.A.

Visting Fellow, (UGC-SAP DRS II) in the Department of English and Cultural Studies at the University of Burdwan during January 23-30, 2020.

**Member, Board of Studies, Department of English, Sikkim University.**

**Prof. Mala Renganathan**

Member of the (i) UGC Expert Committee for visit to Patkai Christian College, Dimapur, Nagaland, on June 26-27, 2019.

UGC Nominee, Advisory Committee of the UGC-SAP-DRS II “Situating the Mizo/ Zohnahthlak in Mizoram and Manipur: A Study of the Historical and Socio-Cultural Process of Emergent Identities from Orality to Writing” w.e.f. February 2020.

**Dr. Suranjana Choudhury**

Member of the Doctoral Board of Humanities and Social Sciences in National Institute of Technology, Shillong.

**Other Activities**

**Prof. Esther Syiem**

Delivered lectures on (i) “Literatures of North East India” in the UGC Sponsored Refresher Course held in the Department of Khasi on November 18, 2019, (ii) “Aspects of Orality in Literatures from North East India” in the 3rd Dr. Indira (Mamoni

Raisam) Goswami Memorial Lecture at Cotton University, Guwahati. organized by South East Asia Ramayana Research Centre Guwahati, Assam on December 07, 2019

Participated in a Poetry Reading of self-composed poems organized by the Department. of English, St Anthony’s College Shillong on July 18, 2019 at St Anthony’s College, Shillong.

**Prof. Sukalpa Bhattacharjee**

Chaired academic sessions at the (i) two-day National Seminar on “Contesting the Site of Sights: The Discourse of Visual Media Cultures with Special Reference to Northeast India”, organized by the English and Foreign Language University, Shillong Campus during June 10-11, 2019, (ii) International Seminar on “Eye for an Eye: Conflicts in South-East Asia” organized by the Department of English, Synod College Shillong during November 06-07, 2019.

Delivered lectures on (i) “Teaching Skills in Indian Classrooms” at the UGC-HRDC Short Term Course in Soft Skills “ held at the UGC-HRDC at NEHU Shillong during September 23-28, 2019, (ii) “Folklore and Subalternity” (2 lectures) at the Refresher Course in Folkloristics and Semiotics organized by the Department of Cultural and Creative Studies NEHU Shillong held at UGC-HRDC NEHU Shillong, during September 16-28, 2019, (iii) “Border Crossings in New Literature: Events and Memories” in the Department of English and Cultural Studies held at the University of Burdwan on January 28, 2020, (iv) Research Methodology (2 lectures) in the Ten Days Research Methodology Workshop organized by ICSSR-NERC Shillong during December 04-13, 2019.

Visting Fellow, (UGC-SAP DRS II) in the Department of English and Cultural Studies at the University of Burdwan



during January 23 - 30, 2020.

Reviewer: Indian Journal for Gender Studies (SAGE Journals), Asian Ethnicity (Taylor & Francis), SAGE Open: peer reviewed open access journal for the social and behavioral sciences and humanities (www.sageopen.com).

**Prof. Mala Renganathan**

Delivered lectures on (i) “Folk Theatre and Indian Drama (2 lectures)” in the Refresher Course on “Folkloristics and Semiotics” organized by the Department of Creative & Cultural Arts, NEHU, Shillong on April 04, 2019, (ii) “Folk Performances in the Modern World” in the Refresher Course on ‘Folklore and Semiotics’ organized by the Department of Creative and Cultural Studies, NEHU, Shillong in September 2019.

Chaired an Academic Session “Culture and Conflict” in the International Seminar “An Eye for an Eye: Conflict in South East Asia” organized by the Department of English, Synod College, Shillong during November 06-07, 2019.

**Prof. Kynpham Sing Nongkynrih**

A short story, ‘Tagore among the Philistines’ was published in GPlus, Guwahati. May 2019. 6:31.

**Prof. Jyotirmoy Prodhani**

Delivered invited lectures on “Skills for Translation and Translation Practice” at the National Workshop on Socio-cultural

Perspective of Translation in Writings from Northeast India at Arya Vidyapeeth College, Guwahati, organized by Literary Cell AVC during October 21-26, 2019.

**Mr. Rabindra Singh Ngangom**

Self-composed poems (i) published in Eastern Muse: Poems from the East and North East, published by Authors press, January 2019, New Delhi, (ii) published in “Poetics and politics of the ‘everyday’: Engaging with India’s Northeast” (Issue 53) of Café Dissensus, an alternative magazine dealing in art, culture, literature, and politics, New York City, USA, on March 21, 2020, (iii) in “Poetry Live” (read) on Instagram on March 31, 2020, hosted by Kitab Khanna and Indian Novels Collective, Mumbai

Panelist in discussion “Poetry in Northeast India” and read self-composed poems at Ukiyo National Literary Festival on October 10, 2019, hosted by Ukiyo Bookstore, Imphal, Manipur.

**Dr. Suranjana Choudhury**

Delivered invited talks on (i) ‘Partition Writings and Gender’ at EFLU, Shillong on April 12, 2019, (ii) ‘Workshop on creative writing’ organized by the Department of English and Communication, Martin Luther Christian University, Shillong on November 01, 2019.

## DEPARTMENT OF ENGLISH (TURA CAMPUS)

**Head** : Prof. Sujata Gurudev  
**Telephone** : +91 9436592455, +91 6009559216 (M)  
**E-mail** : englishtura.nehu@gmail.com, s\_guudev@rediffmail.com

**Faculty: 06**

Designation	Name and Qualification	Specialization
<b>Professor</b>	Prof. Sujata Gurudev, M.Phil. & Ph.D. (NEHU)	American Literature Modern British Fiction, Modern Poetry
	Prof. Dwijen Sharma, M.Phil. & Ph.D. (Dibrugarh Univ.)	Indian English Literature Literary & Cultural Theory
<b>Associate Professor</b>	Dr. Ramona M. Sangma, M.A. & Ph.D. (NEHU)	Postcolonial Literature Literary Theory & Criticism, Ethno-Literature.
	Dr. Jova C. Marak, M.A. & Ph.D. (NEHU)	Indian Writing in English, Women Writings, Ethno- Literature
	Dr. Namrata Pathak, M.Phil. & Ph.D. (EFLU)	British & Continental Drama, Literary Theory & Criticism, Gender Studies, Writings from India's North East
	Dr. L. K. Gracy, M.A. & Ph.D. (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, Post colonial Literature, Women and Gender Studies, Theatre Studies, Western Literary Theory and Indian Poetics.

### Brief Statement of Academic Activities

The Department conducts M.A. and Ph.D. programmes in English Literature, with 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. At present, the Journal is under review to be listed in the UGC-Approved List of Journals. Student Seminar has been introduced in the Department to orient the Master's level students towards serious research. Regular Seminars on progress of Ph.D. scholars are held in the Department. Scholars and professionals from areas of mass media, graphic design, 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. The Drama Society is accredited with the task of organizing every year a 12-day Workshop on Theatre in Education in collaboration

with National School of Drama, New Delhi. NSD has approved the proposal to hold Workshops on Community Theatre/ Indigenous Theatre in the near future under the auspices of the Drama. Society of the Department of English, NEHU, Tura. This

is a laudable venture as it will further help in documenting and preserving the local performances and theatrical forms of Meghalaya and the nearby areas.

### Students' Profile

**Enrolment Capacity: M.A. – 34, Ph.D. - 05**

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.A.	10	24	01	31	-	02	32	02	34
Ph.D.	01	04	-	05	-	-	05	-	05

### Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.A.	07	25	-	30	01	01	31	01	32
Ph.D.	01	01	-	01	-	01	02	-	02

### Students Awarded PhD Degree

Name of Student	Title of Thesis	Name of Supervisor
Deisami Sumer	History as Myth in Wilson Harris's Novels: A Select Study	Prof. Sujata Gurudev
Suraiya Yasmin	The Sufi Poetry of Rumi, Hafiz and Bulleh Shah: A Thematic Study	Prof. Sujata Gurudev

### Educational Tour of Students

**Teacher-in-Charge** : Dr. L.K. Gracy

**Places/Institutions Visited** : Haryana and Rajasthan

**Duration of Tour** : 13 days (January 18-30, 2020)

**Purpose of Tour** : To visit Educational Institutions, Museums, Historical places of interest and to learn and observe the socio-economic progress and diversity of the country especially pertaining to Haryana and Rajasthan.

The additional perk of the tour is the participation in the famous Jaipur Literary Festival (JLF) by the students and the teacher-in-charge. The scope of listening to the stalwarts in the field of literature in JLF

exposed the students to new world views and perspectives.

### Courses Conducted

**Postgraduate:M.A.**

#### Semester I

Poetry (Chaucer to Pope), Fiction (19th Century to Beginning of 20th Century), Drama (Renaissance to Restoration), Classical Literary Theory and Criticism, 19th Century American Literature.

#### Semester II

Poetry (Blake to Browning), Fiction (Early 20th Century to Mid-20th Century), Environmental & Indian Writing in English, The Beginnings of English Literary Criticism, Open Course: World Literature in Translation (Option A), South Asian Literature (Option

B), Modern Indian Drama (Option C)

### ***Semester III***

Poetry (Yeats to Duffy), Shakespeare I, Literary Theory and Criticism (Romantic Age to Structuralism), Open Course: Contemporary Indian Fiction in Translation (Option A), Women and Travel (Option B), Drama in Performance (Option C)

### ***Semester IV***

Fiction (late 20th Century and Beyond), Open Course: Contemporary American Literature (Option A), Postcolonial Literatures, Shakespeare II, Contemporary Theory, Modern Drama (Option B)

### **Ph.D. Courses**

Research Methodology, Research Writing and Presentation, Theory and Text (Option D)

### **Seminars/Conferences/Symposia/Extension Programmes**

#### ***Attended***

#### **Prof. Sujata Gurudev**

Delivered (i) a lecture on “Research and its Application in Social Science” in the Training Programme on Research Methodology organized by the Department of Education on October 18, 2019, (ii) a plenary talk on “Environment, Happiness, and Health: Re-Reading Literature in the 21st Century” in a National Seminar on Environment, Happiness and Health: Re-reading Literature in 21st Century at Bodoland University, Kokrajhar, Assam during November 14-15, 2019, (iii) lectures as a resource person in the Refresher Course in Business Studies organized by the Department of Management, NEHU, Tura Campus, in collaboration with UGC-HRDC, NEHU, Shillong.

Participated in the valedictory session of the conference on Multi-Stakeholder, Child Specific Interventions from a Professional Social Work Perspective organized by MSW, NEHU, Tura, held on November 18, 2019,

#### **Prof. Dwijen Sharma**

Delivered (i) extension lectures on ‘Modern

Literary Theories’ in Rani Channamma University, Belagavi, Karnataka on April 26, 2019 and ‘Tenets of Postcolonial Theory’ in Rani Channamma University, P G Centre, Bijapur, Karnataka on May 02, 2019 (ii) two lectures on ‘Research Methodology’ as a Resource Person in National Workshop on Research Methodology at Rani Channamma University, Belagavi, Karnataka on April 29, 2019, (iii) one special lecture on: (a) ‘Research Methodology’ in KLE Society’s Lingaraj College, Belagavi, Karnataka on April 30, 2019, (b) ‘Modern Critical Theories’ and ‘The Background to 20th Century British Literature’ respectively’ in Shri S. R. Kanthi Arts, Commerce and Science College, Mudhol (Bagalkot), Karnataka on 3rd May 2019, (iv) invited lectures on: (a) ‘Intertextuality’ at Kokrajhar Govt. College, Kokrajhar, BTAD, Assam on September 13, 2019, (b) ‘The Author and the Reader’ at Bongaigaon College, Bongaigaon Assam on January 29, 2020.

Presented plenary papers on (i) “Doing Environmental Humanities: A Case for Happiness and Wellbeing” in a National Seminar on Environment, Happiness and Health: Re-reading Literature in 21st Century at Bodoland University, Kokrajhar, Assam during November 14-15, 2019, (ii) “Does Indian Culture Resist Scientific Temperament?” in the National Seminar on Indian Culture and Scientific Temperament in 21st Century at Central Institute of Technology, Kokrajhar, Assam on January 28, 2020.

#### **Dr. Namrata Pathak**

Coordinator of the (i) 12-day National Workshop on Theatre in Education in collaboration of NSD, New Delhi, during February 17-21, 2020, (ii) talk on “Tracing the Historical Trajectory of Evolution of Indian Poetry in English” delivered by Dibyajyoti Sarma, publisher (Red River) and eminent translator on October 03, 2019.

Delivered (i) a talk on “Indian Poetry in English and the Recent Trends” at Summer Reads, New

Delhi, on April 22, 2019, (ii) plenary talks as resource person on: (a) Creative Writing in an Age of Technological Advancement in a National Workshop organized by Nowgong College in collaboration with IQAC and IIC, Nowgong College, on March 06, 2020, (b) Women, Society and Empowerment in Srimanta Sankardev University, Nagaon, on March 06, 2020.

Invited as a speaker (i) in a literary programme, Lights in Verses, organized by Oxford Bookstores, Connaught Place, New Delhi, on April 23, 2019, (ii) in Arunachal Literature and Art Festival (ALAF) with the theme “Literature through the Lens of Indigenous Language and Perspective of Documenting Culture through Art”, Itanagar, sponsored by the Department of Tourism during November 08-10, 2019.

Presented papers on (i) “In Search of an Alternative History in Arun Sarma’s Buranjipath” in a National Seminar on Archaeology of North East India, Retrospect and Prospect organized by the Department of History and Archaeology, NEHU, Tura, in collaboration with IGRMS, Bhopal, held during August 26-28, 2019, (ii) “Pedagogy and Performance: How to Teach an English Text in a Local Classroom with Specific Reference to Three Northeastern Texts” in the ELTAI Golden Jubilee Conference on Right to English held at Amity University, Noida, Delhi, during October 09-12, 2019.

#### **Dr. L. K. Gracy**

Co-coordinator: 12-day National Workshop on Theatre in Education in collaboration of NSD, New Delhi, during February 17-29, 2020.

Presented papers on (i) ‘Gender Based Violence and the Matrilineal Society: A Study of A•chik Women in West Garo Hiks, Meghalaya’ in an International Seminar organized by the Department of Economics, Gossaigaon College, Gossaigaon, Assam, India, during August 26-28, 2019, (ii) ‘Kohima and World War II as Reflected in Easterine Kire’s novel “A Respectable Woman”, in a National

Seminar organized by the Department of History and Archaeology, NEHU, Tura in Collaboration with Indira Gandhi Rashtriya Manav Sangrahalaya, Bhopal, during August 26-28, 2019, (iii) ‘Ecological Consciousness in Easterine Kire’s “When the River Sleeps”’, in an International Seminar organized by the Department of Economics, Gossaigaon College, Kokrajhar, Assam, India held during February 03-05, 2020.

#### **Publications**

##### **Research Papers**

###### ***Published in India***

Sangma, R. (2020). The Meghalayans, Series 1. D Kumar Vijay, Diengdoh VD Cyril (Eds.). Department of Tourism, Govt. of Meghalaya, Shillong, p. 3, 5, 21.

Pathak, N. (2019). Dark, Ravenous and Mad: Hunger in Bhaskar Hazarika’s Aamis. TheThumb Print-A Magazine from the East, India. <http://www.thethumbprintmag.com/dark-ravenous-and-mad-hunger-in-bhaskar-hazarikas-aamis/>.

##### **Honours/Awards/Recognition**

A book titled “Women’s Writing from North East India” edited by the Department of English (Tura Campus) featured in the BA English (Hons) revised syllabus of Jamia Milia Islamia, New Delhi.

##### **Prof. Sujata Gurudev**

Received a letter of appreciation from the Coordinator, Masters of Social Work (MSW), for participating in the valedictory session of the conference on Multi-Stakeholder, Child Specific Interventions from a Professional Social Work Perspective held on November 18, 2019.

##### **Other Activities**

##### **Prof. Dwijen Sharma**

Delivered lectures on (i) ‘Research Methodology in Cultural Studies’ (4 lectures) as a Resource Person in the Eleven-Day Workshop on Research Methods in Literary Studies at Bodoland University, Kokrajhar,

BTAD, Assam during September 11-14, 2019, (ii) “Research Methodology in Cultural Studies” and “Developing a Qualitative Research Synopsis” (2 lectures) in the ICSSR sponsored Training Programme on Research Methodology organized by the Department of Education, NEHU, Tura Campus during October 14-19, 2019, (iii) ‘Indian Writing in English’ (2 lectures) in the Refresher Course on Language and Literature of India organized by the HRDC, Gauhati University on October 19, 2019.

Chaired technical sessions in the (i) National Seminar on Environment, Happiness and Health: Re-reading Literature in 21st Century at Bodoland University, Kokrajhar, Assam during November 14-15, 2019, (ii) National Seminar on Indian Culture and Scientific Temperament in 21st Century at Central Institute of Technology, Kokrajhar, Assam on January 28, 2020.

#### **Dr. Ramona Sangma**

Resource Person and featured in documentary on conservation in North East India Explorer of the Misty Mountains. (Episode: Meghalaya part 02, EpisodeNo. 3) Hosted by Mike Pandey; Doordarshan Arunprabha. 2020.

Member of the (i) International Society for Folk Narrative Research (ISFNR), (ii) Indian National Trust for Art and Cultural Heritage (INTACH), Meghalaya Chapter.

#### **Dr. Namrata Pathak**

Featured in the (i) Sangam Special Issue on Poetry from the North East, Volume II, Issue

2. Poetry at Sangam showcases poetry in English and translations as well as essays on poetics and news of new release. <http://poetry.sangamhouse.org/2019/06/namrata-pathak/>, (ii) Creative Section of Nezone: Bridging the Gap. <https://www.nezone.com/info/MytjUVNtZjhhNkxuV2NlaXY1dndKZz09/a-few-poems-of-namrata-pathak.html>, (iii) Five pieces in Bengaluru Review, an online magazine dedicated to art and its many expressions that publishes works of original fiction, poetry, translations, in-depth essays, interviews, and photo stories. <https://bengalureview.com/tag/september-2019/>, (iv) Four pieces in the Creative Section of Café Dissensus, an alternative magazine dealing in art, culture, literature, and politics in the volume on Poetics and Politics of the ‘everyday’: Engaging with India’s Northeast (Issue 53) guest edited by Suranjana Choudhury and Bhumika R, New York City, USA. <https://cafedissensus.com/2020/03/21/content-poetics-and-politics-of-the-everyday-engaging-with-indias-northeast-issue-53/>, (v) Bengaluru Review, an online magazine <https://bengalureview.com/namrata-pathak-interview>. <https://bengalureview.com/namrata-pathak-interview>.

Member of the Editorial Board Journal of North East Writer’s Forum (NEWF).

**Reviewer** : National Journal, Dibrugarh University Journal of English Studies (DUJES).



## DEPARTMENT OF GARO (TURA CAMPUS)

**Head** : Dr. Fameline K. Marak  
**Telephone** : 03651- 223107, Fax: 03651-223953  
**E-mail** : fkmarak@gmail.com/garoDepartmentnehu@gmail.com.

### Faculty: 4

Designation	Name and Qualification	Specialization
<b>Associate Professor</b>	Dr. Fameline K. Marak, M.A. & Ph.D. (NEHU)	Traditional & Modern Poetry, Folk Literature & A·chik folklore
<b>Assistant Professor</b>	Jacqueline R. Marak, MEd (Utkal) PhD (NEHU)	Fictional Studies
	Dr. Dokatchi C. Marak, M.A. & Ph.D. (NEHU)	Linguistics
	Shri Crystal Cornelious D. Marak, M.A. (NEHU)	Fictional Studies, Drama

### Thrust Areas of Research

Garo Literature, Language, Folklore, and Literature in Translation, Environmental Studies and World Literature including Indian Writings in English.

### Brief Statement of Academic Activities

The Department offers MA, M.Phil. and Ph.D. programmes. The Department continues in its research activities to preserve and promote the rich A·chik tradition and language through translation and documentation in areas of Folklore, Linguistics and Literature. The Department holds class Seminars regularly to impart research-oriented interest among the Master level students and Research scholars. Field studies are conducted regularly and the students are encouraged to research folk literature and culture of the Garos. As there is a need to improve and

preserve the language, literature and culture of the Garos/ A·chiks, students are always encouraged to write articles, poems, short stories, essays, field reports etc. Seminars, Workshops and training on traditional skills and knowledge are conducted regularly in the Department. Visiting Professors/ Fellows and Scholars are invited from other Universities for special lectures on selected topic such as Oral Narrative, Literary Theory & Criticism, Research Methodology and Theory of Translation etc., where the students have freedom to discuss and interact with the professionals. 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.

## Students' Profile

Enrolment capacity: M.A. - 33, Ph.D. - 03

Degree	Male	Female	SC	ST	GEN	Meghalaya	Non-Meghalaya	Total
M.A.	11	22	-	33	-	33	-	33
M.Phil.	01	02	-	03	-	03	-	03
Ph.D.	-	03	-	03	-	02	01	03

## Degrees Awarded

Degree	Male	Female	SC	ST	GEN	Meghalaya	Non-Meghalaya	Total
M.A.	10	21	-	31	-	31	-	31

## Fieldwork/Educational Tour of Students

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

**Places/Institutions Visited:** Mumbai & Goa. Visited important places like Gateway of India, Museums, Hanging Garden, Chhatrapathi Shivaji Maharaj Terminus (C.S.T.), Mumbai, Marine Drive, Upper Fort, Aguada, Bom Jesus Basilica, Baga Beach, Dona Paula, Diocesan Catechetical Centre, Dolphin Trip, and other places.

**Duration of Tour** : 13 days (January 14-26, 2020)

**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. It was also aimed at providing opportunities to the students to learn new experiences and knowledge by visiting Educational Institutions and Historical places.

## Courses Conducted

**Post graduate: M.A.**

### Semester I

History of Garo Language and Literature, Poetry I, Sacrificial Rites & Invocations,

Drama I, Linguistics I & Environmental Studies.

### Semester II

Fiction I, Literature in Translation, Prose I, Linguistics II & Linguistics III.

### Semester III

Literary Theory & 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.

## Ph.D. Courses

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

Seminar/ Conference/ Symposia/Extension Programmes etc.

## Organized

The Department organized (i) the Sahitya Akademi sponsored Gramalok in collaboration with A•chik Literature Society, Tura at Mendipathar College, North Garo Hills, Meghalaya, on August 31, 2019. Coordinator: Fameline K. Marak; Organizing members: Jacqueline R. Marak, Dokatchi Ch. Marak; Organising Secretary:

Crystal Cornelious D. Marak, (ii) the Sahitya Akademi sponsored Gramalok in collaboration with A•chik Literature Society, Tura at Williamnagar Government College, East Garo Hills, Meghalaya on September 14, 2019. Coordinator: Fameline K. Marak, organizing member: Jacqueline R. Marak, Dokatchi Ch. Marak; Organising Secretary: Crystal Cornelious D. Marak, (iii) the Writers' Meet in collaboration with A•chik Literature Society, Tura on September 21, 2019 at the Christian Girls H.S. School, Tura. Coordinator: Fameline K. Marak, Organizing members: Jacqueline R. Marak, Dokatchi Ch. Marak; Organising Secretary: Crystal Cornelious D. Marak, (iv) the Sahitya Akademi sponsored Gramalok in collaboration with A•chik Literature Society, Tura at Ampati Degree College, South-West Garo Hills, Meghalaya on September 28, 2019. Coordinator: Fameline K. Marak, Organizing members: Jacqueline R. Marak, Dokatchi Ch. Marak; Organising Secretary: Crystal Cornelious D. Marak, (v) A Week Training Programmeme on Loinloom: A•chik Traditional Folk Skill in the Department of Garo, NEHU, Tura Campus, Tura, during January 27 – February 01, 2020. Coordinator: Fameline K. Marak, Organizing members: Jacqueline R. Marak, Dokatchi Ch. Marak, Crystal Cornelious D. Marak; Organising Secretary: Crystal Cornelious D. Marak

Fameline K. Marak, Jacqueline R. Marak, Dokatchi Ch. Marak were the member of the organizing committee of the A•chik Literature Society's Workshop on Traditional Musical Instruments (chigring, flutes, spi, dama, dotdrong, sarendra and Wangala dance) held at the Don Bosco Secondary, School, Tura during December 02-07, 2019.

### *Attended*

#### **Dr. Fameline K. Marak**

Presented self-creation poems at the (i) Sahitya Akademi sponsored Gramalok in collaboration with A•chik Literature Society, Tura at Mendipathar College, North Garo Hills, Meghalaya, on August 31, 2019, (ii) A•chik Literature Society's Writers' Meet in collaboration with Department of Garo, NEHU, Tura Campus, Tura, at the Christian Girls H.S.School, Tura on September 21, 2019.

Attended the (i) General Council of the Sahitya Akademi meeting at Agartala, Tripura on June 14, 2019, (ii) NECOL Advisory Board Meeting at Guwahati on June 27, 2019, (iii) General Council of the Sahitya Akademi meeting at New Delhi on February 25, 2020, (iv) Annual Festival of Letters of the Sahitya Akademi at New Delhi during February 24-29, 2020.

Given introductory remark at the (i) Sahitya Akademi sponsored Gramalok in collaboration with A•chik Literature Society, Tura at Williamnagar Government College, East Garo Hills, Meghalaya on September 14, 2019, (ii) Sahitya Akademi sponsored Gramalok in collaboration with A•chik Literature Society, Tura at Ampati Degree College, South-West Garo Hills, Meghalaya on September 28, 2019.

#### **Dr. Jacqueline R. Marak**

Delivered lectures on (i) "Development of a Synopsis in Literature" in the six days Training Programme on Research Methodology organized by Department of Education, North-Eastern Hill University, Tura Campus, Meghalaya on October 16, 2019, (ii) "Development of a Synopsis in Literature and Reporting in Qualitative Research," in the six days Training Programme on Research Methodology

organized by Department of Education, North-Eastern Hill University, Tura Campus, Meghalaya on October 17, 2019.

Presented self-creation poems (i) “Sonan’ Salrang” at the Sahitya Akademi sponsored Gramalok in collaboration with A•chik Literature Society, Tura at Mendipathar College, North Garo Hills, Meghalaya, on August 31, 2019, (ii) “Ma•grin’ Skima,” at, the Sahitya Akademi sponsored Gramalok in collaboration with A•chik Literature Society, Tura at Williamnagar Government College, East Garo Hills, Meghalaya on September 14, 2019, (iii) “Chibrim” at the A•chik Literature Society’s Writers’ Meet in collaboration with Department of Garo, NEHU, Tura Campus, Tura, at the Christian Girls H.S. School, Tura on September 21, 2019, (iv) “Oh! Sia” at the Sahitya Akademi sponsored Gramalok in collaboration with A•chik Literature Society, Tura at Ampati Degree College, South-West Garo Hills, Meghalaya on September 28, 2019.

Attended a one-day National Workshop on Integration of Theory and Practice of Education through ICT organized by the Centre for Pre-Service Teacher Education, NEHU Shillong in collaboration with Department of Education, NEHU, Tura Campus, Tura under MHRD Scheme of Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNTT) on November 19, 2019.

#### **Dr. Dokatchi Ch. Marak**

Delivered a lecture on “Research Ethnics in Language and Culture,” in the Training programme on Research Methodology for Research Scholars organized by Department of Education, North-Eastern Hill University, Tura Campus, Meghalaya during October 14-19, 2019.

Presented self-creation poems “JatniSing•kam” at the A•chik Literature

Society’s Writers’ Meet in collaboration with Department of Garo, NEHU, Tura Campus, Tura, at the Christian Girls H.S. School, Tura on September 21, 2019, (ii) “Ka•donga” at the Sahitya Akademi sponsored Gramalok in collaboration with A•chik Literature Society, Tura at Ampati Degree College, South-West Garo Hills, Meghalaya on September 28, 2019.

#### **Shri Crystal Cornelious D. Marak**

Presented self-creation poems (i) “Jajong” at the Sahitya Akademi sponsored Gramalok in collaboration with A•chik Literature Society, Tura at Mendipathar College, North Garo Hills, Meghalaya, on August 31, 2019, (ii) “AtchiramSong” at, the Sahitya Akademi sponsored Gramalok in collaboration with A•chik Literature Society, Tura at Williamnagar Government College, East Garo Hills, Meghalaya on September 14, 2019, (iii) “Jikgite” at the A•chik Literature Society’s Writers’ Meet in collaboration with Department of Garo, NEHU, Tura Campus, Tura, at the Christian Girls H.S. School, Tura on September 21, 2019, (iv) “Chame” at the Sahitya Akademi sponsored Gramalok in collaboration with A•chik Literature Society, Tura at Ampati Degree College, South-West Garo Hills, Meghalaya on September 28, 2019.

#### **Publications**

##### **Research Papers**

###### ***Published in India***

Marak, J.R. (2019). Sawanchimsai? A•chikKu•rang, 1 (1):49.

Marak, D.C. (2019). Katta. A•chikKu•rang, 1 (1):42.

Marak, C.C.D. (2019). A•chik Pottery: A Dying Culture. Manviki, An International Journal of Humanities & Social Sciences, XI (I) 121-123.

Marak, C.C.D. (2019). Gongjagreoniko

Chimonggimin Golporang, Buringni Samrang AroDo•o-matrangni Bimingrang. A•chikKu•rang,1 (1):46-48.

### **Book/Book Chapters/ Proceedings**

Marak, D. C. (2020). Word Formation in A•chik Language. In: The Cultural Heritage of Meghalaya. Q.Marak and S. K. Choudhary (Eds.). Routledge, New York. ISBN 9788194352129, Chapter 14, p. 305-327.

Marak, D. C. (2019). Ripeng Chong•mot; Manden' Ku•sik; JatniSing•kam.In:NitogipaRitingrang. Marthin R.Marak (Ed.). Garo Sahitya Sabha, Assam. p. 57-63.

Marak, C. C. D. (2019). Ku•akmao Seanirang. Bidawe Media, Tura, ISBN 978-81-938203-1-5.

### **Other Activities**

#### **Dr. Jacqueline R. Marak**

Member of the (i) Governing Body, Mason Phillips Academy, Tura (Affiliated to MLCU, Shillong) since 2018, (ii) Editorial Board, Nokdangni Ripeng, 2015 till date, (iii) Tribal Literary Forum of India 2015 till date.

Life member of the (i) All India Poetess Conference, (ii) Meghalaya Poetry Competition, (iii) A•chik Literature Society. Convener: Standardization of Garo spelling, A•chik Literature Society, 2013 till date.

#### **Dr. Dokatchi C. Marak**

Life Member of the (i) All India Poetess Conference, India, (ii) A•chik Literature Society, Tura, Meghalaya and also the convener of the society, (iii) Tribal Literary Forum of India.

Member of the Editorial Board, Nokdangni Ripeng, Tura, Meghalaya, 2015 till date.

#### **Shri Crystal Cornelious D. Marak**

Life Member of the (i) A•chik Literature Society, Tura, West Garo Hills, Meghalaya, and also the Secretary of the society, (ii) Garo Graduate Union, Tura, West Garo Hills, Meghalaya.

#### **Dr.Fameline K. Marak**

Life Member of the (i) Achik Literature Society, Tura, West Garo Hills, Meghalaya and also the Executive Member of the society, (ii) Garo Graduate Union, Tura, West Garo Hills, Meghalaya.

Founder Member of the (i) Freedom Life Orphanage, Samchongre, West Garo Hills, Meghalaya, (ii) Esther Home for School and College Students, Tura, Meghalaya.

Member of the (i) General Council for the "Society for Promotion of Arts & Cultural Enrichment (SPACE), Meghalaya, (ii) General Council, Sahitya Academy, New Delhi, (iii) Advisory Board for Sahitya Academy's North-East Centre for Oral Literature, (NECOL) Agartala.

## DEPARTMENT OF HINDI

**Head** : Prof. M. P. Pandey (up to August 04, 2019)  
 Prof. B. P. Tripathi (w.e.f. August 05, 2019)  
**Telephone** : 0364-2723514 (O), 2723515 (O) / +91 9774125265(M)  
**E-mail** : hodhin@nehu.ac.in/deshdhar@gmail.com

**Faculty: 04**

Designation	Name and Qualification	Specialization
<b>Professor</b>	Prof. M. P. Pandey, M.A. & Ph.D. (Kashi Vidyapeeth, Varanasi)	Criticism & Poetics
	Prof. D. K. Choubey, M.A. (Gauhati Univ.), Ph.D. (Manipur Univ.)	Medieval Literature & Comparative Study
	Prof. B. P. Tripathi, M.Phil. & Ph.D. (JNU)	Modern Poetry
	Prof. H. K. Mishra, M.A. & Ph.D. (BHU)	Hindi Journalism & Modern Literature

### Thrust Areas of Research

North-Eastern Literature and Comparative Study.

### Brief Statement of Academic Activities

During the academic year many academic activities have been initiated. ‘Sodharthi Sanvaad Manch’ (Research Forum of the Department) was established on May

04, 2018. The research scholars of the Department participated very actively and organized many programmes, namely Purvottarevam Videshi Bhasha mein Anvadki Bhumika evam Rojgar ke Avasar, Hindi Sahitya mein Aadivasi Jeevan, Gajal: Udbhav, Parampara aur Vikas and Krishna Baldev Vaidya evam Giriraj Kishor ka Smaran.

The following lectures were delivered in the Department:

Name	Institute	Date	Topic
Dr. Sajal De	Russian Department EFLU, NEHU	May 10, 2019	Purvottar evam Videshi Bhasha mein Anvad ki Bhumika evam Rojgar ke Avasar
Mr. Ranendra	Director, Sport Department, Govt. of Jharkhand, Ranchi	May 24, 2019	Hindi Sahitya mein Aadivasi Jeevan



Prof. Vashishth Anoop	Kashi Hindu Vishwavidyalaya, Varanasi	May 29, 2019	Gajal: Udbhav, Parampara aur Vikas
Dr. Rajesh Dixkshit Neerav	Vice-Chancellor, Renensa University, Indore	October 10, 2019	Vartman Samay mein Takniki aur Kritrim Buddhimatta
Dr. Amita Neerav	Fichar Editor, Nai Dunia, Indore	October 10, 2019	Sahitya aur Itihas ka Antarsam-bandh

### Students' Profile

**Enrolment Capacity: M.A. - 61, M.Phil. -10, Ph.D. - 06**

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.A.	11	39	01	16	-	33	08	42	50
M.Phil.	02	04	01	02	-	03	02	04	06
Ph.D.	03	03	-	03	-	03	01	05	06

### Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.A.	05	26	01	05	25	05	26	31	25
M.Phil.	02	05	01	02	04	02	05	07	02
Ph.D.	-	01	-	-	01	-	01	01	

### Students Awarded PhD Degree

Name of Student	Title of Thesis	Name(s) of Supervisor(s) Joint Supervisor
Mrs. Priyanka	'Bhakti ka leen Hindi Sant Kavya mein Sangeet'	Prof. B. P. Tripathi

### Research Fellowship

**CSIR-UGC-JRF: 5**

**UGC Non-Net :12**

**Others: 1 (ICCR), 1 (ICSSR)**

### Courses conducted

**Postgraduate: M.A.**

#### Semester I

Hindi Bhashaevam Uska Vikash, Bhartiya Kavyashastra I, Aadhunik Kavya Chhayavad tak) evam, Paryavaran Parak Kavya, Hindi Gadya Sahitya I (Natakevam Nibandh), Aadikalin Hindi Sahitya ka Itihas

#### Semester II

Bhaktikalin Kavya, Bhartya Kavyashastra II, Hindi Gadya Sahitya II (Upan yasevam Kahani), Aadikalin Kavya, Prayojanmoolak Hindi

#### Semester III

Hindi Sahityaka Madhayakal, Ritikaleen Kavya, Hindi Natak, Anuvad-Sidhantevam Vyawhar, LokSahitya

#### Semester IV

Hindi Sahitya ka Aadhunik kal, Chhayavadottar Kavya, Paschatya Sahityalochanaevam, Hindi Aalochana,

Bhasha Vigyan, Hindi Nibandh

### **M.Phil. /Ph.D. Courses**

Anusandhanki, Pravidhaur, Prakriya, Hindi Sahityaki, Vaicharik, Prishthbhoomi, Sangosthievam, Samiksha

### **Seminar/Conference/Symposium/ Extension Programmeme**

#### **Attended**

#### **Prof. M. P. Pandey**

Delivered lectures on (i) 'Hindi ke Prayog ki Samasyayein aur unka Samadhan' in the Workshop organized by Khadi Village Industry Corporation, Shillong and also chaired a session on July 31, 2019, (ii) 'Lalit Nibandh : Parampara aur Prayog : Uttar Adhunik Sandarbh' in the National Seminar organized by Sahitya Academy, New Delhi and also chaired a session during August 26-27, 2019, (iii) 'Hindi Bhasha, Sahitya aur Anuvaad: Vishesh sandarbh Purvottar Bharat' in an International Hindi conference organized by The Indraprastha College for Women, University of Delhi, New Delhi in collaboration with Colombia University and New York University, USA during January 09-11, 2010, (iv) Purvottar Bharat keparipreksha me Gandhi Darshan kirasangiktaat Vidyashree Nyas, Varanasi in collaboration with Uttar Pradesh Hindi Sansthan, Lucknow, Kendriya Hindi Sansthan, Agra, and Sahitya Academy, New Delhi during January 12-14, 2020.

Participated (i) the NAAC Assessor's Orientation Programme (AOP) organized by National Assessment and Accreditation Council (NAAC), Bengaluru in Mizoram University, Aizawl on August 14, 2019, (ii) as a Chief Guest in a Hindi Diwas Programme organized by North-East Electric Power Corporation (NEEPCO) Shillong on September 16, 2019 in

Shillong and delivered a lecture on the topic 'Rastriya Vikas mein Hindi ki Bhoomika aur Karyalayan mein Hindi ke prayog ki Awashyakata'

#### **Prof. D. K. Choubey**

Presented papers on (i) 'Purvottar mein Hindi Bhasha Sahitya ka Yogdan' in a National Seminar organized by Hindi Sahitya Parishad Allahabad, collaboration with IPPR Delhi at Rajeev Gandhi University' Itanagar on February 18, 2020, (ii) 'Purvottar Bharat mein Hindi kisthiti Chunoutiyan evam Sambhawnaen' in an International Seminar organized by MG Hindi Antrastriya Vishwavidyalaya Vardha and Gauhati University, Guwahati on February 20, 2020, (iii) 'Purvottar Bharat ki Boliyan evam Lok Sahitya' in an International Seminar organized by Uttar Pradesh Hindi Sansthan and Lucknow University, Lucknow on February 22, 2020.

Chaired the sessions in National Seminars on (i) 'Hindi Bhasha Adhigam ke Sadhan evam Anuprayog' organized by Meghalaya Rastra Bhasha Prachar Samittee, Tura on August 31, 2019, (ii) 'Jansanchar Madhyam evam Hindi' organized by Oil India Limited Duliyan Assam collaboration with Hindi Cell NEHU at Shillong on October 19, 2019, (iii) 'Purvottar Bharat ke Sahitya mein Gandhivadi Darshan' organized by Indian Philosophy Research Delhi at Rajiv Gandhi University Itanagar, on February 19, 2020, (iv) 'Purvottar Bharat mein Rajbhashaki Sthiti' organized by MG Hindi Antrastriya Vishwavidyalaya Vardha and Gauhati University Guwahati on February 21, 2020.

#### **Prof. B. P. Tripathi**

Chaired a session of a National Seminar on 'Bhavishya ka Bharat-Asankayen aur

Ummiden' organized by Independent Media Initiative Society, Noida on November 14, 2019.

### **Prof. H. K. Mishra**

Presented papers on (i) 'Gandhi Darshan ka Bharatiya Sahitya par Prabhaw' in an International seminar organized by RGU, Itanagar on February 17, 2020, (ii) 'Hindi Bhasha aur Poorvottarki Bhashayen' in a National seminar organized by RGU, Itanagar on February 18,, 2020, (iii) 'Hindi ki Vartamansthi, Chunoutiyan evam Sambhawanayen' in a International Seminar organized by Gauhati University, Guwahati on February 19, 2020, (iv) 'Viashwik Paridrishya mein Gandhi' in an National Seminar organized by RGU, Itanagar and also chaired a session on February 18, 2020.

### **Publications**

#### **Research Papers**

##### ***Published in India***

Pandey, M. P. (2019). Literature and culture of Khasi, Garo and Jaintias. in an eight-volume dictionary. In Shambhunath, 'Hindi Sahitya Gyankosh'. Bharatiya Bhasha Parishad, Kolkata.

Choubey, D. K. (2019). Purvottar Bharat ki Shourya Gathaen, Sahitya Amrit, Issue 2, ISSN- 2455-1171: 86-91.

Choubey, D. K. (2019). Anuvad: Ek Paricharcha- Purvottar Kshetraki Bhashaonke Sandrabhmein, Bhasha, ISSN – 0974-004X: 9-11.

Tripathi, B. P.(2019), Manushya ka Beej, Sablog, September, ISSN-2277-5897, 21-24.

Tripathi, B. P. (2019), Antardrishtiki Chingariyan, Prayagpath, ISSN-2395-

4000, 49-52.

Tripathi, B. P. (2019), Anubhutyon ki Unchayi ka Ekant Sadhak, Pakhi, R.N. 99869, 82-83.

Tripathi, B. P. (2019), Alochna ke Namvar: NamvarkiAlochna, Bimb-Pratibimb, 6-11.

Tripathi, B. P. (2019), Adhi Duniya ke Sapnonki Pukar, Lamhi, ISSN-2278-554X, 140-142.

Tripathi, B. P. (2019), Avyakt Yatharth ke Kushal Hastshilpi, Lamhi, ISSN-2278-554X, 78-80.

Tripathi, B. P. (2019), Chetna ke Rahasyon ka Ashik Nrityakar, Naya Gyanodaya, 51-54.

Tripathi, B. P. (2019).Khanti Sahityik Dharre se Mukti ka Samay, Punarnava DELHIN 2005/15401, 83-86.

Mishra, H. K. (2019). Bharatiya Sanskritik Bahulata aur Poorvottar ki Bhashayen, Chintan Srijan, 16 (3), ISSN 0973-1490: 76-84.

Mishra, H. K. (2019). Safalatake Raahmein Riston ka Bhoj-Hindi Anusheelan, edited by Prof. Narendra Mishra, Published by Hindi Sahitya Parishad, 61 (3-4), ISSN 2249-930X: 72-78.

#### **Books/Book Chapters/Proceedings**

Choubey, D. K. (2019). Assam mein Vaishnav Mat ka Udbhav evam Vikssh, Purvottar ka Bhakti Sahitya, ISBN 978-81-942460-1-5: 19-28.

Choubey, D. K. (2019). Arunachal Predash ki Aapatani Bhasha ki Lokoktiyan: Swarup Vivechan, Purvottar Bharat: Bhasha Sahitya aur Sanskriti, ISBN 978-938-1130-78-6: 96-101.

Mishra, H. K. (2019). Pathalochan, Edited by Dr. Ashwini Kumar Shukla, Publisher- Madhurakshar Prakashan, ISSN 978-81-929060-7-2.

### ***Other Activities***

#### **Prof. D. K. Choubey**

Delivered lectures on (i) Official Language on Hindi Divas at National Institute of Electronic and Information Technology (NIEIT), Shillong on September 13, 2019, (ii) Implementation of Official Language at Anthropology Survey of India, Shillong on September 04, 2019.

Attended (i) Member of Steering Committee as subject expert organized by State Level Eligibility Test Commission, Guwahati on June 25, 2019, (ii) Workshop for Five Language Pocket Dictionary (Hindi-Khasi-Jayantia-Garo-English) organized by Central Hindi Directorate Shillong Center on June 27, 2019, (iii) Workshop cum Evaluation as subject expert of JPSC, Ranchi during July 05-13, 2019, (vii) a Seminar cum Workshop for

AOP at Mizoram University organized by NACC, Bangalore on August 13, 2019, (iv) a meeting of Steering Committee of SLET (NE) at Guwahati University, Guwahati on October 25, 2019 (v) a meeting for National Level Award Committee for Hindi Writers of Central Hindi Directorate, Delhi on February 11, 2020.

Edited NEHU Jyoti in House magazine, issue III, September, 2019

#### **Dr. H.K. Mishra**

Delivered lectures (i) on the Hindi-English contest programme in Air Force Wives Welfare Association (AFWWA), Shillong on July 02, 2019, (ii) on the occasion of Hindi Pakhawada in Kendriya Vidyalaya, NEHU, Shillong on September 28, 2019.

Attended Workshops (i) on Plagiarism organized by Central Library, NEHU & INFLIBMENT, Gandhinagar on August 23, 2019, (ii) as a subject expert at Kendriya Hindi Sansthan, Guwahati during August 13-15, 2019.

## DEPARTMENT OF KHASI

**Head** : Prof. A. Kharmalki  
**Telephone** : 0364 - 2723301 (O)  
**E-mail** : rockyernonglait@yahoo.in

### Faculty: 06

Designation	Name and Qualification	Specialization
<b>Professor</b>	Prof. B. War, M.Phil. (Delhi Univ.), Ph.D. (Univ. of London, UK)	Khasi Phonetics and Phonology, Morphology, Syntax, Khasi Sociolinguistics, Theories of Literary Translation, Translation and Khasi Literature, Austro-Asiatic Linguistics, Khasi Poetry.
	Prof. S. Dkhar, M.Phil. & Ph.D. (NEHU)	Khasi Drama, Khasi Culture, Khasi Poetry
	Prof. A. Kharmalki, M.Phil. & Ph.D.(NEHU)	Language Teaching, Translation, Sociolinguistics
	Prof. D. R. L. Nonglait, M.Phil. & Ph.D. (NEHU)	Literary Theory and Criticism; Postcolonial literature in Khasi, Psychoanalytic studies in Khasi literary texts, Khasi Fiction
<b>Assistant Professor</b>	Dr. B. Bairo, M.A. & Ph.D. (NEHU)	Khasi Fiction, Archetypal Studies in Khasi Short Stories
	Dr. M. M. Khymdeit, M.Phil. (GU), Ph.D. (NEHU)	Khasi Poetry, Stylistics in Khasi Poetry, Ecocriticism on Khasi poetry

### Thrust Areas of Research

Khasi Literature, Literature in Translation, Environmental Awareness in Khasi Literature, Literary Theory and Criticism, Folklore in Khasi Literature and Linguistics.

### Brief Statement of Academic Activities

The Department organized (i) a regional

Seminar on “Language and Literature” held at the Science Seminar Hall, NEHU, Shillong on September 27, 2019, (ii) a Refresher Course on “Khasi Language, Literature and Culture” during November 11-24, 2019.

### Students’ Profile

**Enrolment Capacity: M.A.- 53, Ph.D. - 02**

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.A.	12	41	-	53	-	-	53	-	53
Ph.D.	-	02	-	02	-	-	02	-	02

### ***Degrees Awarded***

<b>Degree</b>	<b>Male</b>	<b>Female</b>	<b>SC</b>	<b>ST</b>	<b>OBC</b>	<b>GEN</b>	<b>Meghalaya</b>	<b>Non-Meghalaya</b>	<b>Total</b>
M.A.	09	40	-	49	-	-	49	-	49
M.Phil.	02	03	-	05	-	-	05	-	05
Ph.D.	-	-	-	-	-	-	-	-	-

### **Placement of Students**

1. Pynsuklin L. Mawnai, Asstt. Professor, Sngap Syiem College, Mawkyrwat, Meghalaya,
2. Lily Mary Nongtdu, Asstt. Professor, St. Anthony's College Extension, Byndihati, Meghalaya,
3. Tromidress Lawai, Asstt. Professor, St. Anthony's College Extension, Byndihati, Meghalaya,
4. Parlinsha Pyngrope, Asstt. Professor, Lady Keane College, Shillong, Meghalaya,
5. Nunu Khongpdah, Asstt. Professor, Shillong Commerce College, Meghalaya,
6. Badahunshisha Jana, Asstt. Professor, Shillong Commerce College, Meghalaya.

### **Courses Conducted**

#### **Postgraduate: M.A.**

##### ***Semester I***

Khasi Linguistics I, Khasi Poetry I, Khasi Drama I, Aspects of Culture in Khasi, Literature I and Literary Theory & Criticism I.

##### ***Semester II***

Khasi Linguistics II, Literary Theory & Criticism II, Khasi Drama II, Literature in Translation I and Khasi Poetry II.

##### ***Semester III***

Khasi Linguistics III, Literary Theory & Criticism III, Environmental Awareness in Khasi Literature, Khasi Fiction I and Literation in Translation II.

##### ***Semester IV***

Khasi Linguistics IV, Khasin Poetry

III, Khasi Fiction II, Literary Theory & Criticism IV and Aspects of Culture in Khasi Literature II.

#### **M.Phil. /Ph.D. Courses**

Research methodology, Seminar Papers: Literary Theory and Criticism (Option A), Emerging Trends in Khasi Literature (Option B), Translation and Khasi Literature (Option C).

#### **Seminars/Conferences/Workshops/ Symposia/Extension Programmemes (National/International)**

##### **Prof. S. Dkhar**

Organized the Foundation Day celebration of AIPC and Chaired a session of the Multilingual Poetry sessions and Cultural programme organized by AIPC Shillong held at Elswer School Auditorium, Laban Shillong on April 30, 2019. Academic Coordinator of NEHU and Chulalongkorn University on Multilingual Dictionary and Conservation of Cultural Tourism at Kongthong (The Whisling Village) organized by NEHU Team from Linguistics Department NEHU in collaboration with the Thai Team from CU held on August 28, 2019.

Coordinator of the Undocumented Folktale Competition as part of Ri Khaiñ Autumn Festival held at Laitmarok Markham Village, West Khasi Hills District, organized by Sub-Divisional office (Civil), Mairang Civil Subdivision West Khasi Hills in collaboration with Umshyrpi College, Shillong and NEHU, Shillong during November 01-02, 2019.



### ***Attended***

#### **Prof. B. War**

Chaired a session in the International language fest on “Indigenous and Endangered Languages (ILFIEL 2019)” organized by the Department of Linguistics, NEHU, Shillong during October 25-26, 2019.

#### **Prof. S. Dkhar**

Chaired (i) the inaugural function of the International language festival on “Indigenous and Endangered Languages” and gave a Chairperson’s remark, held at Multi-use Convention Hall, NEHU, organized by the Department of Linguistics, NEHU Shillong in collaboration with the Directorate of Arts and Culture and Indian Council for Cultural Relations, Regional Centre, Shillong and also chaired a technical session during October 25-26, 2019, (ii) the Book Launch programme authored by Kitbor W. Nongrum entitled *Ka Jingroi Jingsan Ki Phlim Khasi* at Phunga Manipuri Hotel Laitumkhrah, Shillong – delivered a chairperson remark on “Development of Khasi Film today” on January 13, 2020, (iii) a technical session in a two-day Workshop on Massive Open Online Courses (MOOCs) on the theme “Adoption Promotion and Development of MOOCs through SWAYAM platform” held at the Cluster Class room, NEHU, organized by NEHU, Shillong during May 28-29, 2019, (iv) a session on “Thai Tourism” and attended the field research of NEHU and Chulalongkorn University on Conservation of Cultural Tourism as an Academic Coordinator held at Sohra organized NEHU Team in collaboration with the Thai Team from CU on September 02, 2019, (iv) the inaugural function of the 19th Mega convention of the All India Poetess Conference held at Pastoral Centre, Tezpur, organized by the

AIPC, Tezpur, Assam on November 22, 2019,

Resource person in the (i) Panel discussion on the theme “Literature through the lens of indigenous language” as part of the celebration of the Arunachal Literature Arts Festival, held at Itanagar ground, Arunachal Pradesh organized by ALAF on November 10, 2019, (ii) Training Workshop for the Treasury officers, Government of Meghalaya and did a presentation on “Ethical Values in Government Institutions” held at Seminar hall of Directorate of Treasuries, 3rd Secretariat, Lower Lachumere, Shillong, organized by the Directorate of Treasuries, Government of Meghalaya on May 14, 2019, (iii) celebration of Thomas Jones Day and presented a paper on “The Contribution of Thomas Jones, the father of Khasi Alphabet to Khasi Literature and Education” held at Thomas Jones Memorial School, Lumparing, Shillong, organized by the management of Thomas Jones Memorial School, Lumparing on June 22, 2019, (iv) Regional Seminar Kinship System and its relevance today and presented a paper on “Khasi Kinship system and its relevance today” organized by Dr. Homiwell Lyngdoh Centre for Indigenous Study held at JRTS Mawklot Auditorium on June 28, 2019, (v) Function on Celebration of the 184th Death Anniversary of U Tirot Sing Syiemlieh and spoke on “U Tirot Sing Syiem bad ka thma Dohlieh-Khasi” in the inaugural Function held at Mairang, organized by the SyiemDorbar, Hima Nongkhlaw, Mairang on July 17, 2019, (vi) “Kobi Pranam”, a Tribute programme to commemorate Rabindranath Tagore’s 78th Death Anniversary and read out a self-composed poem “A Tribute to Gurudev Rabindranath Tagore” held at Brookside, Rilbong, organized by Malabika Bisharad and Tagore lovers of Shillong on August 08, 2019, (vii) All India Indigenous

Writers' Festival on the occasion of International Year of Indigenous Languages and presented five self-composed poems in the Fifth session of Poetry Reading held at Sahitya Akademi Auditorium, Ravindra Bhavan, New Delhi, organized by Sahitya Academy, New Delhi during August 09-10, 2019, (viii) programme "Face to Face with the Author" and gave a presentation on the book *U Raikut* and an interaction with the teachers and students held at Lady Keane College Auditorium organized by the Department of Khasi, Lady Keane College, Shillong on August 29, 2019, (ix) Orientation programme for Officer Trainees of IAS, 2019 Batch, Assam Meghalaya Cadre and did a power point presentation on "Status of Women in Matrilineal Society of Meghalaya" held at Meghalaya Administrative Training Institute, Shillong, organized by the Directorate Meghalaya Administrative Training Institute, Shillong on September 25, 2019, (x) awareness programme for the youth on the theme Career Guidance and Social Awareness and gave a power point presentation and thereafter interaction with the audience, organized by SELD Shella Presbytery in association with Rural Social Outreach, Shillong held at the Conference Hall, K.J.P. Synod Sepngi, Mission Compound on October 12, 2019, (xi) Symposium on Importance of Education and Its Value and gave a power point presentation on "Importance of Education and Its Value" held at Ranikor Community Ground, organized by the Ranikor Constituency Development, Ranikor on October 15, 2019, (xii) National Seminar on the theme, Preservation of Cultural and Linguistic Studies: Prospects and Challenges and presented a paper on "Preservation of Cultural and Linguistic studies in Northeast India: Prospects and Challenges" held at Sankerdev College

conference hall, organized by Sankerdev College, Shillong on October 31, 2019, (xiii) National Seminar on the theme, Preservation of Cultural and Linguistic Studies in Northeast India: Prospects and Challenges and presented a paper jointly with Trocylin Chyne on "Ka Jingriewspah ki Khana-parom jong ka thain shatei lam Mihngi: Ki Jingeh ba ki Jaitbynriew Riewlum ki ia kynduh: Ka Wad bniah ia ki Khana-parom Khasi" held at Sankardev College conference hall, organized by Sankardev College, Shillong on October 31, 2019, (xiv) research papers session and presented a paper on "Rise of Rape and Women Lynching in India: Challenges for Women and girl children" as part of the 19th Mega convention of the All India Poetess Conference held at Pastoral Centre, Tezpur, organized by the AIPC, Tezpur, Assam on November 23, 2019, (xv) panel discussion on " Understanding Gender Discourse in Khasi Society" held at the programme of Doordarshan Kendra Shillong, organized by DDK, Shillong, Laitkor, Shillong on September 27, 2019

Attended as Chief Guest at a Book Launch programme at Khasi National Durbar Hall, Mawkhair, Shillong and delivered a speech on "Development of Khasi Drama" and released a Khasi Drama, entitled *Ka Step Phyrnai* authored by Reginald Susngion September 14, 2019.

#### **Prof. A. Kharmalki**

Organizing member at the International language fest on Indigenous and Endangered Languages on October 25-26, 2019.

Chaired a session at the International language fest on Indigenous and Endangered Languages on October 25-26, 2019.

#### **Prof. D. R. L. Nonglait**

Delivered speech on "Thomas Jones"

colonised background and his contributions towards the Khasi written language and literature” at a Special Lecture on Thomas Jones, organized by the Principal, Synod College, Shillong on June 21, 2019.

Attended as a chief guest at a book launch programme, organized by Shri Riquo Marq Laloo held at Upper Nongrim Hills, Shillong and released his book, entitled *Ki Katto Katne Shaphang ki Katto Katne* on November 16, 2019.

#### **Dr. B. Bairo**

Delivered a lecture in the Department of Khasi, Synod College, Shillong on July 24, 2019.

#### **Dr. M. M. Khyndeit**

Attended as Panelist of a Panel Discussion on the theme “Ka Lawei ka Ktien Baiar u Hynñiew skum” organized by the Grassroot, Shillong in Commemoration of World Indigenous Day 2019 held at Pastoral Centre, Shillong on August 08, 2019.

#### **Books/Book Chapter/Proceedings**

Dkhar, S. (2020). Contribution of women of North East India in Literature. *Indian Theological Journal*, 13:57-67. B. J. Syiemlieh (Ed.). John Roberts Theological Seminary, Shillong, JRTS, ISSN 009747184.

Nonglait, D. R. L. (2019). *Ka thymmei u Thomas Jones bad u synñiang jong u sha ka litereshor Khasi*. Khraw Sing College Souvenir Celebrating 10 Years, 6-12.

Nonglait, D. R. L. (2019). *Ki Khuiñ Bakongsan Ka Jingbit-Kren. Ka Atiar Ki Samla (Jingiaseng Samla Khasi Jaiñtia Presbyterian Assembly)*, 21-25.

Bairo, B. (2019). *Ka Parallelism ha kakitab U Job. Ka Thwet Jingstad (Quest for knowledge)*, IV (2): 15-18.

Khyndeit, M. M. (2019). *Ka burom mei kha pakha bad ka jingbteng ña ka jingñadei ha ka phawar ñam meikha: Ka bishar lyngkot. Ka Thwet Jingstad (Quest for Knowledge)*, IV, (2): 18-23.

#### **Book Forewords**

##### **Prof. S. Dkhar**

Foreword for the following books (i) *Domestic Violence and Matrilineal Society Recapturing Khasi Theological-Ethical Values*, by Malwin Stone Passah, (ii) *Ki Khana Lyngkot Bad Ki Jingsneng Ha Ka Dur Ka Poitri “Ka Lamkhmat”* by (L) Rolace Sayoo published by Education Department, Government of Meghalaya. (p. 5-7), (iii) *Ka Thwei Ki Jingsngew (Ki Poitri Khasi, “Ki Mat Pashat Jingmut”* by Tisha Dkhar, published by Education Department, Government of Meghalaya. (p. 5-8).

##### **Prof. D. R. L Nonglait**

Foreword to Riquo Marq. Laloo’s book, *Ki Katto Katne Shaphang ki Katto Katne*, 5-6.

## Funds Received from Agencies including NEHU/UGC

### Ongoing

Title of Project	PI/Co-PI	Funding Agency	Amount (Rupees)
Multilingual Dictionary	Prof. S. K. Singh, Dr. Saralin Lyngdoh, Prof. Streamlet Dkhar and Prof. M. P. Pandey	Chulalongkorn University	THB 80,000/-

### Honours/Awards/Recognitions

#### Prof. B. War

Member of the (i) Linguistic Association of Great Britain, United Kingdom, (ii) Transactions of Philological Society, United Kingdom, (iii) Main Committee to look into the matter for inclusion of the Khasi Language in the 8th Schedule of the Constitution of India, Arts and Culture Department, Government of Meghalaya, (iv) Committee on UPE Project (Tibeto-Burman and Austro-Asiatic Languages), Department of Linguistics and Khasi, NEHU, Shillong, (v) Board of Studies, The English and Foreign Languages University, Shillong Campus.

Life member: Tribal Literary Forum of India.

Coordinator of Committee on Preservation and Promotion of Endangered Languages, NEHU, Shillong

Founder President, Shillong Academic Society

President of the (i) Managing Committee, Lumdawbah Government Lower Primary School, Lumdawbah, Shillong, (ii) Society for Khasi Studies, Shillong.

Secretary, Board of Trust, Shon Roy Basan Secondary School, Lumdawbah, Shillong

#### Prof. S. Dkhar

Nominated as (i) Chief Adviser of the Association of South Asian Culture and Literature, Pirganj, Rangpur, Bangladesh for 2019-20, (ii) member in the expert committee of Meghalaya State Curriculum Framework 2019 by the DERT, Government of Meghalaya.

Member of the (i) Advisory Committee to the State Government on the State Literary Award in both Khasi and Garo Literature, (ii) Executive Committee, Khasi Authors' Society, (iii) Editorial Board of Ka Thwet Jingstad (Quest for Knowledge), a research journal with ISSN accreditation published by the Society for Khasi Studies, Shillong

Board of editors of the International Journal of Humanities and Social Sciences. Punjabian Khurja, Uttar Pradesh, India

Academic Coordinator of NEHU-Chulalongkorn Project 2018-21

President of the (i) Managing Committee, Kelian Memorial School, Dhanketi, Shillong, (ii) Ka Thiar Lyngwiar Dpei Society, A registered Society for preservation of Khasi language and culture, Golflinks Shillong.

**Chairperson AIPC, National 2019-20.**

**Prof. A. Kharmalki**

Member of the (i) Ka Thwet Jingstad (Quest for Knowledge) a research journal with ISSN accreditation published by the Society for Khasi Studies, Shillong, (ii) Society for Khasi Studies, Shillong.

Life member of the (i) Tribal Literary Forum of India, (ii) NEIES, Shillong.

**Prof. D. R. L. Nonglait**

Chairman, Editorial Board of (i) Ka Thiar ki Nongthoh, a journal Published by Khasi Authors' Society, Shillong, (ii) Ka Syngkhong Jingtip, a journal Published by Khasi Authors' Society, Shillong.

Member of the (i) Editorial Board of Ka Thwet Jingstad, a journal published by Society for Khasi Studies, Shillong, (ii) Task Force for Meghalaya State Curriculum Framework, Directorate of Educational Research and Training, Government of Meghalaya, Shillong, (iii) Secular Educationist, Senate of Serampore College, Serampore, West Bengal, (iv) Managing Committee, Cherra Teachers' Training Centre, Sohra, (v) Managing Committee, Synod Higher Secondary School, Shillong President, Khasi Authors' Society, Shillong.

General Secretary, Tribal Literary Forum of India, Head Quarter, Shillong.

Secretary, Managing Committee, Wisdom Secondary School, Pariong.

**Dr. B. Bairo**

Secretary of the Society for Khasi Studies, Shillong

Member of the (i) Editorial Board, Ka Thwet Jingstad (Quest for Knowledge) a research journal with ISSN accreditation published by the Society for Khasi Studies, Shillong, (ii) Tribal Literary Forum of

India, (iii) Khasi Authors' Society, Shillong

**Dr. M. M. Khyndeit**

Editor of the Ka Thwet Jingstad (Quest for Knowledge) a research journal with ISSN accreditation published by the Society for Khasi Studies, Shillong.

Member of the (i) Society for Khasi Studies, Shillong, (ii) Governing Body, R. B. P. Synod College, Umsaitnsing.

Joint Secretary of the Tribal Literary Forum of India.

Secretary of the Khasi Authors' Society, Shnat Nongpoh.

**Other Activities****Prof. B. War**

Attended as Resource Person and presented 4 lectures in the UGC-sponsored Refresher Course in Khasi on 'Khasi Language, Literature and Culture' organized by the UGC-Human Resource Development Centre, NEHU, held during November 11-24, 2019.

**Prof. S. Dkhar**

Guest of honour in the (i)celebration of the foundation day of Indian Council for Cultural Relations and spoke on "The history of ICCR and its contribution to promote and conserve arts and Culture and to sponsor foreign students to study in Indian universities" held at Asian Confluence, organized by ICCR, Regional centre Shillong in collaboration with Asian Confluence, Shillong on April 09, 2019, (ii) Felicitation programme of Bronze medalist Hameshaniah Suïam in the 4th International Turkish Open Kick boxing Tournament 2019 at Antalia, Turkey, during April 04-07, 2019, (iii) "Lend A Hand": A musical evening" and spoke on

the “Importance of Humanity these days” organized by Lend a Hand Charity trust, in collaboration with the Department of Arts and Culture, Colours and Chief Minister Scheme held on January 16, 2020.

Special Guest in the (i) valedictory service of the felicitation of the Graduates of John Roberts Theological Seminary; reviewed and released a book Domestic Violence and Matrilineal Society: Recapturing Khasi Theological-Ethical Values written by Rev. Malwin Stone Passah held on 12th April 2019 at the Chapel of JRTS, Mawklot, (ii) Meghalaya Got Talents grand finale 2019, organized by the Meghalaya Dancers Association, held on May 04, 2019 at Soso Tham Auditorium, Shillong, (iii) Special Guest in the 2nd day of the Bharat Rang Mahotsav: International Theatre Festival of Indiato felicitate Ms. Kavita Srinivasa, the Director of the play “Kumari and the Beast” on February 05, 2020 at Soso Tham Auditorium, Shillong (iv) Premier show and launching of the Khasi feature film, Khyndai Lad , at Shillong Club, Shillong on February 06, 2020.

Chief Guest at the (i) Upgraded of the Open Library of Khadsawphra College Mairangand delivered a speech on “the importance of Research in Higher Education”, Khadsawphra College, Mairang on February 22, 2020, (ii) College Week of the Khadsawphra College, Mairang on November 16, 2019. (iii) School exhibition of Kelian Memorial School, Shillong on June 14, 2019.

Resource person in the UGC Sponsored Refresher course in Khasi and delivered three lectures on History and Development of Khasi Drama” and “Understanding Drama and its Types” organized by the Academic staff College, NEHU, Shillong during November 12-19, 2019.

Attended the two-day Workshop under Unnat Bharat Abhyas held at the Maharshi Kanad Auditorium, Inter- University Accelerator Centre (IUAC), UGC, New Delhi, on January 21-22, 2020.

Cultural manager in the International conference on Community and Cultural Multiplicity in North-East India & South Asia: Ethnography, History and Society held at Shillong Law College organized by North-East India Council for Social Science Research, Shillong India during May 20-22, 2019.

Academic Coordinator of NEHU-CU, project to meet the team from Royal Thai Embassy under the leadership of Jesda Katavetin, Director General, Department of South Asian Middle East and African affairs, Ministry of Thailand to discuss about the Thai NEHU relationship and gave a detailed report on the progress of NEHU-CU project held at Saw Aiom Rikynjai Resort, Umñiuh Khwan, Ribhoi on June 04, 2019.

Invited Guest in the Celebration of 100 years of Rabindranath Tagore sojourn to Shillong, delivered a speech on the “Impact of Tagore works on Khasi Literature” and presented a translated version of Tagore’s poem in Khasi held at Rabindranath Art Gallery, Brookside Rilbong organized by Malabika Bisharad on October 11, 2019.

Participated in the Interactive Round table Discussion on the theme “China in India’s Neighbourhood” at the Asian Confluence Centre, Laitumkhrah, Shillong, India on February 18, 2020.

### **Prof. A. Kharmalki**

Attended as Resource Person in the Refresher Course in Khasi on ‘Khasi Language, Literature and Culture’ during November 11-24, 2019.



**Prof. D. R. L. Nonglait**

Delivered four lectures at the Eight Refresher Course in Khasi coordinated by Dr. M. M. Khyndeit in the Department of Khasi, NEHU, Shillong, during November 11-24, 2019.

**Dr. B. Bairo**

Delivered lectures in Refresher Course in Khasi on 'Khasi Language, Literature and Culture' during November 11-24, 2019.

## DEPARTMENT OF LINGUISTICS

**Head** : Prof. Shailendra Kumar Singh  
**Telephone** : 0364 -272 3310 (O), 09863279254(M)  
**E-mail** : hodling@nehu.ac.in, toksinghnehu@gmail.com

**Faculty: 04**

Designation	Name and Qualification	Specialization
<b>Professor</b>	Prof. Shailendra Kumar Singh, M.Phil. & Ph.D. (Univ. of Hyderabad)	New Linguistics World Order, Alternative- Sociolinguistics Translation, Deep Multilingualism, North-East India Linguistics & Linguistics Landscaping
<b>Assistant Professor</b>	Dr. Saralin A. Lyngdoh, M.Phil. & Ph.D. (Delhi Univ.)	Syntax, Typology Linguistic structures of NE languages, Structures of South Asian Languages, South Asia as a Linguistics Area, Introductory Courses to Linguistics Language Ideology, Eco-linguistics Austro-Asiatic Languages of North East India, Language Conflicts and Resolution Studies
	Dr. Barika Khyriem, M.Phil. (Delhi Univ.), Ph.D. (NEHU)	Phonetics & Phonology, Dialectology, Sociolinguistics, Austro-Asiatic Linguistics
	Dr. Bijoy L. Dhanwar, M.Phil. (Univ. of Hyderabad), Ph.D. (NEHU)	Tibeto-Burman Linguistics, Typology, Syntax, Lexicography, Historical Linguistics

### Thrust Areas of Research

Tibeto-Burman and Austro-Asiatic languages/dialects of the North-East of India and build up expertise for field work, data analysis, and descriptive linguistics by training students through MA, M.Phil. and Ph.D. programmemes. 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, etc, have been emphasized upon in order to provide a wide option for students of Linguistics.

### Brief Statement of Academic Activities

The Department organized a series of programmes including International conference and Workshops, and brought in many International scholars from all the continents to the university.

## Students' Profile

Enrolment Capacity: M.A.- 37, Ph.D.- 05

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.A.	06	31	-	35	-	02	30	07	37
M.Phil.	02	08	-	10	-	-	03	07	10
Ph.D.	-	05	-	03	02	-	-	05	05

## Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.A.	05	24	-	27	-	02	15	14	29

## Placement of students

Monali Longmailai, Assistant Professor in Assam University.

Research Fellowship

UGC Non-Net:9

Field Trip/ Educational Tour of Students

**Teacher –in- Charge** : Dr. B.L.Dhanwar

**Places/Instituion visited** : Umrangso in West Jaintia Hills District.

**Duration of Tour** : 3 days (November 07-09, 2019)

**Purpose of Tour** : Fieldwork Training for 3rd Semester students.

## Course 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

### M.Phil. /Ph.D. Courses

Research Methodology, Current Trends in Linguistics (Optional 1), Current Trends in North East Linguistics (Optional 2), Advances in Natural Language Processing (Optional 3), Seminar Paper

#### Attended

### Prof. Shailendra Kumar Singh

Delivered (i) a theme paper as a guest of honor and plenary speaker on “Indigenous and Lesser Known Languages” in a three-day National conference on the “Indigenous and Lesser Studied Languages (IISL) of India at Tezpur University, Assam, during October 29-31, 2019, (ii) a theme paper as a Resource Person on भारतीय भाषिक पर्यावास अल्पज्ञात भाषाओं के प्रलेखन में हिन्दी की भूमिका in a National Seminar on “Documentation of Lesser known Languages: Discourse and Prospects” at CIIL Mysore in collaboration with Central Institute of Hindi during February 12-13, 2020, (iii) a welcome address in the International Language

Fest on Indigenous and Endangered Languages organized by Department of Linguistics, NEHU, in collaboration with ICSSR, Shillong, ICAR and Department of Arts and Culture, Government of Meghalaya held on October 26, 2019, (iv) a welcome addresses on the Mother Tongue Day organized by NEHU, Shillong on February 21, 2020, (v) an Introducing paper in atwo-day Workshop on MOOCS organized by NEHU, Shillong during May 28-29, 2019, (vi) a talk on 'Linguistic Ecology: Manipur' at 15th Annual Conference and Literary Meet on 9th November held at Manipur Rajbari, Laitumkhrah, Shillong during November 09-10, 2019.

Participated at the International Women's Day organized by NEHU, Shillong on March 06, 2020.

#### **Dr. S. A. Lyngdoh**

Attended (i) the Identification of POS Tag for Khasi Language based on Hidden Markov Model POS Tagger in the 20th International conference on Computational Linguistics and Intelligent Text Processing La Rochelle, France during April 07-13, 2019, (ii) as organizing member in a two-day Workshop on MOOCS organized by NEHU, Shillong during May 28-29, 2019.

Organized an presented a paper on "Status of Khasi in the Eight Schedule" and "The Status of the Indigenous Kongthong Village" at the International Language Fest on Indigenous and Endangered Languages organized by Department of Linguistics, NEHU, in collaboration with ICSSR, Shillong, ICAR and Department of Arts and Culture, Government of Meghalaya held at NEHU Campus Shillong on October 25, 2019.

Participated in the International Women's Day organized by NEHU, Shillong on March 06, 2020.

#### **Dr. Barika Khyriem**

Presented a paper on "Pdeng shakap Phonology" at the International Language Fest on Indigenous and Endangered Languages held during October 25-26, 2019 organized by Department of Linguistics, NEHU, in collaboration with ICSSR, Shillong, ICAR and Department of Arts and Culture, Government of Meghalaya

Participated in the (i) two-day Workshop on MOOCS organized by NEHU, Shillong during May 28-29, 2019, (ii) one-day Workshop on "Importance of Intellectual Properties Right" organized by Design Innovation Centre NEHU in Collaboration with (a) PH.D. Chamber of Commerce and Industries and (b) Controller General of Patents, Design and Trademark, Government of India on August 30, 2019, (iii) International Language Fest on Indigenous and Endangered Languages organized by Department of Linguistics, NEHU, in collaboration with ICSSR, Shillong, ICAR and Department of Art and Culture, Government of Meghalaya held on October 26, 2019, (iv) Participated in the International Women's Day organized by NEHU, Shillong on March 06, 2020.

#### **Publications**

##### **Research Papers**

##### ***Published in India***

Marina, L., Lyngdoh, S. A. (2019). Passivization in Hmar. Language in India, 19 (5): 152-162 [www.languageinindia.com](http://www.languageinindia.com) ISSN1930-2940.

##### **Books/ Book Chapters/Proceedings**

Singh, S.K, Sinha, S., editors. (2019). Linguistic Ecology: Bihar. Munchen Allemange: Lincom Europa Academic Publisher: ISBN 9783862889839.

Singh, S.K. (2019). Verb Root in MBM

Languages: Commonness. In: Linguistic Ecology: Bihar. S. K. Singh and Sweta Sinha (eds.).Munchen Allemange: Lincom Europa Academic Publishers, Part IV, Chapter 13, p 128-134.

Shukla, P.,Singh, S.K. (2019). Linguistic

Landscape of Bihar. In: Linguistic Ecology: Bihar. S. K. Singh and Sweta Sinha (eds.).Munchen Allemange: Lincom Europa Academic Publishers, Part II, Chapter 5, p.52-62.

## **Research Projects**

### **Ongoing**

<b>Title of Project</b>	<b>PI/Director</b>	<b>Funding agency</b>	<b>Amount (Rupees)</b>
Linguistic Landscaping of Capital Cities of Hindi Belt	Prof. S. K. Singh	ICSSR	14.00 Lakhs
Multilingual Online Dictionary	Dr. Saralin A. Lyngdoh, Co-ordinator	Chulalongkorn University	THB 80,000/-

### **Academic Collaborations**

Prof. Shailendra Kumar Singh, Dr. S. A. Lyngdoh and Dr. Barika Khyriem collaborated for preparing Multilingual Online Dictionary (collaborative project with Chulalongkorn University, Bangkok).

### **Honours/Awards/Recognition**

#### **Prof. Shailendra Kumar Singh**

Certificate of Appreciation for highly esteemed contribution over the years to the study and research and publication of

book Linguistic Ecology: Manipur on the occasion of the 15<sup>th</sup> Annual Conference and Literary Meet held at Manipur Rajbari, Laitumkhrah, Shillong on November 09-10, 2019.

### **Other Activities**

#### **Dr. S. A. Lyngdoh**

Conducted field work community extension programme for primary data collection on indigenous during August 25 – September 02, 2019.

## DEPARTMENT OF PHILOSOPHY

**Head** : Prof. Vanlalnghak  
**Telephone** : 0364 - 272 3552 (O)  
**E-mail** : philosophynehu@gmail.com

**Faculty: 06**

Designation	Name and Qualification	Specialization
<b>Professor</b>	Prof. Vanlalnghak, M.A. (NEHU), Ph.D. (IIT Kanpur)	Philosophy of Culture, Moral Philosophy, Analytic Philosophy
	Prof. Xavier P. Mao, M.Phil (Delhi), M. Lett. (Sydney), Ph.D. (NEHU)	Existentialism, Ethics
<b>Associate Professor</b>	Dr. Prasenjit Biswas, M.A.&Ph.D. (NEHU)	Phenomenology & Continental Philosophy, Philosophy of Mind, Philosophy of Tribes of NE India
<b>Assistant Professor</b>	Dr. E. Richard Tongper, M.Phil.& Ph.D. (NEHU)	Philosophy of Religion, Philosophical Theology, Applied Ethics, Gandhian Philosophy
	Dr. Basil Pohlong, M.A. & Ph.D. (NEHU)	Philosophy of Religion, Philosophical Anthropology, Philosophy of Culture, Ethics
	Dr. Aribam Uttam Sharma, M.A. (Manipur Univ.), Ph.D. (NEHU)	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

### Students' Profile

**Enrolment Capacity: M.A. – 60, Ph.D. –08**

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.A.	28	32	-	57	-	03	40	20	60
Ph.D.	03	05	-	08	-	-	03	05	08

### Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.A.	22	35	-	55	-	02	32	25	57
Ph.D.	-	06	-	04	-	02	03	03	06



### *Students Awarded PhD Degree*

<b>Name of Student</b>	<b>Title of Thesis</b>	<b>Name of Supervisor</b>
Ms. Saphimosh W. Blah	'Understand Different World views on Environment: A Hermenutical Study'	Prof. B. K. Agarwala
Mr. Collect R Cajee	'Hick's Critique of Christian Uniqueness A Critical Appraisal'	Dr. E. R. Tongper
Mr. Lalruatfela	'Wittgenstein's Philosophy of Culture'	Dr. L. N. Lenka
Mr. P. Dondor Khongdup	'Actuality & Potentialety: A study on Heidegger'	Dr. B. Pohlong
Mr. Aswini Rout	"Theories of hearing: A comparative study of Wittgenstein, Bhartrhari and Agamben"	Dr. L. N. Lenka (Supervisor) Dr. Prasenjit Biswas (Jt. Supervisor)
Ms. Sayeda D Jowena	'A critical study of Bhagavad Gita'	Prof. X. P. Mao

### **Research Fellowship**

**CSIR-UGC-NET: 4**

**UGC Non-Net: 19**

**Others: 1 (NFHE)**

### **Courses Conducted**

**Postgraduate: M.A.**

#### ***Semester I***

Indian Metaphysics, Western Metaphysics, Symbolic Logic, Philosophy of Religion, Indian Philosophy of Language I

#### ***Semester II***

Ethics & Environment, Indian Epistemology, Western Epistemology, Indian Moral Philosophy, Indian Philosophy of Language II

#### **Semester III**

Philosophy of Social sciences, Phenomenology & Existentialism, Philosophy of Post Modernism I, Analytic Philosophy, Contemporary Philosophy of Religion, Tribal Thought and Culture

#### ***Semester IV***

Modernism & Responses, Philosophy of

Culture, Philosophy of Post-Modernism II, Western Moral Philosophy, Applied Ethics, Philosophy of Wittgenstein

### **Ph.D. Courses**

Research Methodology, Seminar Paper, Philosophy of Culture & Religion

Fieldwork/Educational Tour of Students

***Teacher-in-Charge*** : Prof. X. P. Mao

***Places/Institutions visited:*** Mumbai & Goa

***Duration of Tour*** : 14 days (January 07 – 20, 2020)

***Purpose of Tour*** : To broaden the intellectual horizon of the students by seeing important historical places.

### **Seminars/Conferences/Workshops/Symposia/Extension Programmeme**

#### ***Organized***

94th Indian Philosophical Congress (IPC) and Asian-African Philosophical Congress (AAPC) held at NEHU, Shillong during March 7-11, 2020. Local Secretary: Prof. X. P. Mao; Additional Local Secretary: Prof. Vanlalnghak.

### ***Attended***

#### **Prof. Vanlalnghak**

Delivered (i) Usha Bhattacharya Memorial Lecture On “Christian Concept of Non-Violence and its Contemporary Relevance” organized by Department of Philosophy, Lady Keane College, Shillong on September 07, 2019, (ii) two lectures on Philosophy of Culture in a Refresher Course on “Folkloristics and Semiotics” organized by Department of Cultural and Creative Studies, NEHU during September 16-28, 2019.

#### **Prof. X. P. Mao**

Delivered public lectures (i) at St. Anthony College on April 10, 2019, (ii) on Gandhi’s non-violence in B.B.S on October 23, 2019.

Visited (i) Jowai College on inspection on April 08, 2019, (ii) BBS College as an expert for selection on April 09, 2019, (iii) Mahavir Jain Shillong College as an expert for selection/promotion Board on April 17, 2019, (iv) St. Dominic’s College as an expert for selection Board on May 29, 2019, (v) Pynursla College on inspection on July 03, 2019.

#### **Dr. Prasenjit Biswas**

Presented papers on (i) “Possibility of Difference in Gayatri Spivak’s Corpus: Reading Sexualities” at University of Paderborn International Workshop of Centre for Women Philosophers, Germany on July 31, 2019, (ii) “Indeterminacy and Under determination in Quantum interpretations: The Possibility of a Knowing Subject” at 2nd Phenomenological Approaches to Physics Conference held at Stony Brook University, New York on September 26, 2019, (iii) “Anomalies of Imagined Homelands: A Possible Multicultural

Resolution” presented at the International Workshop on “ Indian Conceptions of Multiculturalism” held at IIT Tirupati in association of Brunel University, London on January 09, 2020.

Delivered a lecture on “All Out Logic of affect in Citizenship Instruments” at Department of English (under DRS SAP), University of Burdwan on January 27, 2020.

#### **Dr. B. Pohlong**

Delivered a lecture on ‘Philosophy of Language’ in the 8th Refresher Course in Khasi at Department of Khasi, NEHU, Shillong on September 12, 2019.

#### **Dr. Aribam Uttam Sharma**

Presented a paper on ‘Circles of Gender Liberation and Rethinking of Cultural Traditions’: with reference to South East Asia’ in the International Seminar on “Is and Ought: Where the Two Shall Meet” at Lady Keane College, Shillong during March 29-30, 2019.

### **Publications**

#### **Research Papers**

##### ***Published in India***

Biswas, P. (2019). The Onus of Justice, Victimhood and democratic Citizenship. In: Akranto Bangali. Tapodhir Bhattacharjee (ed.), Sopan, Kolkata, p.234-50.

Pohlong, B. (2019). Philosophy of Language. Ka Thwet Jingstad, IV (2): 8-14.

##### ***Published Aboard***

Biswas, P. (2019). The Hegelian Quantum: A Meta/Physical Exploration. PULSE: the journal of science and culture, 6, 1-18.

Biswas, P. (2019). Claims of Legality: CAA. Asia Dialogue, University of Nottingham, UK.

Biswas, P. (2019). Aporias of Literary Theory: Fuzziness and ‘Literary Contract’. In Critical Essays of Literature, Language and Aesthetics: Essays in the Honour of Milind Malshe. Annapurna Rath (Ed.). Cambridge Scholar Publishing, Cambridge, UK, p.78-90.

### **Books/Book Chapters/Proceedings**

Mao, X. P. (2020). A Critique on person in Kierkegaard. New Delhi: Concept Publishing Company Pvt. Limited.

Pohlong, B. (2019). Environmental Crisis and Ethical Sustainability. In:

Issues in Philosophy East and West. Bhaskar Bhattacharya and Tejasha Kalita Handiqui (Eds.). State Open University, Assam, p.158-182.

### ***Other Activities***

#### **Dr. Prasenjit Biswas**

Committee member of the 94th Indian Philosophical Congress (IPC) and Asian-African Philosophical Congress (AAPC) held at NEHU, Shillong during March 07-11, 2020.

#### **Dr. Basil Pohlong**

Committee member of the 94th Indian Philosophical Congress (IPC) and Asian-African Philosophical Congress (AAPC) held at NEHU, Shillong during March 07-11, 2020.

## IV

### SCHOOL OF HUMAN AND ENVIRONMENTAL SCIENCES

**Dean** : Prof. R. Khongsdier  
**Telephone** : 0364-2723221 (O)  
**Fax** : 0364-2550040  
**E-mail** : deanshes@nehu.ac.in

The School of Human and Environmental Sciences has five Departments, namely Anthropology, Environmental Studies, Geography, Horticulture and Rural Development and Agricultural Production. Two new Departments of the School have been established in 2019, namely Geology (Shillong Campus) and Forestry (Tura Campus). The various Departments are involved in a wide variety of academic and research activities for the benefit of the region. All the Departments offer postgraduate programmes and Ph.D. programme. Besides, the Department of Rural Development and Agricultural Production offers M.Phil. programme, and the Department of Geography conducts a self-financed Postgraduate Diploma in Geo-informatics. Some Departments have also undertaken field work /educational tours for the students.

Faculty members of the School have published 51 research papers in journals of National and International repute and

18 in books, book chapters and conference proceedings. The Departments have also completed 8 research projects and another 23 research projects including two International projects are in progress. The Department of Geography is recognized as a UGC-SAP-DRS-III and DST-FIST supported Department. Various Departments organized several invited lectures, Seminars, Conferences, Workshops and symposia. There have been attempts made for initiating academic collaborations with the University of Oxford, UK; University of Alaska, Syracuse University, USA; Tel-Aviv University, Israel; Université Libre de Bruxelles, Brussels, Belgium; Polish Academy of Sciences, Krakow, Poland; Kagawa University, Takamatsu, Japan; Earth Observatory of Singapore, NTU, Singapore; General information Russian Foundation for Basic Research (RFBR), Moscow; universities and academia in Poland and Japan.

## DEPARTMENT OF ANTHROPOLOGY

**Head** : Prof. D. K. Limbu  
**Telephone** : 0364-2723105 (O) / +91 9436118429 (M)  
**E-mail** : dhruba\_limbu@yahoo.co.in

**Faculty: 11**

Designation	Name and Qualification	Specialization
<b>Professor</b>	Prof. T. B. Subba, M.Phil. & Ph.D. (N.Bengal Univ.)	Cultural Anthropology (Migration, Development, Diaspora)
	Prof. H. Lamin*, M.Phil. & Ph.D. (NEHU)	Cultural Anthropology (Medical Anthropology and Economic Anthropology)
	Prof. R. Khongsdier, M.Phil. & Ph.D. (NEHU)	Biological Anthropology (Health and Nutrition, Demography and Population Genetics)
	Prof. L. T. V. Zehol, M.Phil. & Ph.D. (NEHU)	Cultural Anthropology (Ethnicity, Development, Anthropology of Women and Gender)
	Prof. D. K. Limbu, M.Phil. & Ph.D. (NEHU)	Biological Anthropology (Population Genetics, Dental Anthropology, Demography)
	Prof. G. Ranjan, M.A. & Ph.D. (Univ. of Lucknow)	Cultural Anthropology (Tribal Development, Ethnography, Literary Anthropology, Anthropology of Politics)
	Prof. B. Langstieh, M.Sc. (NEHU), Ph.D. (ISI, Calcutta)	Biological Anthropology (Anthropo-genetics, Molecular Anthropology, Demography, Human Ecology, Aging, RCH)
<b>Associate Professor</b>	Dr. V. Pakyntein, M.Phil. & Ph.D. (Delhi)	Cultural Anthropology (Matrilineality, Gender Issues and Socio-Cultural Change)
	Dr. Q. Marak, M.A. (Gauhati Univ.), Ph.D. (NEHU)	Archaeological Anthropology (Food Studies, Material Culture, Archaeology of Northeast India)
<b>Assistant Professor</b>	Dr. J. W. Dkhar, M.Phil. & Ph.D. (NEHU)	Biological Anthropology (Growth and Nutrition)
	Dr. S. Ghosh, M.Sc. & Ph.D. (Delhi)	Biological Anthropology (Human Adaptation and Physiology)

\* On lien as Pro Vice-Chancellor, NEHU, Shillong.

### Thrust Areas of Research

The Department trains and creates expertise in Cultural and Biological Anthropology. It is the only Anthropology 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 Archaeology and Linguistic Anthropology. It enrolled thirty students for the MA/MSc programmes and six students for the Ph.D. programme during the current year. Thirty students completed their MA/MSc and ten students were awarded the Ph.D. degree.

The Department is collaborating in three International projects, the first being on “The Effect of Social Networks on Inequality: A Longitudinal Cross-Culture Investigation” with Dr. Alexander Alvergne, School of Anthropology and Museum Ethnography, University of Oxford, UK and Dr. Jeremy Koster, Department of Anthropology, University of Cincinnati, Ohio USA. The second project is 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, and the third is on “Exercise Capacity and Cardio-Pulmonary Responses among Sherpa: Highlander Vs Migrant” sponsored by ASEM-DUO, Belgium.

The Department is also undertaking a project titled “The Stories of our Ancestors (Narrative retelling by the Nagas of North-East India)” sponsored by the North Eastern Council. The faculty of the Department published twenty-three publications including two edited books.

### Students' Profile

**Enrolment Capacity: M.A./M.Sc. – 30, Ph.D. - 01**

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MA/M.Sc.	06	24	-	27	-	03	06	24	30
Ph.D.	02	04	-	05	-	01	01	05	06
Postdoc.	-	01		-	-	01	-	01	01

### Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MA/M.Sc.	08	19		23	-	04	03	24	27
Ph.D.	01	09		10	-	01	01	09	10



### *Students Awarded PhD Degree*

<b>Name of Student</b>	<b>Title of Thesis</b>	<b>Name of Supervisor</b>
Ms. Radhe Amung	Political Participation of Women in Gram Panchayat and their Socio-Economic Status: A Study of the Adi, Apatani and Nyishi Tribes of Arunachal Pradesh	Prof. G. Ranjan
Ms. Khayingla-Mashangva	Development Programmes in Manipur: A Case Study of MGNREGA in Ukhrul District	Prof. L. Zehol (Supervisor), Prof. T. B. Subba (Jt. Supervisor)
Ms. Abigail Lalnuneng	A Study of Blood Pressure in Relation to Body Composition and Socio-Economic Status among the Hmars of Manipur	Prof. R. Khongsdier
Ms. Leivon Khamu-Kom	Differential Fertility among the Kom: A Study in Churachandpur District of Manipur	Prof. R. Khongsdier
Mr. Abang Pertin	Religious Beliefs and Practices among the Adis: An Anthropological Study on Continuity and Change	Prof. H. Lamin
Ms. Naorem Ranjita Devi	A Morpho-Genetical Study of the Bishnupurias of Bishnupur District, Manipur	Prof. D. K. Limbu
Ms. Doisiammoi Suantak	Substance Abuse and Women: An Anthropological Study Among the Vaipheis of Manipur	Dr. Q. Marak
Ms. Baphinda Shisha Thangkhiew	HIV/AIDS in Meghalaya: An Anthropological Study of Awareness about Prevention and Cure	Prof. H. Lamin
Ms. Junali Kropi	A Biosocial Study of Nutrition Anaemia Among the KarbiAnglong District, Assam	Prof. R. Khongsdier
Ms. Jenny Jami	Nutritional Status and Morbidity among the LothaNagas of Wokha Town, Nagaland	Prof. D. K. Limbu

#### **Placement of Students**

Dr. Longshibeni Kithan was appointed as Assistant Professor, Department of Folkloristics and Tribal Studies, Central University of Karnataka on November 26, 2019.

#### **Research Fellowships**

UGC-SRF: 02

UGC NON-NET:05

Rajiv Gandhi National Fellowship:02

ICSSR Post-Doc Fellowship:01

#### **Fieldwork/Educational Tour of Students**

##### ***Teacher-in-Charge***

:All the Teachers of the Department

##### ***Places Visited***

:Home towns of the respective students

##### ***Duration of Tour***

:21 days (January 05 - 25, 2020)

##### ***Purpose of Tour***

:Field work for students' dissertation

## **Courses Conducted**

### **Postgraduate: M.A./M.Sc.**

#### ***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.

### **Ph.D. 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. Sudipta Ghosh**

Presented papers on (i) “Body composition and blood pressure association in genetically and ethnically distinct tribal

populations” in an International conference on the theme Anthropology of Food and Health organized by the Department of Anthropology, University of Delhi, Delhi, during February 27-29, 2020, (ii) “Heritability of the Body Composition and Blood Pressure association in ethnically distinct indigenous populations” in the American Association of Physical Anthropologists (AAPA) Annual meeting organized by the American Association of Physical Anthropologists (AAPA) in Cleveland Convention Center, Cleveland, OH, USA during March 27-30, 2019.

### **Publications**

#### **Research Papers**

##### ***Published in India***

Ghosh, S., Riamei, G. (2019). Nutritional status in relation with age and place of residence among the adult Rongmei Naga of Manipur. The NEHU Journal, XVII (1&2): 31-39.

Limbu, D. K., Gogoi, D. (2020). Index of opportunity for natural selection among the Idu Mishmi of Dibang Valley district, Arunachal Pradesh. The NEHU Journal, 17 (2):1-11.

Limbu, D. K., Khual, G. K. (2019). Socio-economic factors influencing infant and child mortality among the Zou of Manipur. JNEIC, 4(2):100-132.

Ranjan, G. (2019). Human life at stake: The situation of labourers working in unregulated mining enterprises. Journal of Emerging Technologies in Innovative Research, 6(5):654-657.

Subba, T. B. (2020). Verrier Elwin and his fieldwork method. Journal of the Anthropological Survey of India, 69 (1): 1-8, DOI: 10.1177/2277436X20905924.

### ***Published abroad***

Brutsaert, T. D., Kiyamu, M., Revollendo, G. E., Isherwood, J. L., Lee, F. S., Rivera-Ch., M., Leon-Velarde, F., Ghosh, S., Bigham, A.W. (2019). Association of EGLN1 gene with high aerobic capacity of Peruvian Quechua at high altitude. *Proceedings of the National Academy of Sciences of the United States of America (PNAS)*, 116 (48): 1-12.

Ghosh, S., Kiyamu, M., Contreras, P., León-Velarde, F., Bigham, A., Brutsaert, T.D. (2019). Exhaled nitric oxide in ethnically diverse high-altitude native populations: A comparative study. *American Journal of Physical Anthropology*, 170(3): 451-458, doi: 10.1002/ajpa.23915.

Limbu, D. K., Khual, G. K. (2019). Influence of mothers' obesity, hypertension and morbidity on infant and child mortality among the Zou of Manipur, North East India. *Antrocom Journal of Anthropology*, 15(1):109-117.

Limbu, D. K., Passah, M.C. (2020). Prevalence of anaemia and its association with socio-demographic factors among the Pnar women of Jowai Town, West Jaintia Hills District, Meghalaya, India. *Antrocom Journal of Anthropology*, 16(1):203-210.

Marak, Q. (2019). Wooden structures as megalith: A reappraisal. *Anthropology and Ethnology Open Access Journal*, 2(3), <http://doi.org/10.23880/aeoaj-16000122>.

Rodborne, R., Khongsdier, R. (2000). Evaluation of the nutritional status of Khasi children under ICDS Programmeme in Mawsynram Block of East Khasi Hills, Meghalaya.

*Anthropology and Ethnology Open Access Journal*, 3(1), <https://doi.org/10.23880/aeoaj-16000133>.

### **Books/Book Chapters/Proceedings**

Marak, Q., Chaudhuri, S., editors. (2020). *The Cultural Heritage of Meghalaya*. IGRMS, Bhopal and Manohar Publications, New Delhi, ISBN: 978-81-943521-2-9.

Dkhar, J. W., Darnei, K. (2020). Marriage customs of the Biates. In: *The Cultural Heritage of Meghalaya*. Q. Marak and S. K. Chaudhuri (Eds.). IGRMS, Bhopal and Manohar, New Delhi, Chapter 17, p. 367-382.

Ghosh, S., Thangjam, Z. (2019). Menstrual cycle among the Meiteis of Manipur: Myths and taboos. In: *Spectrum of Anthropological Perspectives of Northeast India*. S. Sengupta and J. Borah (Eds.). Gyan Publishing House, New Delhi, Chapter 14, p. 189-199.

Langstieh, B. T. (2020). Peopling of Shillong plateau: A molecular anthropological insight. In: *The Cultural Heritage of Meghalaya*. Q. Marak and S. K. Chaudhuri (Eds.). IGRMS, Bhopal and Manohar, New Delhi, Chapter 5, p. 87-103.

Limbu, D. K. (2020). Nepalīs of Meghalaya: Settlement, social institutions and festivals. In: *The Cultural Heritage of Meghalaya*. Q. Marak and S.K.Choudhuri (Eds.). IGRMS/Manohar Publications, Bhopal and New Delhi, Chapter 8, p. 159-174.

Marak, Q. (2020). Women and clay: A study on the craft of pot – making among Garos. In: *The Cultural Heritage of Meghalaya*. Q. Marak and S.K.Chaudhuri (Eds.). IGRMS, Bhopal

and Manohar, New Delhi, Chapter 22, p. 443-456.

Marak, Q., Bhuyan, G. (2020). Prehistoric tool making in Garo Hills. In: The Cultural Heritage of Meghalaya. Q. Marak and S. K. Chaudhuri (Eds.). IGRMS, Bhopal and Manohar Publications, New Delhi, Chapter 2, p. 31-46.

Ranjan, G. (2019). Influence of Different Religions on a particularly vulnerable tribal group: An anthropological exploration. In: Syncretism in India: Religious and Cultural Dimensions. G. Lazar SVD, Sarit K. Chaudhuri and

K. Jose, SVD (Eds.). Gyan Publishing House: New Delhi, Chapter 24, p.267-27.

Zehol, L. (2020). Naga women as Natural Resource Managers: Is Revival of Tradition always the best Option? In: Environment and Society: The context of North East India. R. M. Shangpliang (Ed.). Concept Publishing Company, New Delhi, Chapter 4, p. 33-42.

Subba, T. B., editor. (2019). Brill's Encyclopedia of the Religions of the Indigenous People of Northeast India. Brill, Leiden, ISSN: 2665-9093. (General Editor: Prof. Marine Carrin).

#### **Fund Received from Agencies including NEHU/UGC**

**Non-Plan: Rs. 6.00 lakhs**

#### **Research Projects**

##### **New**

<b>Title of Project</b>	<b>PI/Co-PI</b>	<b>Funding Agency</b>	<b>Amount ₹ in lakhs</b>
The Stories of our Ancestors (Narrative retelling by the Nagas of North East India)	Prof. L. Zehol	North Eastern Council	67.47
Exercise Capacity and Cardio-Pulmonary Responses among Sherpa: Highlander Vs Migrant	Dr. S. Ghosh	ASEM-DUO, Belgium	4.42
<b>Ongoing</b>			
Pattern of Hearing Loss and Inheritance among Rural Population of Pynursla Block, Meghalaya	Dr. B. Langstieh (Co- PI) Dr. A. Bhatia, NEIGRIHMS, Shillong	ICMR	1.90

##### **Completed:**

<b>Title of Project</b>	<b>PI</b>	<b>Funding Agency</b>	<b>Amount (Rupees)</b>
Documentation of Endangered Material Culture of the Garos of Meghalaya	Dr. Q. Marak	Anthropological Survey of India	5.00
An Exploratory Study on the Socio-economic Status and Problems of Single Mothers Meghalaya	Dr. V. Pakyntein	National Commission of Women (NCW), New Delhi	9.12

## **Academic Collaborations**

### **Prof. B. T. Langstieh**

Collaborated with (i) Dr. Brian E. HeM. Phil. (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”. (ii) Dr. Alexander Alvergne, School of Anthropology and Museum Ethnography, University of Oxford, UK and Dr. Jeremy Koster, Department of Anthropology, University of Cincinnati, Ohio USA on “The Effect of Social Networks on Inequality: A Longitudinal Cross-Culture Investigation”.

### **Dr. Sudipta Ghosh**

Collaborated with (i) Prof. Tom D. Brutsaert, Syracuse University, Syracuse, NY, USA, and Dr. Abigail Bigham, University of Michigan, USA on “Hypoxic Ventilatory Responses in Ethnically Diverse High-Altitude Native Populations: A Comparative Study”, (ii) Prof. Gregory Livshits (Department of Anatomy and Anthropology, Tel-Aviv University, Israel) on “Comparative Analysis of Association between the Cranio-facial Traits and Body Composition in Two Ethnically Drastic Populations”, (iii) Prof. Vitalie Faoro, Cardio-Pulmonary Exercise Laboratory, Faculty of Motorskill Sciences, Université Libre de Bruxelles, Brussels, Belgium, for the project “Exercise Capacity And Cardio-Pulmonary Responses Among Sherpa:

Highlander Vs Migrant”, (iv) Prof. Kamala Ramadoss, Syracuse University, NY, USA, on “Effect of Dietary Acculturation on Cardiovascular Disease Risk Factors and Metabolic Syndromes among the Immigrant Indians”, (v) Dr. Ritushree Kukreti, Institute of Genomics & Integrative Biology, New Delhi, on “A Comprehensive Pharmacogenetic Study of Dopaminergic Pathway Genes Implicated in Levodopa Response in Parkinson’s Disease”.

## **Honours/Awards/Recognitions**

### **Prof. T. B. Subba**

Chairman, UGC Expert Committee for drafting Learning Outcome – Based Curriculum Framework for Anthropology (May 2018-April 2019). He is also Member of the Governing Council, Asian Confluence, Shillong, from March 13, 2019 till date.

### **Prof. R. Khongsdier**

Member of the (i) Meghalaya State Level Scrutiny Committee for Scheduled Tribes, Government of Meghalaya, and (ii) Meghalaya State Task Force on Minorities. He is also Member of the Editorial Boards of the Journal of Life Sciences, Indian Journal of Research in Anthropology, The Anthropologist, and the International Journal of Anthropology and Ethnology.

### **Dr. Q. Marak**

Awarded Associateship at Indian Institute of Advanced Studies (IIAS), Shimla (November 2019 onwards). She is Member of Editorial Board of the International

Journal Anthropology and Ethnology Open Access Journal. She is also a Member of Steering Committee set up by State Government, Meghalaya, to bring out a book commemorating 50 years of Statehood.

### ***Other Activities***

#### **Prof. T. B. Subba**

Delivered (i) Valedictory address titled “Custom, Customary Law and Law: A Conspectus” at the International conference on Custom, Law and the Colonial State in Northeast India: Dynamics and Challenges for the Post colonial State held at NEHU and sponsored by the Nehru Museum & Library, New Delhi, during June 13-14, 2019, (ii) Golden Jubilee Lecture titled “The Eco-system of a Language and its Survival” at the Central Institute of India Languages, Mysore on July 15, 2019, (iii) Keynote address at the International Conference on Ethnicity, Livelihoods and Culture Change among the Himalayan People: Anthropology and Beyond held at Rajiv Gandhi University, Doimukh, during August 30-31, 2019, (iv) Valedictory Address titled “Do ‘People’ Exist? The Problems of Writing Peoples’ History” at the National Seminar on Darjeeling: In search of People’s History held at Southfield College, Darjeeling, during September 05-07, 2019, and (v) Keynote address at the National conference on Contemporary Research and Emerging Issues of Northeast India: Anthropology,

Rajiv Gandhi University, Rono Hills, Doimukh during March 02-03, 2020.

#### **Prof. R. Khongsdier**

Member of the Governing Body of the North Eastern Institute of Ayurveda Homoeopathy, Shillong.

#### **Prof. L. Zehol**

Served as mentor of Dr. Tara Douglas, Post-Doctoral Scholar.

#### **Prof. G. Ranjan**

Delivered lectures on (i) Prof. Sameera Maiti Memorial Lecture in the Department of Anthropology, Central University of Sikkim on November 08, 2019. (ii) Two plenary lectures in the National Colloquium on the Architects of Anthropology in India, in the Department of Anthropology, Dibrugarh University, Dibrugarh, during March 12-13, 2020.

#### **Dr. Sudipta Ghosh**

Presented papers on (i) “High altitude adaptation in relation to exhaled nitric oxide” at the Science Communicators’ Meet 2020 held during January 05-06, 2020 during the 107th Indian Science Congress held in Bengaluru; and (ii) “Allen’s Rule and Human Adaptation to High Altitude: A comparison between Monpa and Santhal” at the 10th National Leh Symposium 2019 held in New Delhi organized by the CSIR-Institute of Genomics and Integrative Biology (IGIB), Delhi on November 15, 2019.



**Dr. Q. Marak**

Academic Advisor on Human Ecology component to the project “Characterization of Community Reserves and Assessment of their Conservation Values in Meghalaya” at Salim Ali Centre for Ornithology and Natural History, Coimbatore (PI: Dr. P. V. Karunakaran).

**Reviewer :** Journals of the Kolkata Society for Asian Studies, Anthropology and Ethnology Open Access Journal, Indian Anthropological Society, and Man in India.

## DEPARTMENT OF ENVIRONMENTAL STUDIES

**Head** : Prof. D. Paul  
**Telephone** : 0364 - 2721157 (O), +91 9436732431 (M)  
**E-mail** : hodces@nehu.ac.in; pauld97@rediffmail.com

**Faculty: 05**

Designation	Name and Qualification	Specialization
<b>Professor</b>	Prof. O. P. Singh, M.Sc. & Ph.D. (BHU)	Environmental Monitoring and Restoration of Degraded Ecosystems
	Prof. D. Walia, M.Tech. (Dr. HSG Univ.), Ph.D. (Gauhati Univ.)	Structure and Tectonics
	Prof. D. Paul, M.Sc. & Ph.D. (NEHU)	Integrated Pest Management, Bioresource utilization, EIA
	Prof. M. S. Bisht, M.Sc. (Univ. of Jodhpur), Ph.D. (Delhi Univ.)	Waste (organic and single use plastic) recycling and use, and Application of bamboo for various uses for socio-economic development and carbon sequestration
<b>Associate Professor</b>	Dr. S. S. Chaturvedi, M.Sc. (Gorakhpur Univ.), Ph.D. (BHU)	Environmental monitoring & abetment, climate change monitoring & mitigation and natural resource management

### 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, 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 of NE Region, Radon activity concentration in NER, Earthquake forecasting research and impact of seismicity on infrastructures, Waste (organic and single use plastic)

recycling and use. Application of bamboo for various uses for socio-economic development and carbon sequestration

### Brief Statement of Academic Activities

The Department took part in several International and National Workshops/ Seminars/ Training programmes and undertook research projects aimed at creating much-needed database for promoting ecologically sound and sustainable development of the hill regions of northeast India. The Department also contributed towards configuring the deeper crustal structure for understanding the crustal evolutionary processes, global positioning system studies and seismicity of the northeast India along with the radon activity concentration. The Department

received grants to support the research and other activities of the Department. The grants received from various external funding agencies were used to strengthen

ongoing research and extension activities and in development of laboratory and other infrastructure.

### Students' Profile

**Enrolment Capacity: M.Sc. - 28**

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.Sc.	06	21	01	22	-	04	18	09	27

### Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.Sc.	13	10	-	21	-	02	20	03	23
Ph.D.	01	02	-	03	-	-	02	01	03

### Students Awarded PhD Degree

Name of Student	Title of Thesis	Name of Supervisor
Ms. AksanaNeah Ch. Marak	Environmental Protection Through Corporate Social Responsibility in Meghalaya: Current Status and Future Prospects	Prof. O. P. Singh
Ms. VihenoIralu	Distribution and Regeneration Ecology of <i>Elaeocarpus Prunifolius</i> (C. Muell.) Mast. and <i>Micheliapunduana</i> Hk. F. & Th. in Meghalaya	Dr. K. Upadhaya
Mr. Balawan Joshua Mawrie	Assessment of Pesticide Residues in food items available in Shillong	Prof. D. Paul

### Placement of Students

Mr. Balawan Joshua Mawrie was appointed Assistant Professor in Shillong College, Shillong.

### Research Fellowship

UGC NON-NET: 10

Rajiv Gandhi National Fellowship: 02

### Fieldwork/Educational Tour of Students

**Teacher-in-Charge** : Prof. M. S. Bisht

**Places Visited** : Thiruvananthapuram, Kanyakumari, Puducherry and Chennai

**Duration of Tour** : 15 days (January 12 – 26, 2020)

**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: M.Sc.**

### 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; Radiation Biology

### ***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

### **Ph.D. Courses**

Research Methodology in Environmental Science; Contemporary Environmental Science

### **Seminars/Conferences/Workshops/Symposia/Extension Programmes**

#### ***Organized***

The Department jointly organized (i) ISCA Lecture Series with Shillong Chapter, Indian Science Congress Association, Kolkata on Tectonic geomorphology of Brahmaputra River and Application of Geomorphology in Identification and mapping of Active fault at NEHU, Shillong on May 14, 2019, (ii) Bhuvismvad, an initiative of Ministry of Mines, Government of India by Dr. Bashab N. Mahanta, Suptdg. Geologist and Sh. B.R. Synagi, Senior Geologist along with Geological Survey of India and Shillong Chapter, Indian Science Congress Association, Kolkata on July 25, 2019, (iii) Five days Training Programme on Landslide Mitigation and DPR Preparation at NEHU, Shillong and National Disaster

Management Authority, New Delhi during November 25-29, 2019, (iv) 4th North East Green Summit 2019 (NEGS 2019) with Shillong Chapter, ISCA and NE Green Summit at IIT Guwahati during November 01 – 03, 2019, (v) the ISG-ISRS National Symposium 2019 Innovations in Geospatial Technology for Sustainable Development with Special Emphasis on NER held at NESAC, Umiam, Meghalaya during November 20 – 22, 2019, (vi) Entrepreneurship Tinkering Programme with Karmyo Foundation, Shillong Chapter, ISCA, Kolkata and Incubation Centre NEHU on November 16, 2019, (vii) National Seminar on Earthquake Hazards: Perception, Mitigation and Management with Shillong Chapter, Indian Science Congress Association, Kolkata and EWMI, Guwahati and sponsored by Ministry of Earth Sciences, New Delhi during February 06 – 08, 2020.

Conducted entrance test on International Earth Sciences Olympiad (IESO) 2020 at NEHU, Shillong on December 01, 2019.

#### ***Attended***

#### **Prof. D. Walia**

Delivered lectures on (i) “Advances on Geospatial Technology for Renewable Energy Resources and Geosciences Applications” in a National Seminar on Innovations in Geospatial Technology for Sustainable Development with Special Emphasis on NER and chaired a session at NESAC, Shillong during November 20-22, 2019, (ii) “Energy Resources: Issues and Challenges” in an International conference on Advanced Material for Energy Science and Technology by Department of Energy Engineering, NEHU, Shillong on February 26, 2020, (iii) “Geosciences and Energy: Growth and Development” in 107th Indian

Science Congress and chaired a session held at University of Agricultural Sciences, GKVK, Bangalore, Karnataka during January 03-07, 2019, (iv)“Bioresources: Future Trends” and chaired a session during the 4th North-East Green Summit at IIT, Guwahati, Assam during November 01- 03, 2019.

Chaired a session during Indo-Japan HINDAS Workshop at Department of Geography, Delhi School of Economics, Delhi on December 26, 2019

Presented a paper on “Lightning and its impact” during Round table Meeting on Lightning and Thunderstorms (RMLT 2019) organized by Tripura University, Agartala during September 12-14,2019.

Attended the meeting of CCP-SPLICE of DST at JNU, New Delhi to discuss proposal entitled “Climate Change Assessment and Risk in Meghalaya” during August 30-31, 2019.

## **Publications**

### **Research Papers**

#### ***Published in India***

Premlata, T., Sharma, V., Bisht, M. S., Chongtham, N. (2020). Edible bamboo resources of Manipur: consumption pattern of young shoots, processing techniques and their commercial status in the local market. *Indian Journal of Traditional Knowledge*, 19: 73-82.

Pyngrope, A., Khardewsaw, A., Jami, N., Talang, T., Maibam, D., Sharma, Y., Walia, D., Saxena, A. (2019). Measurement of indoor radon activity levels in Jowai region, Meghalaya, India. *Journal of Applied and Fundamental Science*, 5(1): 29-33.

Santosh, O., Bajwa, H. K., Bisht, M. S., Chongtham, N. (2019). Functional biscuits from bambooshoots: Enrichment

of nutrients, bioactive compounds and minerals in bamboo shoot paste fortified biscuits. *International Journal of Food Science and Nutrition*, 4(1): 89-94.

Upadhyaya, A., Chaturvedi, S.S., Tiwari, B. K., Paul, D. (2019). Effect of temperature on germination of Citrus macroptera, Citrus lapites and Citrus indica seeds. *The NEHU Journal*, XVII (1-2): 12-20.

#### ***Published Abroad***

Bajwa, H. K., Santosh, O., Koul, K., Bisht, M. S., Chongtham, N. (2019). Phytomodulatory effects of fresh and processed shoots of an edible bamboo *Dendrocalamus hamiltonii* Nees & Arn. Ex Munro on antioxidant defense system in mouse liver. *Journal of Food Measurement and Characterization*, 13(4): 3250–3256.

Bajwa, H. K., Santosh, O., Koul, K., Bisht, M. S., Chongtham, N. 2019. Quantitative determination of macro and micro element content of fresh and processed bamboo shoots by Wavelength Dispersive X-ray Fluorescence Spectrometry. *X ray Spectrometry*, DOI: 10.1002/xrs.3048

Lamare, R. E., Singh, O. P. (2020). Effect of cement dust on soil physico-chemical properties around cement plants in Jaintia Hills, Meghalaya. *Environmental Engineering Research*, 25(3): 409-417. DOI: <https://doi.org/10.4491/eer.2019.099>.

#### **Books/Book Chapters/Proceedings**

Singh, O. P. (2020). Look towards the northeast: Unscientific coal mining has turned water in many rivers stretches highly acidic and polluted. In: *State of India's Environment 2020 (A Down To Earth Annual)*. S. Narain, R. Mahapatra,

S. Das, A. A. Parrey, S. Sinha, A. Misra and R. Sengupta (Eds.). Centre for Science and Environment, New Delhi, p. 210-211.

Varentsov, P. V., Ivanov, I. N., Lozovsky, D., Bai, X. Li, Kumar, S., Walia, D. (2019). Geoelectric Models Along the Profile Crossing the Indian Craton, Himalaya and Eastern Tibet Resulted from Simultaneous MT/MV Soundings. In: The Study of Continental Lithosphere Electrical Conductivity, Temperature and Rheology. M. Abdulkhay, A. Zhamaletdinov and Yury L. Rebetsky (Eds.). Springer, Chapter 9, p. 72-82. Springer Proceedings in Earth and Environmental Sciences, <https://doi.org/10.1007/978-3-030-35906-5>

org/10.1007/978-3-030-35906-5

Walia, D., Maibam, D., Sharma, Y., Saxena, A. (2020). Radon Testing and Mitigation in Schools of Shillong City, Meghalaya. In: Radon: Detection, Exposure and Control. R.C. Tiwari (Ed.). Nova science publishers Inc., NY, Chapter 8, p. 69-75. Series: Earth Sciences in the 21st Century.

Walia, D., Saxena, A., Maibam, D., Sharma, Y. (2020). Calibration factor for LR-115 type II detector for soil-gas radon measurement. In: Radon: Detection, Exposure and Control. R.C. Tiwari (Ed.). Nova science publishers Inc., NY, Chapter 9, 76-82. Series: Earth Sciences in the 21st Century.

## Research Projects

### New Projects

Title of Project	PI/Co-PI	Funding Agency	₹ in lakhs
Short term research on Forest Fire in Meghalaya	Prof. D. Paul	Department of Forest & Environment, Govt. of Meghalaya	8.00
Landslide Mitigation & Detailed Project Report (DPR) Preparation	Prof. D. Walia	National Disaster Management Authority, New Delhi	7.60
4th North East Green Summit	Prof. D. Walia	North Eastern Council, Shillong	9.00
4th North East Green Summit – Special Session on Biotechnology	Prof. D. Walia	Department of Biotechnology, New Delhi	10.00
Meghna Basin Land Use Change Analysis and Atlas Development	Prof. D. Walia	IUCN, Asia Regional Office, Thailand, Bangkok	10.00



### *Ongoing*

<b>Title of Project</b>	<b>PI/Co-PI</b>	<b>Funding Agency</b>	<b>₹ in lakhs</b>
Impact of Mining on Water Resources in Jaintia Hills, Meghalaya	Prof. O. P. Singh	Ministry of Water Resources, Govt. of India, New Delhi.	13,46,572
Study on Mining Affected Areas and its Impact on Livelihood	Prof. O. P. Singh	Meghalaya Basin Management Authority, Meghalaya	16,30,150
Assessment of Carbon Stock and Carbon Sequestration Potential of Major Landuse Sectors in Meghalaya	Dr.S.S.Chaturvedi (PI), Prof. B. K. Tiwari (Co-PI)	Department of science and Technology, New Delhi	Fund not released by funding agency (Rs.)
Rainfall Induced Landslide Hazard and Forecast and Prevention	Prof. D. Walia	DST, New Delhi	26,11,000
GPS based TEC for earthquake precursor for understanding seismicity in Shillong Plateau.	Prof. D. Walia (Gopal Sharma, NESAC) (PI)	TDP, NESAC	7,00,000

### *Completed*

<b>Title of Project</b>	<b>PI/Co-PI</b>	<b>Funding Agency</b>	<b>₹ in lakhs</b>
Preparation of State of Environment Report of Mizoram-2016	Prof. O. P. Singh	Ministry of Environment, Forest and Climate Change, Govt. of India, New Delhi.	25,00,000
Technology Development for Bamboo-Plastic-Board from Waste Plastic and Bamboo Strips	Prof. M. S. Bisht	State Council of Science, Technology and Environment, Meghalaya	10,91,000
Technology Development for Making Boards from Waste Pine Needles	Prof. M. S. Bisht	State Council of Science, Technology and Environment, Meghalaya	8,19,000
Biodiversity inventorization and conservation through assisted regeneration of RET species in limestone mining area of Meghalaya Cements Ltd.	Prof. D. Paul	Meghalaya Cements Ltd.	16,27,200
Final Environmental Assessment Study of Transmission and Distribution Sub-projects in Khasi Hill & Ri-Bhoi Districts of Meghalaya Under NERPSIP	Prof. D. Paul	Power Grid Corporation of India Ltd.	18,73,750/-

## **Academic Collaborations**

### **Prof. O.P. Singh**

Collaborated with Meghalaya Basin Development Authority (MBDA), Meghalaya on the project “Neutralization of Acidic Water in Coal Mining areas of Meghalaya and Ecorestoration of Mining Affected Areas”.

### **Prof. D. Walia**

Collaborated with Prof. A. Saxena, Department of Physics, NEHU on radon and seismicity; Dr. P. Banerjee, EOS-NTU on Global Positioning System; Prof. I. Varentsov, Director, RFBR, Moscow on Magnetotelluric Study; Dr. G. Sharma, Scientist, NESAC, Shillong on Ionospheric characterisation.

### **Prof. D. Paul**

Collaborated with Prof. G. Bez, Department of Chemistry, NEHU, Dr. A. Bhattacharjee, Department of Biotechnology & Bioinformatics, NEHU, and Prof. D. Syiem, Department of Biochemistry, NEHU.

### **Prof. M.S. Bisht**

Collaborated with Prof. N. Chongtham, Department of Botany, Panjab University, Chandigarh.

## **Honours/Awards/Recognitions**

### **Prof. D. Walia**

Incorporated in Advisory Group Member as Academic Advisor of North East Green Summit.

Member of the (i) Expert Committee on “Landslide Hazard Mitigation”, NRDMS, Department of Science and Technology, New Delhi, (ii) Council of Geological Society of India for the triennium 2019-2022, (iii) Board of Management, Deen

Dayal Upadhaya Community College for Skill Development, NEHU.

Secretary of the Indian Society for Training and Development (ISTD), New Delhi.

### **Prof. D. Paul**

Member of the (i) State Level Nodal Agency for Watershed Programmes, (ii) State level monitoring committee for effective monitoring and implementation of Plastic waste management rules, 2016.

## **Other Activities**

### **Prof. O. P. Singh**

Delivered invited talks on (i) “Water resources and water crisis in north-eastern region of India” in International Seminar on Understanding Water Crisis: The Way Forward organized by Synod College Shillong during June 06-07, 2019 at Shillong; (ii) “Adaptation to Climate Change in Forest and Biodiversity” in Training Programme organized by Meghalaya Basin Development Authority (MBDA) for District level officers at Shillong during June 18-20, 2019, (iii) “Environmental impact of energy use: Current scenario and future perspectives” as keynote lecture in a National conference on Emerging Trends in Environmental research (NACETER 2019) organized by Department of Environmental Science, Pachhunga University College (Mizoram University), Mizoram during October 31 - November 02, 2019, wherein he also chaired a session.

Invited as a resource person to deliver a lecture in Orientation Programme organized by the Department of Earth Sciences, University of Science and Technology (USTM) on October 10, 2019.

**Prof. D. Walia**

Attended (i) National consultation on University Network on Disaster Risk Reduction organized by NIDM, MHA, New Delhi and UNISDR-ASTAAG during April 05- 06, 2019, (ii) Meghna Research Collaborators and India Benefit Sharing Strategy for the Meghna Basin meeting in Shillong during April 24 – 25, 2020, (iii) Thematic Workshop on Vulnerability Atlas of India and Disaster Resistant Design and Construction Practices held at India Habitat Centre, New Delhi, organized by Ministry of Housing and Urban Affairs and BMTPC, New Delhi on May 03, 2019, (iv) Meeting with Mr. S. Sanyal, CEO, Innovation Park, IIM, Kolkata and Mr. R. Sinha, NEDFi, Shillong to discuss certain aspects regarding the development of the start-up system in Meghalaya on May 10, 2019, (v) Meeting with Dr. A. Tyagi, Former DG, Indian Meteorological Department and presently Senior Advisor, IRADe and team of IRADe on aspects related to climate change with future development of projects on May 23, 2019, (vi) Meeting to discuss the draft water policy, Meghalaya Secretariat, Shillong; (vii) meeting of the ISTD Shillong Chapter on May 26, 2019 at ICSSR guest house Conference hall, Shillong on May 24, 2019, (viii) Council Meeting of Geological Society of India followed by an Extraordinary General Body Meeting and the Foundation Day celebrations on May 28, 2019, (ix) Working Group meeting for finalization of Memorandum of Association for University network for DRR scheduled on June 17, 2019 organized by NIDM, New Delhi; (x) one-day Workshop cum interaction meeting on Lightning Resilient India Campaign and Agromet Advisory Services in NER of India organized by

NESAC, Shillong on June 22, 2019; (xi) International Workshop on Innovative Models for Multi National Collaboration on Disaster Resilience and working meeting of the Himalayan University Consortium's Thematic Working Group on Disaster Resilience at Institute for Disaster Management and Reconstruction (IDMR), Sichuan University, Chengdu during June 30 - July 04, 2019, (xii) Experts' Consultation on Developing Disaster Resilience Action Plan through GIS and Prioritizing Actions for Natural Disaster Risk Reduction in Urban Agglomerations of Shillong and Gangtok at NESAC, Shillong on July 30, 2019, (xiii) Indian Green Building Council meeting to discuss hosting the National Workshop on Green Hill Habitat for greening of hill stations in Eastern India on August 09, 2019, (xiv) review meeting for preparedness of the ISG-ISRS National Symposium 2019 at NESAC Director's Conference Hall during August 30- 31, 2019, (xv) Consultative Workshop on formulation of Policy document on Scientific Social Responsibility (SSR) for North Eastern Region, organized by National Advisory Committee-SSR Project, TIFAC and IIT Guwahati on September 18, 2019, (xvi) Large Scale Terrain Mapping- Programme and Review Meeting at Manipur University, Imphal during September 13 – 14, 2019, (xvii) First Meeting of the Expert Committee on Landslide Hazard Mitigation at Chitkara University, Himachal Pradesh during September 25- 26, 2019, (xviii) UGC National Workshop on Fostering Social Responsibility & Community Engagement in Higher Educational Institutions in India under Unnat Bharat Abhiyan during at IUAC, New Delhi, January 21-22, 2020,

(xix) Workshop and inauguration of Inter University Centre for Yogic Sciences (IUC-YS) at IUAC, New Delhi on January 23,2020; (xx) 5th ISTD Eastern Region Conference at Kolkata during January 10 - 11, 2020, (xxi) Workshop on Social Media Management and Practices organized by MHRD, New Delhi on December 27, 2019, (xxii) 2nd Meghna Advisory Group Meeting, at Dhaka, Bangladesh during February 11-12, 2020, (xxiii) Interactive Round table Discussion on the theme “China in India’s Neighbourhood” at the Asian Confluence Centre, Shillong on February 18, 2020.

Delivered a popular lecture on “Climate Change: Issues and Challenges” at Shankar Dev College, Shillong on August 09,2019.

### **Prof. D. Paul**

Delivered an invited talk on “Environmentally sound management of E waste” delivered at National Institute of Electronics and Information Technology (NIELIT), Shillong on February 13, 2020.

Invited as a resource person for one-day inter college Seminar on Climate change: Adaptation & Mitigation and delivered a lecture on “Global warming & Climate Change” at St. Dominic’s College, Shillong on August 27, 2019.

## DEPARTMENT OF GEOGRAPHY

**Head** : Prof. Sunil Kumar De  
**Telephone** : 0364-2723201, 2723202  
**E-mail** : hodgeo@nehu.ac.in/ desunil@gmail.com

### Faculty: 07

Designation	Name and Qualification	Specialization
<b>Professor</b>	Prof. B. S. Mipun, M.A. (JNU), Ph.D. (NEHU)	Agricultural Geography, RS & GIS
	Prof. D. K. Nayak, M.Phil. & Ph.D. (JNU)	Social and Population Geography, Gender and Health related Issues
	Prof. H. J. Syiemlieh, M.Phil. & Ph.D. (NEHU)	Fluvial and Applied Geomorphology
	Prof. S. K. De, M.Sc. & Ph.D.	Environmental Geomorphology, Geomorphological Hazards
<b>Associate Professor</b>	Dr. L. Cajee, M.Sc. & Ph.D. (NEHU)	Bio- Geography and Geography of Tourism
	Dr. P. K. Ryngha, M.Phil. & Ph.D. (JNU)	Regional Development, Urban Geography, Remote Sensing & GIS
<b>Assistant Professor</b>	Dr. S. Purkayastha, M.A. & Ph.D. (NEHU)	Population Geography, Geography of Development, Geography of North-East India

### Thrust Areas of Research

Geomorphology with focus on Applied Geomorphology and Geomorphological Hazards, Environmental studies with focus on Climatology and Climate Change, Water Resources and Hydrology, Biogeography and Biodiversity and Watershed Management Studies, Regional Development and Regional Planning, Researches on Social and Cultural Diversity of the North-Eastern Region with a special focus on Tribal Development, GIS and Remote Sensing applications in Environment and Land Use Planning.

### Brief Statement of Academic Activities

The Department is supported by UGC-SAP-DRS-III and DST-FIST programmes . The Department organized two collaborative Seminars/Workshops with the Indian Society of Remote Sensing and Association of Geospatial Industries in November 2019. Apart from this, the Department of Geography also runs a self-financed two-semester PG Diploma in Geoinformatics in the University.

**Students' Profile****Enrolment Capacity: M.A./M.Sc.– 42, Ph.D. - 08**

Degree	Male	Female	SC	ST	GEN	Meghalaya	Non-Meghalaya	Total
M.A./M.Sc.	00	30	11	15	26	20	21	41
Ph.D.	-	05	03	04	04	01	07	08
P.G. Diploma (Geoinformatics)	-	14	10	11	13	20	06	24

**Degrees Awarded**

Degree	Male	Female	SC	ST	GEN	Meghalaya	Non-Meghalaya	Total
M.A./M.Sc.	-	33	03	11	25	18	18	36
M.Phil.	01	03	05	02	07	02	07	09
Ph.D.	-	02	01	01	02	00	03	03
P.G. Diploma (Geoinformatics)	-	23	03	10	16	20	06	26

**Students Awarded PhD Degree**

Name of Student	Title of Thesis	Name of Supervisor
Mr. Raju Deb Barma	Growth and Distribution of Rubber Plantation in Tripura and Changing Livelihood Options	Dr. S. Purkayastha
Ms. Hiraxmi Deb Barma	Land Degradation in Haora Drainage Basin of Tripura	Dr. S. Purkayastha
Ms. Sudatta Wadadar	Landslide and Soil Erosion in the Lachung River Basin, Sikkim and Their Impact on Hydro-Morphological Characteristics in the Lower Course of the River	Prof. S. K. De

**Research Fellowship**

CSIR-UGC-NET:1

UGC Non-NET: 8

Rajiv Gandhi SC/ST:01

Meritorious Maulana Azad Minority Fellowship:01

UGC-NET JRF: 11

ISRO Project:01

NFHE:02, PDF:01

**Fieldwork/Educational Tour of Students**

**Teacher-in-Charge** : Dr. S. Purkayastha,  
Accompanying  
Teacher: Dr. L. Cajee

**Places / Institute Visited**: Ernakulam – Alaphuza– Bangalore

**Duration of Tour** : 14 days (January 24 – February 06, 2020)



**Purpose of Tour** : All India Study Tour under Course No. GEOC 201- Geography of India

**Teacher-in-Charge** : Dr. L. Cajee, Accompanying Teacher: Prof. H. J. Syiemlieh

**Places / Institute Visited** : S a i d e n Village, Nongpoh, Meghalaya

**Duration of Tour** : 10 days (January 11-20, 2020)

**Purpose of Tour** : Socio-economic and Physical survey by the IV Semester M.A./M.Sc. students, under Course No. GEOC 401- Dissertation

### **Courses Conducted**

#### **Postgraduate: M.A./M.Sc.**

##### **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 course) Biogeography (open course), Population and Settlement Geography, Geographical Thought-II, Quantitative Techniques in Geography-II, Cartography-II (Practical), Geography of North-East India (open course)

##### **Semester III**

Geography of India, Principles of Ecology (open course) Biogeography (open course), Population and Settlement Geography, Geographical Thought-II, Quantitative Techniques in Geography-II, Cartography-II (Practical), Geography of North-East India (open course)

##### **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

#### **P.G. Diploma in Geoinformatics**

##### **Semester I**

Principles of Remote Sensing & GPS; Fundamentals of GIS; Cartography & Geo-Statistics; Geosciences & Image Interpretation; Computer Programming.

##### **Semester II**

Digital Image Processing; Spatial Analysis & Modelling; Project;

Geoinformatics in Agriculture, Soil & Land Evaluation; Geoinformatics in Regional and Urban Planning; Geoinformatics in Water Resources; Geoinformatics in Disaster Management

#### **M.Phil./Ph.D. 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/Workshops/Symposia/Extension Programmes**

#### ***Organized***

The Department along with the Indian Society of Geomatics, Shillong Chapter, Indian Society of Remote Sensing, Shillong Chapter and North-Eastern Space Application Centre (NESAC), Umiam jointly organized the National Workshop on Innovations in Geospatial Technology for Sustainable Development with special emphasis on NER during November 20-22, 2019. (Co-Chairman: Prof. S. K. De.)

The Department also jointly organized the conference on Role of Geospatial Technologies in the Development of North Eastern Region on India along with the Association of Geospatial Industries jointly during November 27-28, 2019. (Jt. Organizing Secretary: Prof. S. K. De.)

#### ***Attended***

##### **Prof. B. S. Mipun**

Presented a paper on “Trade & Investment India and PR China Border Trade” in a Workshop on Calcutta Dialogue India-PR China Relationship, The way towards a peace economy, organized by Research Centre for Eastern & North Eastern Regional Studies, Kolkata at The Lalit Great Eastern, Kolkata on March 13, 2020.

##### **Prof. D. K. Nayak**

Delivered (i) a key note address in the four day International Workshop on Health care for older population: Learning

from Indo Canadian Experiences and chaired in the session “Urbanisation and Environment” organized by Shastri Indo-Canadian Institute, held at Panjab University, Chandigarh, India during April 24-27, 2019, (ii) two invited lectures on “Research Methodology: An Introduction” and “Multidisciplinary approach to Social Science Research” in the Workshop on Research Methodology in Social Sciences, Cotton University, Guwahati during April 01 - 10, 2019, (iii) 21st Professor S.P. Chatterjee Memorial Lecture on “The Young North and the Old South” at the Department of Geography, Calcutta University, Kolkata on July 29, 2019, (iv) a Key note address in the 3rd National Seminar on Natural Resource Management for Sustainable Development, Mizoram University, Aizawl during November 07-08, 2019 (v) an invited lecture on “Assessing Impact of Climate Change on health with special reference to urban areas and Mega cities of India” in the XIV International Geographical Union (IGU) International Conference on Agriculture, Food, water, Bio-Diversity and Health in Changing Climate, Bardhaman University, Bardhaman during March 06-08, 2020.

Chaired a session and attended the 41st Indian Geographers Meet and the National Conference on Building a Disaster Resilient Society as a resource person at Pt. Ravishankar Shukla University, Raipur during November 21-23, 2019.

##### **Prof. S. K. De**

Presented (i) a paper on “Impact of human activities on the dynamics of braiding in the lower course of the Balasan River, West Bengal, India” in the Regional Conference on Geomorphology held in the National and Kapodistrian University of Athens,

Greece during September 19-21, 2019, (ii) the report on IAG Working Groups in the IAG (International Association of Geomorphologists) Executive Committee and Council Meetings as Vice President; and participated in the IAG Young Geomorphologists Training Programme Field Visit as Resource Person on September 24, 2019. (iii) lecture on “Braiding Dynamics in the Lower Course of the Balasan River, West Bengal, India” in technical session 4 on Fluvial Processes in the 31st IGI Conference and National Seminar on Applications of Geospatial Technology in Geomorphology and Environment organized by the Department of Geography and Applied Geography, North Bengal University, Darjeeling on November 12-14, 2019 and also chaired a technical session on ‘Human Impact on Environment’.

Delivered inaugural address in the (i) 4th International Symposium on Red Beds and Danxia Landform and 19th National Academic Symposium on Red Beds and Danxia Landform held in Zaoyuan Hotel, Yan'an City, China jointly organized by The Yan'an Municipal People's Government and Shaanxi Institute of Geological Survey during August 19-22, 2019, (ii) 3rd Joint Scientific Field Investigation on Danxia Landform in Northern Shaanxi (International) organized by Shaanxi Institute of Geological Survey and Yulin Municipal People's Government, Shaanxi, China during April 25-May 01, 2019.

Chaired a technical session in National Seminar on Earthquake Hazards: Perception, Mitigation and Management sponsored by the Ministry of Earth Sciences, Government of India at NEHU, Shillong on February 06-08, 2020.

### **Dr. P. K. Rynngnga**

Presented (i) two posters on “The role of GIS in urban planning development and infrastructure and management in Shillong” and “The role of GIS & Remote Sensing in Site Suitability Assessment For Solid waste Dumpsite using Multi criteria decision and Overlay Analysis” in the National Symposium on Innovations in Geospatial Technology for Sustainable development with special reference on NER, NESAC, Shillong and co-chaired the Technical Session “T4B: Large scale mapping, Urban & Infrastructure Planning and Development” during November 20-22, 2019, (ii) a paper on “Smart City Challenges: Transformation requires a holistic approach” in the National Seminar on Role of GeoSpatial Technologies in the Development of North Eastern Region of India and chaired a session, jointly organized by the Association of Geospatial Industries and NEHU, Shillong during November 27 – 28, 2019.

### **Dr. S. Purkayastha**

Presented a paper on “Coping with floods in Tal and Diara regions of Malda district, West Bengal” in the XIV International Geography conference on Global economy, sustainable tourism and climate change, organized by Deccan Geographical Society of India, and hosted by Department of Geography, University of Rajasthan, Jaipur during September 27 – 29, 2019.

### **Publications**

#### **Research Papers**

##### ***Published in India***

Borah, A., Rynngnga, P. K. (2019). Ex-Situ Conservation of Biodiversity Through Responsible Tourism: A Study of Eastern Himalayan Botanic Ark.

International Journal of Research and Analytical Reviews, 6(2): 985-992.

Borah, A., Ryngnga, P. K. (2019). Revisiting colonial era through tourism: A Study of the prospect's colonial heritage tourism in Brahmaputra Valley, Assam. *Thematics Journal of Geography*, 8(4): 38-51.

Cajee, L., Lemtur, S. (2019). Urban Carrying Capacity Concept: A Geographical Perspective. *Thematics Journal of Geography*, 8 (4): 738-745.

Cajee, L., Mawlong, M. (2019). Indigenous rice varieties in North East India: A geographical overview. *Thematics Journal of Geography*, 8 (4): 79-91.

Purkayastha, S., Chandran, S.(2019). History of reclaimed kayals in Kuttanad wetland and associated social divide in Alapphuzha district, Kerala. *Transactions*, 4 (1): 69-80.

Purkayastha, S., Debbarma, R. (2019). The Role of physiography and land suitability in the distribution of Rubber plantation in Tripura. *Thematics Journal of Geography*, 8 (4): 710-724.

Ryngnga, P. K. (2019). Trends and Patterns of Urbanization in Meghalaya, India. *Hill Geographer*, 35 (1): 105-111.

Sardar, A., Nayak, D. K. (2019). Livelihood (in)security among the Lodhas in Rarh and Terai Regions of West Bengal: A Comparative Analysis. *Hill Geographer*, 35 (1): 33-47.

Wadadar, S., Karim, S., De, S. K. (2019). Assessment of soil loss of the Lachung River Basin, North Sikkim, India using RUSLE. *Geographical Review of India*, 81 (1): 64-79.

### **Published Abroad**

Debnath, M., Sharma, M. C., Syiemlieh, H.J. (2019). Glacier Dynamics in Changme Khangpu Basin, Sikkim Himalaya, India, between 1975 and 2016. *Geosciences*, 9 (6), 259: doi.org/10.3390/geosciences9060259

Prokop, P., Wiejaczka, Ł., Syiemlieh, H.J., Kozłowski, R. (2019). Response of water chemistry to long-term human activity innested catchments system of subtropical Northeast India. *Water*, 11 (5), 988: doi:https://doi.org/10.3390/w11050988

### **Books/Book Chapters/Proceedings**

Ryngnga, P. K., (2019). Tourism Development and Community Participation in Meghalaya: A Case Study of Mawlynnong. In: 25 Years of Economic Reforms & North East India. B. Dhar, S. Sengupta and S. Sarma (Eds.). EBL Publications, New Delhi, Chapter 8, p. 90-99.

Sen, S., Mitra, S., De, S. K. (2020). Evolution of Tilla-lunga Topography, West Tripura, India. In: *Land Resources: Processes, Degradation and Evaluation*. H.S. Sarma and S. Padmaja (Eds.). Concept Publishing Company Pvt. Ltd., New Delhi, Chapter 10, p. 143-159.

**Funds Received from Agencies including NEHU/UGC**

Non-Plan (Rs. in lakhs)	Plan (2012-17)	UGC-SAP-DRS-III	DST-FIST
6.20	-	-	-

**Research Projects****Ongoing**

Title of Project	PI	Funding Agency	Amount (Rs. in lakhs)
Desertification and Land Degradation: Monitoring, Vulnerability Assessment and Combating Plans	Prof. B. S. Mipun	SAC, ISRO, DoS, Ahmedabad	18.80

**Academic Collaborations****Prof. H. J. Syiemlieh**

Collaborated with Department of Geo-environmental Research, IGIPZ, Polish Academy of Sciences, Krakow, Poland as part of Indo-Polish Collaboration (INSA-PAS) on “Impact of Extreme Rainfall on Soil Properties and Water resources in NE India”.

**Dr. L. Cajee**

Collaborated with Department of Education, Kagawa University, Takamatsu, Japan as part of Indo-Japan collaboration on “Climate Change in South Asia”.

**Honours/Awards/Recognitions****Prof. H. J. Syiemlieh**

Member of the State Environmental Impact Assessment Authority, Meghalaya.

**Prof. S. K. De**

Appointed as the distinguished expert in the Shaanxi Institute of Geological Survey, Shaanxi, China-2019.

Invited as the expert under RUSA 2 scheme for International and National Academic Networking and Collaboration in the Department of Geography, Jadavpur University, Kolkata during December 21, 2019- February 02, 2020.

Editor of Hill Geographer (A Bi-Annual UGC Care listed Journal) published by the Geographical Society of the North-Eastern Hill Region, Department of Geography, NEHU, Shillong since November, 2019.

**Dr. P. Ryngha**

Appointed as member of the State Council of Science, Technology and Environment (SCSTE) Government of Meghalaya.

**Other Activities****Prof. B. S. Mipun**

Delivered lectures in the (i) 48th Orientation Programme, UGC-HRDC, NEHU, Shillong during June 24 - July 14, 2019, (ii) UGC Summer School, Zoology Department, HRDC, NEHU, Shillong on July 19, 2019.

**Prof. D. K. Nayak**

Delivered lectures in the (i) Refresher Course organized by the Manipur University on “Writing research projects/paper-I”, “Writing research Projects/paper-II” and “Environment, Inequality and Development” during October 18 – 19, 2019, (ii) Refresher Course on Population, Environment, Development & sustainability in NBU on “Population Growth and its Impact on Environment”, “Demographic Dynamics and Climate Change: Does Size Matter?”, “Environment, Inequality and Human Development” and “Sustainability of Commercialization of Agriculture in Tribal areas of the North-East: The Case of Meghalaya” during July 08 – 09, 2019, (iii) ICSSR, NER ten-day Workshop on “Hypothesis Formation” and “Observation Method” during December 04 – 13, 2019, (4) Refresher Course lectures in HRDC, NEHU, Shillong (over 10 lectures).

**Prof. S. K. De**

Delivered (i) an invited lecture in the National Workshop on Rural Development: Changing Paradigms and Evolving Approaches organized by the Regional Science Association, India and the Department of Geography,

University of Calcutta during July 08-13, 2019, (ii) lecture on “Environmental Geomorphology, Geomorphological Hazards with special reference to landslides in Darjeeling Himalayas” as a resource person in the Indian Statistical Institute, Kolkata on July 12, 2019, (iii) 4 lectures as a resource person in the Refresher Course on Population, Environment, Development and Sustainability organized by the UGC-HRDC, University of North Bengal, Darjeeling during July 08 - 09, 2019, (iv) lecture on “Environmental Geomorphology, Geomorphological Hazards with special reference to landslides” as a resource person in the orientation programme organized by the Department of Earth Sciences, University of Science and Technology, Meghalaya on October 12, 2019, (v) lecture on “Landslide Hazard and Risk Mapping” as a resource person in the training programme on Landslide Mitigation and DPR Preparations jointly organized by NEHU and the National Disaster Management Authority at NEHU, Shillong during November 25-29, 2019.

**Dr. P. K. Ryngnga**

Member of the college inspection team to Kiang Nangbah College, Jowai, on October 17, 2019.



## DEPARTMENT OF HORTICULTURE (TURA CAMPUS)

**Head** : Prof. C. P. Suresh  
**Telephone** : +91 8974455216 (M)  
**E-mail** : nehuhort@gmail.com

### Faculty: 05

Designation	Name and Qualification	Specialization
<b>Professor</b>	Prof. C. P. Suresh, M.Sc. & Ph.D. (BCKV)	Fruits and Orchard Management, Post-Harvest Technology of Horticultural Crops
<b>Associate Professor</b>	Dr. S. Kumar*, M.Sc. (BHU), Ph.D. (CCS HAU)	Floriculture
<b>Assistant Professor</b>	Dr. A. K. Chaurasiya, M.Sc. (NDUAT), Ph.D. (BCKV)	Post-Harvest Technology of Horticultural Crops
	Dr. A. Barman, M.Sc. (BPUA&T), Ph.D. (IIT Dhanbad)	Vegetable Science and Environmental Science
	Dr. Y. S. Singh M.Sc. (UAS, Dharwad), Ph.D. (BCKV)	Fruit Science, Fruits and Orchard Management

\*On lien to CHF, Pasighat

### Thrust Areas of Research

Conservation of genetic biodiversity, sustainable organic farming, standardization of production techniques for Hill Horticulture and resilience 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 in North-East for the academic excellence in Horticulture. The Department mainly concentrates on Horticultural related research and extension works with an aim to improve the production, nutrition and post-harvest management 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
M.Sc.	05	10	-	15	-	-	14	01	15
Ph.D.	-	01	-	-	01	-	-	01	01

### *Degrees Awarded*

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.Sc.	03	07	-	10	-	-	08	02	10

### **Research Fellowship**

Rajiv Gandhi SC/ST:07

Others: 02

ASRB-ICAR NET: 01

### **Educational Tour of Students**

1. Teacher-in-Charge : Dr. Y. S. Singh

**Places/Institutions Visited:** Tamil Nadu and Kerala

**Duration of Tour** : 18 days (January 20- February 06, 2020)

**Purpose of Tour** : Educational Tour

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

**Places/Institutions Visited:** CPCRI, IICPT, ICAR Barapani, NEHU Shillong

**Duration of Tour** : 5 days (November 7-11, 2019)

**Purpose of Tour** : Educational tour

### **Courses Conducted**

#### **Postgraduate: M.Sc.**

##### ***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 and 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-1 (Methodology and Seminar).

##### ***Semester IV***

Research II (Field Laboratory Analysis); Research III (Data Analysis and Interpretation); Research IV Dissertation.

### **Ph.D. 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.

### **Seminars/Conferences/Workshops/Symposia/Extension Programmes**

#### ***Attended***

#### **Prof. C. P. Suresh**

Delivered lectures on (i) “An insight of Blood fruit [*Haematocarpus Validus* (Miers) Bakh. f.ex. Forman]: A lesser known underutilized plant with Immense Nutraceutical and Therapeutic Potential” in National Seminar on Cultivation, Conservation and Sustainable Utilization of Medicinal Plants for Livelihood Improvement organized by Department of Forestry, Faculty of Horticulture, UBKV, Pundibari, Cooch Behar, WB in association with National Medicinal Plants Board, Ministry of AYUSH, Government of India during November 20 – 21, 2019, (ii) “Role of lesser known plant species for food and nutritional security” in a National conference on Horticulture for Sustainability and Nutritional Security organized by University of Horticultural Sciences Bagalkot at KRCCH, Arabhavi during December 19 – 20, 2019, (iii) “Horticulture for indigenous development in Meghalaya” and represented Shillong

Chapter in the Science Communicator Meet of 107th Indian Science Congress organized at University of Agricultural Sciences, GKVK Campus, Bangalore, Karnataka during January 03 - 07, 2020.

#### **Dr. A. K. Chaurasiya**

Presented a paper on “Blending effect of fermented beverage from pineapple (*Ananas comosus* (L.) Merr. cv. Queen) and ginger *Zingiber officinale* Rosc. cv. Megha)” in the International conference on Global Initiatives in Agricultural and Applied Sciences for Eco Friendly Environment (GIASE 2019) organized by Agricultural Technology Development Society (ATDS) Ghaziabad, UP, India in collaboration with Tribhuvan University, Kathmandu, Nepal, held at Kathmandu, Nepal during June 16 – 18, 2019.

#### **Dr. A. Barman**

Presented a paper on “Morphological and molecular diversity assessment of a collection of pumpkin landraces from Garo Hills region of Meghalaya” at the 1st International Conference on Environment and Society (ICES 2019) organized by Global Environment & Social Association (GESA), New Delhi held at Harcourt Butler Technical University (HBTU) Kanpur, U.P., India during December 22-23, 2019.

### **Publications**

#### **Research Papers**

#### ***Published in India***

Lyngdoh Pale, J. P., Chetry, S., Suresh, C. P., Singh, Y. S., Chaurasiya, A., Barman, A. (2019). Morphological and Bio-chemical Characterization of Bael (*Aegle marmelos* Correa.) in West Garo Hills, Meghalaya. *Int. J. Curr. Microbiol. App. Sci.*, 8(10):2414-2420: doi: <https://doi.org/10.20546/ijcmas.2019.810.280>.

Sangma, L. B., Chaurasiya, A. K. (2019). Effect of Pulse Treatment on Post-Harvest Quality of Gerbera (*Gerbera jamesonii* Bolus ex Hooker) cv. Black Bird. *Int.J.Curr.Microbiol.App.Sci.*, 8(12): 1380-1392.

Singh, A. K., Chaurasiya, A. K., Mitra, S. (2020). Novel processing method for improved antioxidant and nutritional value of elephant foot yam (*Amorphophallus paeoniifolius* Dennst-Nicolson). *Indian J. of Experimental Biology*, 58: 206-211.

#### Books/Book Chapters/Proceedings

Deb, P., Suresh, C. P. (2019). Lesser Known Plant Species for Food, Nutritional Security and Medicinal Benefit in North Eastern India. In: *Proceedings in Ascertaining Food Security through Livelihood Enriching Interventions*. A. Pouchepparadjou, L. Umamaheswari and T. Sivasakthi Devi (Eds.). Pajancoa& RI, Karaikal (Puduchery), Chapter 8, p.39-44.

#### Ongoing: 5

Title of Project	PI/Co-PI	Funding Agency	Amount (Rs.)
Characterization of high value phytochemicals of anti-diabetic and immunomodulatory properties in North Eastern banana varieties	Prof. C. P. Suresh (PI) Dr. Y. S. Singh (Co-PI)	DBT, New Delhi	56,30,000
Phytochemical and molecular characterization, bioprospecting of genes, value addition and quality enrichment of Bamboo through plant tissue culture technique from North East India	Dr. A. Barman	DST (SERB), New Delhi	30,03,990
Utilization of novel biotechnological tools using agro-waste products for livelihood improvement of farmers of Meghalaya India	Mentor Scientist: Dr. A. Barman	DST, New Delhi	18,60,000
Isolation and characterization of bioactive components from indigenous plants of NEH region for anti-urolithiatic potential with standardized phytochemical and pharmacological parameters	Dr. A. Barman	DBT, New Delhi	79,82,800

Extraction and characterization of functional phytochemicals from khoonphal ( <i>Haematocarpus validus</i> ) of Meghalaya and its value addition	Dr. A. Barman (Co-PI)	DST (SERB), New Delhi	23,42,560
Cultivation of packing leaves plant for livelihood enhancement of ST communities and promotion of packing leaves as substitute of plastics in Meghalaya		National Mission on Himalayan Studies (NMHS)	

## Academic Collaborations

### Prof. C.P. Suresh

Collaborated with (i) Dr. M. M. Vaganan, Principal Scientist, Biochemistry, National Research Centre for Banana, Trichy as a project partner in the project entitled “Characterization of high value phytochemicals of anti-diabetic and immunomodulatory properties in North-Eastern Banana varieties”, (ii) Central University of Tamil Nadu, Thiruvavur, where he was as an expert for curriculum development, to coordinate, teach and oversee the MSc Horticulture degree programme, (iii) Department of Fruit Science, College of Horticulture and Forestry, Pasighat, Arunachal Pradesh assisting Dr. S. Romen Singh, Assistant Professor for the biochemical studies of minor and major fruits of Meghalaya, (iv) Krishi Vigyan Kendra, West Garo Hills, Tura, Meghalaya with Dr. J. Mahanta, Senior Scientist and Head for the studies and development of Oyster Mushroom.

### Dr. A. Barman

Collaborated with (i) Uttar Banga Krishi Viswavidyalaya, Coochbehar, West Bengal on the DBT, New Delhi project entitled “Molecular and Morphological Diversity Analysis of Cucurbits of Garo

Hills Meghalaya”, (ii) Chhatrapati Shahu Ji Maharaj University (Kanpur, Uttar Pradesh), North Eastern Indira Gandhi Regional Institute of Health and Medical Sciences (Shillong, Meghalaya) and The Energy and Research Institute (NERC) on the DBT project entitled “Isolation and characterization of bioactive components from indigenous plants of NEH region for anti-urolithiatic potential with standardized phytochemical and pharmacological parameters”, (iii) The Energy and Research Institute (NERC), Guwahati on the National Mission on Himalayan Studies (NMHS) project entitled “Cultivation of packing leaves plant for livelihood enhancement of ST communities and promotion of packing leaves as substitute of plastics in Meghalaya”.

## Honours/Awards/Recognitions

### Prof. C. P. Suresh

Best poster award for the poster paper “Morpho - Physico - Chemical Characterization of Indian Wild Orange (*Citrus indica*) in Nokrek Biosphere Reserve, Garo Hills, Meghalaya” in National Citrus Meet-2020 at Biswanath College of Agriculture, BiswanathChariali, Assam during January 10 – 12, 2020.

### **Dr. A. Barman**

Best oral presentation award at 1<sup>st</sup> International Conference on Environment and Society (ICES 2019) organized by Glocal Environment & Social Association (GESA), New Delhi held at Harcourt Butler Technical University (HBTU) Kanpur, Uttar Pradesh during December 22 - 23, 2019.

Young scientist award for research in biotechnology by Global Environment & Social Association (GESA), New Delhi.

### ***Other Activities***

#### **Prof. C. P. Suresh**

Participated and chaired one session (Water and Pollution) in State Seminar on Inventory and Revival of Springs in the Catchment Areas for Water Security organized by Tura Christian College in collaboration with Meghalaya State Pollution Control Board, Shillong on June 22, 2019.

Delivered lectures on (i) “Nutrient Dense Indigenous Fruits of North East India: Less Visible but yet Vital for Human Health”, in the National conference on Ascertaining Food Security Through Livelihood Enriching Interventions: Challenges and Opportunities organized by Department of Agricultural Economics and Extension, PAJANCOA & RI, Karaikal during September 04 –06,2019,(ii) “Sustainable Consumer” in World Consumer Rights Day 2020organized by Don Bosco College on March 16, 2020.

Attended the International conference on Recent Trends in Agriculture towards Food Security and Rural Livelihood organized by Faculty of Agriculture, Annamalai University, Tamil Nadu during January03 – 04, 2020.

As a resource person delivered lectures (i) on “Promoting Entrepreneurship Activities in Rural Environment” on March 05, 2020, and “EDPs in India”, “Role of DST (NSTEDB) and other Promotional Institutions: Promotion and Support to Technology Development Scheme of DST and other agencies including Venture Capital Fund” at Faculty Development Programme (FDP) organized by the Placement & Counselling Cell and Department of Management, NEHU, Tura Campus on March 11,2020, (ii) in the training programme on Package and practices for Mango and Litchi at Upper Chima Imphel, Kharkutta, North Garo Hills, Meghalaya organized by Bakdil, Tura on March 13, 2020, (iii) on “Role of Horticulture on Nutritional Security and Sustainable Development”, in the Seminar on Sustainable Agriculture and Food Security in Nagaland organized by DBIDL, Dimapur, Nagaland on February 15,2020.

Chairedtechnical sessions at (i) Food Security and Role of Technology in National conference on Ascertaining Food Security Through Livelihood Enriching Interventions: Challenges and Opportunities organized by Department of Agricultural Economics and Extension, PAJANCOA & RI, Karaikal during September 4 – 6, 2019 (ii) Hi-Tech Horticulture and Precision farming, Arid Horticulture, Sustainable production technologies, ecosystem management, Dry land Horticulture and millets in Horticulture, in National conference on Horticulture for Sustainability and Nutritional Security organized by University of Horticultural Sciences Bagalkot at KRCH, Arabhavi during December 19- 20, 2019, (iii) the International conference on Recent Trends in Agriculture Towards Food Security and



Rural Livelihood held at the Faculty of Agriculture, Annamalai University, Tamil Nadu during January 03–04,2020.

Member of the (i) screening committee at Central University of Tamil Nadu (2019), (ii) Executive Council of Agricultural Society of India, Kolkata (2018-2020), (iii) Board of Studies, Board of Management and Syllabus formation of Deen Dayal Upadhaya Community College, Wahiajer (2018-2020), (iv) fourth building committee of Central University of Tamil Nadu (2019-2020), (v) Governing Body of Loyola College, Williamnagar; and (vi) Board of Studies for Department of Horticulture and Floriculture, Central University of Tamil Nadu, Thiruvavur.

Co-ordinator of the Food Processing (Skill Development), Deen Dayal Upadhyaya Community College, Wahiajer.

**Dr. A. K. Chaurasiya**

Participated in Inventory and Revival of Springs in the Catchment Areas for Water Security, organized by Tura Christian College and Meghalaya State Pollution

Control Board (MSPCB) on June 22, 2019.

Completed the UGC sponsored training course on Faculty Development Programme organized by the Department of Management, NEHU, Tura Campus during March 01 - 14, 2020.

**Dr. A. Barman**

Attended the two weeks' Faculty Development Programme (FDP) organized by the Placement & Counselling Cell and Department of Management, NEHU, Tura Campus during March 02 - 14, 2020.

Submitted 16S ribosomal RNA gene, partial sequence of *Pseudomonas stutzeri* strain NB2 to NCBI GenBank (Accession no.: MN368293).

**Dr. Yumnam Somi Singh**

Attended a summer School organized by Central Agricultural University, Imphal, Manipur, sponsored by ICAR, New Delhi during August 27 - September 16, 2019.

## DEPARTMENT OF RURAL DEVELOPMENT AND AGRICULTURAL PRODUCTION (TURA CAMPUS)

**Head** : Dr. D. C. Kalita  
**Telephone** : 7005473148 (M)  
**E-mail** : himalidurga@gmail.com

**Faculty: 05**

Designation	Name and Qualification	Specialization
<b>Professor</b>	Prof. D. C. Kalita, M.Sc. & Ph.D. (Assam Agricultural Univ.)	Agricultural Economics
	Prof. S. C. Srivastava, M.A. & Ph.D. (Allahabad Univ.)	Economics
<b>Assistant Professor</b>	Dr. B. K. Mishra, M.Sc. (CSA Univ. Agri. & Tech., Kanpur), Ph.D. (BHU)	Dairy Science & Technology
	Dr. B. Mathew, M.Sc. & Ph.D. (BCK Viswavidyalaya, WB)	Fruit and Orchard Management
	Dr. L. S. Pereira, M.Sc. & Ph.D.	Fruits and Orchard Management

### Thrust Areas of Research

Multi-disciplinary research in the areas of rural development, agronomy, horticulture and animal sciences, studies on impact assessment, micro and decentralized planning, local governance, globalization and food security, indigenous knowledge systems in agriculture and allied sectors, conservation of bio-resources, animal husbandry, dairy and food sciences, fruit and vegetables preservation, ethnobotanical studies and plant biotechnology.

### Brief Statement of Academic Activities

Being multidisciplinary in nature the Department undertakes both teaching and research in the areas concerning rural development, agronomy, horticulture and animal sciences. The Department provides both theoretical and practical exposure to MSc (RDAP) students in various areas relating to the multidisciplinary PG programme within the stipulated time. The Department is also offering M.Phil. and Ph.D. programme. In addition, the Department was involved consultancy, projects, Seminars, trainings and Workshops etc.

### Students' Profile

**Enrolment Capacity: M.Sc. – 28, M.Phil./Ph.D. – 08/29**

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.Sc.	16	36	01	51	-	01	37	15	52
M.Phil.	-	08	-	06	-	02	05	03	08
Ph.D.	09	20	01	10	-	18	15	14	29

### ***Degrees Awarded***

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.Sc.	06	24	-	24	-	-	21	03	24
M.Phil.	-	02	-	-	-	02	01	01	02
Ph.D.	-	03	01	-	-	02	-	03	03

### ***Students Awarded PhD***

Name of Student	Title of Thesis	Name of Supervisor
Ms. Nalanda Bala Murugan	Physico-Chemical sensory and Microbial Analysis of Fermented Rice Beverage Chubitchi in West Garo Hills Meghalaya	Dr. B. K. Mishra
Ms Shweta Priyamvada	Supply chain analysis of organized and Un-organized Sector: A comparative analysis in Jorhat District of Assam	Dr. B. K. Mishra
Ms. Jui Bhattacharjee	Impact of Skill Training on Livelihood Among Rural Women in West Tripura and Dhalai District, Tripura	Prof. S. C. Srivastava

### **Research Fellowships**

UGC Non-NET: 10

Rajiv Gandhi National Fellowship:04

### **Fieldwork/Educational Tour of Students**

Field trips are integral part of the course curriculum of the Department and on an average student visit village to interact with the beneficiaries of various government programmes or organizations /Departments involved in implementation of rural development, horticulture and livestock development programmes. All these visits are assignment oriented and marks are awarded on the basis of the reports prepared by the students.

### **Course Conducted**

**Postgraduate: M.Sc.**

#### ***Semester I***

General Aspects of Rural Development, Introductory Agriculture and Agronomy,

Fundamentals of Horticulture, Introduction to Animal Husbandry and Poultry, Indigenous Knowledge Systems in Agriculture, Computer Applications

#### ***Semester II***

Rural Development Approaches, Programmes and Policies, Package of Practices for Field Crops, Plant Propagation and Nursery Management, Dairy and Livestock Development, Farm Management, Basic Economic Theory and Policy

#### ***Semester III***

Research Methods, RD/ Agro/ Horti/ AS (Elective), Dairy Farming and Rural Development, Organic Farming

#### ***Semester IV***

Rural Marketing and Entrepreneurship Development, Basic Statistics and Software Applications, Advances in Agricultural Sciences, RD/Agro/Hort/AS (Elective)

## **M.Phil./Ph.D. courses**

Research Methodology, General Aspects of Rural Development and Agricultural Production, Rural Development and Sustainable Change (Optional), Horticultural Production and Management (Optional), Animal Production and Management (Optional)

## **Seminar/Conferences/Workshops/Symposia**

### ***Attended***

#### **Dr. B. K. Mishra**

Presented a poster on “Exploring the potentiality of Lactic strains and yeasts for the production of B-Vitamins and short chain fatty acids isolated from fermented foods of Garo tribes, Meghalaya, India”, in 48th Dairy industry conference on Dairying for Health and Wealth organized by IDA (North Zone) and Rajasthan Chapter during February 20-22, 2020.

#### **Dr. B. Mathew**

Presented papers on “Medicinal plants used by the Garo tribe of Meghalaya for oral health care practices” and “Standardisation of protocol for sterilisation formicro-propagation of Indian Wild Orange (*Citrus indica* Tanaka)” at a National Seminar on Cultivation, Conservation and Sustainable Utilization of Medicinal Plants for Livelihood Improvement organized by Department of Forestry, Uttar Banga Krishi Viswavidyalaya, Pundibari, Cooch Behar, West Bengal during November 20 – 21, 2019.

## **Publications**

### **Research Papers**

#### ***Published in India***

Das, S., Mishra, B. K., Hati, S. (2020).

Techno-functional characterization of Indigenous *Lactobacillus* isolates from the traditional fermented foods of Meghalaya, India. *Current Research in Food Science*, 3: 9-18, <https://doi.org/10.1016/j.crfs.2020.01.002>

Deb, U., Mishra, B. K. (2019). Quality of Milk Sold in West Garo Hills, Meghalaya. *International Journal of Science, Environment and Technology*, 8 (2): 358-364.

Gopinath, M., Nandy, S., Jothimani, G., Malayaperumal, S., Mishra, B. K., Liddo, R. D., Pathak, S. (2019). Role of Heparin Sodium Salt in the Modulation of Human Umbilical Cord-Derived Mesenchymal Stem Cell Differentiation. *Journal of Applied Biotechnology Reports*, 6(4):165-171, DOI: 10.29252/JABR.06.04.06

Hati, S., Patel, M., Mishra, B. K., Das, S. (2019). Short-chain fatty acid and vitamin production potentials of *Lactobacillus* isolated from fermented foods of Khasi Tribes, Meghalaya, India. *Annals of Microbiology*, 69: 1191-1199, DOI: 10.1007/s13213-019-01500-8

Marak, A. D., Mathew, B. (2020). Traditional healing methods for bone fracture practiced by the Garo tribe of Meghalaya. *Plant Archive*, 20(1):754-748.

Marak, L.C., Pereira, L. S. (2019). Relationship between soil microbes and plant pathogens of *Ziziphuszizyphus* in Nokrek Biosphere Reserve of Garo Hills of Meghalaya. *Research on Crops*, 20(3): 531-536.

Maveliland, S. J., Srivastava, S. C. (2019). Reproductive Health Status of

women matrilineal tribes of Meghalaya: A field based quantitative study. *International Journal of Community Medicine and Public health*, 6(10): 1-6.

Mishra, B. K., Hati, S., Das, S. (2019). Bio-nutritional aspects of Tungrymbai, an ethnic functional fermented soy food of Khasi Hills, Meghalaya, India. *Clinical Nutrition Experimental*, 26:8-22, <http://doi.org/10.1016/j.clnex.2019.05.004>.

Mishra, B. K., Hati, S., Das, S., Brahma, J. (2019). Fermented Rice Beverage of North-East India: A systematic review. *International Journal of Fermented Foods*, 8 (1): 41-56.

Mishra, B. K., Hati, S., Das, S., Prajapati, J. B. (2019). Bio-Functional Attributes and Storage Study of Fermented Soy Milk by *Lactobacillus rhamnosus* and *Lactobacillus helveticus*. *Food Technology and Biotechnology*, 57 (3): 399-407, DOI:10.17113/ftb.57.03.19.6103

Mishra, B. K., Varghese, J. M., Das, S. (2019). Probiotic Characterization of Indigenous Lactic Strains using Foldscope and development of Functional Yogurt. *International Journal of Fermented Foods*, 8(1):15-32.

Narzary, E., Kalita, D.C. (2019). Marketing of Khasi Mandarin Orange in Sonapur Block of Kamrup District, Assam. *International Journal of Science, Environment and Technology*, 8(4): 854-860.

Nongsieg, K., Srivastava, S. C. (2019). Productivity of MGNREGA in South West Khasi Hills District, Meghalaya. *Journal of Emerging Technologies and*

*Research*, 6 (6): 938-945.

Nongsieg, K., Srivastava, S. C. (2019). Role of MGNREGA in Rural Employment and Infrastructure Development of Meghalaya: A review. *Economics and Business Review*, 7(10): 67-74.

Pandey, D. K., De, H. K., Mishra, B. K., Kumar, P., Biam, K. P. (2019). Livestock diversity in shifting cultivation area of North Eastern Hill states in India. *Indian Journal of Animal Sciences*, 89(9): 1014-1016.

Phaomei, G., Mathew, B. (2019). Morphological characterization of jack fruit (*Artocarpusheterophylus* Lam) in West Garo Hills district of Meghalaya. *Plant Archive* 19(2): 2081-2087.

Priyamvada, S., Mishra, B. K. (2019). Constraint Analysis of Milk Production and Marketing in Jorhat District of Assam. *Advances in Bioresearch*, 10(2): 57-67.

Priyamvada, S., Mishra, B. K. (2019). Economic analysis of dairy cattle farms under town milk supply scheme in Jorhat district of Assam. *Indian Journal of Dairy Science*, 72(3):1-10.

Sangma, Y. A. S., Pereira, L. S., Dang, J. C. (2020). Standardization of protocol for in vitro seed germination of *Citrus macroptera* Mont. *Plant Archives*, 20(1): 1175-1178.

### **Books/Book Chapters/Proceedings**

Choudhury, K., Kalita, D. C. (2019). Cluster Approach and Turmeric Cultivation –A Special Reference

to Goalpara District, Assam. Xpress Publishing, Chennai, ISBN-978-1-64546-137-1.

## Research Projects

### Ongoing: 3

Title of Project	PI/Co-PI	Funding Agency	Amount (Rs)
Development of Technology for the preparation of fermented rice beverage in Meghalaya and evaluation of its functional properties	Dr. B. K. Mishra	DBT, Govt. of India	89,75,000
In vitro 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, Govt. of India	30,79,000

### Completed:

Title of Project	PI/Co-PI	Funding Agency	Amount (Rs)
Isolation and microscopical examination of lactic acid bacteria and their Probiotic potentials (in vitro study) from fermented foods of Garo hills, Meghalaya	Dr. B. K. Mishra	DBT, Govt. of India	8,00,000

## Academic Collaborations

The Department has undertaken professional collaboration with NIRD, Guwahati and ICAR Research complex for NEH Region, Barapani for practical exposure. The Department has developed networking with the local level NGOs where the 3rd and 4th semester students are acting as resource persons and interacting directly with the villagers. The Department has also collaborated with Anand Agricultural University, Gujarat; Uttar Bangha Krishi Viswavidyalaya, Pundibari, West Bengal; ICAR Tripura Centre, ICAR Imphal and Amity University, Gurgaon under DBT Twinning Research Programmes.

## Other Activities

### Prof. D. C. Kalita

Delivered an invited talk on “Integrated Farming System for Livelihood Security” at NIRDPR –NERC, Guwahati during February 17 – 21, 2020.

### Dr. B. K. Mishra

Delivered invited talks on (i) “Preventive Mechanism of AAD on Animal Model with intervention of Lactic Acid Bacteria and Yeast” at 22nd Agricultural Scientist & Farmers Congress organized by Bioed Research Institute of Agriculture and Technology Allahabad during February 22-23, 2020, (ii) “Evaluating the efficacy of



Lactic acid Bacteria and Yeast on Animal Model” at ninth International conference on Fermented Foods, Health Status and Social well-being organized by Anand Agricultural University, Anand, Gujarat during December 13-14,2019.

Attended three-day capacity building training programme on Technological Advances in Health & Nutrition during Human life span, sponsored by ICAR-ATARI Zone VII, Umiam organized by college of community Science, CAU, Tura, Meghalaya during December 05- 07,2019.

#### **Dr. B. Mathew**

Delivered invited talks on (i) “Organic Farming: Principles and Concepts”, “Organic Management of Soil” and “Package of Practices of major Spice Crops of North-East India” organized by National Institute of Rural Development, NE Regional Centre, Guwahati on October 21, 2019; (ii) “Organic Composting methods with major focus on Vermi composting” and “Soil and moisture conservation practices” at Farmer’s Training Programmeme organized by BAKDIL (NGO), Tura on October 24, 2019.

Appointed as Nodal Officer for Assessment and Certification of training programmes

on “Integrated Farming cum Post harvest Management” in collaboration with Bethany Society, Tura, and Meghalaya State Skill Development Society (MSSDS), funded by Asian Development Bank (ADB).

Associated with BAKDIL (NGO), Tura as technical consultant for “Agriculture, Horticulture and Spice production and management.”

Attended a UGC sponsored refresher course on “Business Studies (Interdisciplinary)” organized by UGC-HRDC, NEHU Shillong at Department of Management, NEHU, Tura Campus during November 18– December 01,2019.

#### **Dr. L. S. Pereira**

Delivered an invited talk on “Statistical Designs for Agricultural Research” at Training Programmeme on Research Methodology organized by Department of Education, NEHU, Tura Campus during October 14 – 19,2019.

Appointed as Coordinator of training programmemes on “Integrated Farming cum Post harvest Management” in collaboration with Bethany Society, Tura, and Meghalaya State Skill Development Society (MSSDS), funded by Asian Development Bank (ADB).

## V

### SCHOOL OF LIFE SCIENCES

**Dean** : Prof. B. B. P. Gupta  
**Telephone** : 0364 - 2722001 / 2551292 (O), +91 9436100185 (M)  
**Fax** : 0364 - 2550108  
**E-mail** : deansls@nehu.ac.in

The School of Life Sciences comprises of four academic Departments, namely the Department of Botany, the Department of Biochemistry, the Department of Biotechnology and Bioinformatics and the Department of Zoology. The School is a premier centre for post-graduate teaching and research in frontier areas of Biology. The thrust areas of research of the School are Immunology, Endocrinology, Reproductive Physiology, Microbiology, Enzymology, Medicinal Biochemistry, Biogerontology, Radiation Biology, Carcinogenesis and Cancer Biology, Adaptational Biochemistry, Brain disorders, Cardiovascular diseases, Diabetes, Genetics, Fish Biology, Helminthology, Physiology, Nitrogen Fixation, Molecular Biology, Protein Chemistry, Natural Products, Ecology, Forestry, Biodiversity, Taxonomy, and Biotechnology. The Departments under the School of Life Sciences are well known for encouraging studies and research, relevant to the North-Eastern Region. These Departments have procured state-of-the-art equipment like Next Generation Sequencers, DNA Sequencer, DNA Synthesizer, Confocal

Microscope, Gamma Radiation Source, FACS, Real Time PCR Systems, Flameless Atomic Absorption, Nitrogen Analyser, Automatic Scintillation Analyser, etc. The Departments have received financial assistance for extramural research from National funding agencies like DBT, DST, CSIR, ICMR, DAE & ICAR, etc. The Departments have also been supported by UGC, New Delhi, under SAP as well as COSIST Programme besides the DST-FIST Programme. Many of the faculty members, of the School have been awarded National and International fellowships and also have undertaken collaborative research projects in the country and abroad. A large number of students under the School qualify for various Eligibility Tests such as NET, GATE, SLET, etc., every year. The postgraduates and research students of the School are successful in obtaining employment in academic and research institutions in the country and abroad. The School has developed a Central Instrumentation Facility, for promoting research and academic activities besides a Seminar Hall & Conference Room.

## DEPARTMENT OF BIOCHEMISTRY

**Head** : Prof. A. K. Singh  
**Telephone** : 0364-2722101  
**E-mail** : hodbio@nehu.ac.in

**Faculty: 10**

Designation	Name and Qualification	Specialization
<b>Professor</b>	Prof. A. N. Rai, M.Sc. (BHU), Ph.D. (Dundee, Scotland)	Plant-Microbe Interactions, Cyanobacteria
	Prof. R. Sharma, M.Sc. & Ph.D. (BHU)	Biochemistry of Aging
	Prof. R. N. Sharan, M.Sc. & Ph.D. (JNU)	Molecular Biology of Radiation Damage/Repair and Carcinogenesis
	Prof. D. Syiem, M.Sc. & Ph.D. (NEHU)	Enzymology, Medical Biochemistry, Natural Products, Ethnopharmacology, Medicinal plants.
	Prof. A. K. Singh, M.Sc. (Gorakhpur Univ.), Ph.D. (Univ. of Hyderabad)	Molecular Microbial Ecology
	Prof. M. B. Syiem, M.Sc. & Ph.D. (NEHU)	Cyanobacterial Diversity, Metabolomics and Applications
<b>Associate Professor</b>	Dr. L. Kma, M.Sc. & Ph.D. (NEHU)	Cancer biology and Radiation Counter-measures
<b>Assistant Professor</b>	Dr. P. K. Ambasht, M.Sc. & Ph.D. (BHU)	Enzymology: Enzyme Purification, Kinetics and Immobilization
	Dr. S. Bhan, M.Sc. & Ph.D. (BHU)	Medical Biochemistry, Nano-biomaterials
	Dr. T. Tripathi, M.Sc. (Univ. of Mysore), Ph.D. (JNU)	Molecular and Structural Biophysics

### Thrust Areas of Research

**Medical Biochemistry:** Development and Aging, Diabetes, Medicinal Plants, Natural Products, Molecular Biology of Radiation Damage/Repair and Carcinogenesis, Neurobiochemistry, Nano-biomaterial.

**Microbial Biochemistry:** Plant-Microbe Interaction, Cyanobacterial Diversity and Nitrogen Fixation, Cyanobacterial biofertilizer and Bioremediation.

**Protein Chemistry:** Enzymology: Purification, kinetics and immobilization; Molecular and Structural Biophysics.

### Brief Statement of Academic Activities

The Department admitted twenty-two students for MSc and four students for Ph.D. programme. During this period, twenty-one students have successfully completed their MSc and five students have been awarded the Ph.D. degree. Dr.

Pynskhem Bok Swer joined the Department of Biochemistry, NEHU, Shillong as Dr. D. S. Kothari Postdoctoral fellow of the UGC (Mentor Prof. R. Sharma) (June 2019).

Research scholars participated in various Seminar/Workshops/conference/symposia and won a total of four awards for oral presentation and three for posters. Faculty members delivered guest lectures in different institutions, presented research papers and delivered invited talks in different Seminar/Workshops /conference/symposia in India and abroad. Scientists from other institutions visited Department of Biochemistry and delivered talks.

Dr. K. Rajagopal, Senior Principal Scientist, CSIR-CFTRI, Mysore delivered a talk titled “Streptokinase and Clot Busters: A

Success story” (May 7, 2019).

Prof. Bharat B. Aggarwal, Director, Inflammation Research Centre, San Diego, California, USA, delivered a talk titled “Drug discovery for chronic diseases from nutraceuticals to pharmaceuticals and back” (September 27, 2019).

The Department of Biochemistry is being supported by UGC SAP-DRS III: (Co-ordinator: Prof. R. Sharma)

in different institutions, presented research papers and delivered invited talks at different seminar/workshops/conference/symposia in India and abroad. The Department hosted Prof. G.B.N. Chainy (Department of Biotechnology, Utkal University) under DBT-NER Visiting Research Professorship.

### Students' Profile

**Enrolment Capacity: M.Sc.- 22, Ph.D. - 04**

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.Sc.	04	18	-	20	-	02	19	03	22
Ph.D.	-	04	-	02	-	02	04	-	04

### Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.Sc.	05	16	-	18	-	03	18	03	21
Ph.D.	02	03	-	01	-	04	01	04	05

### Students Awarded PhD Degree

Name of Student	Title of Thesis	Name of Supervisor/ Joint Supervisor
Ms. Parismita Kalita	Molecular, biochemical and biophysical studies of recombinant selenozyme thioredoxin glutathione reductase from the liver fluke <i>Fasciolagigantica</i> Cobbold	Dr. T. Tripathi

Ms. Plabita Sahariah	Studies on the effects of DilleniaindicaL. on oxidative stress and apoptosis in alloxan-induced diabetic mice	Dr. S. Bhan (Supervisor), Prof. D. Syiem (Jt. Supervisor)
Mr. Tridip Phukan	Studies on oxidant and antioxidant homeostatic system in cyanobacteria under UV stress	Prof. M. B. Syiem
Ms. Susan Moore Warjri	Analysis of biosorption of heavy metals by cyanobacteria isolated from coal mining areas of Meghalaya	Prof. M. B. Syiem
Mr. Taranga Jyoti Baruah	Radiosensitizing potential of Vicenin-2 on human cancer cell line	Dr. L. Kma

### Placement of Students

Jutishna Bora was appointed as Assistant Professor at Amity University, Kolkata (September, 2019).

Parismita Kalita was selected for DBT-Research Associate fellowship and joined

Indian Institute of Science, Bengaluru (July 2019).

Vijayakumar R was selected for DBT-Research Associate fellowship and joined Indian Institute of Science, Bengaluru (July 2019).

### Research Fellowships

CSIR-UGC-NET	UGC Non-Net	Rajiv Gandhi SC/ST	DRS SAP	DST Inspire	Maulana Azad Minority Fellowship	ICMR
04	14	-	02	03	01	01

### Courses Conducted

#### Postgraduate: MSc

##### *Semester I*

Chemistry and Biomolecules, Enzymology, Intermediary metabolism, Practical.

##### *Semester II*

Physiological Chemistry, Practical.

Open courses: Techniques in Biochemistry, Microbiology.

##### *Semester III*

Genetics, Medical Biochemistry, Practical.

Open courses: Environmental Biochemistry, Nutritional and Clinical Biochemistry.

#### *Semester-IV*

Molecular Biology, Immunology, Bioenergetics, Project.

#### **Ph.D. courses**

Research Methodology, Topics in Biochemistry, Review of Literature and Seminar.

#### **Seminars/Conferences/Workshops/Symposia/Extension Programmes (National/International)**

##### *Attended*

#### **Prof. A. N. Rai**

Delivered invited lectures on (i) “Revised NAAC Process” at L. S. College,

Muzaffarpur, Bihar on July 24, 2019, (ii) “NAAC Assessment & Accreditation: The Revised Framework” at Dibrugarh University on August 17, 2019, (iii) “Quality Assurance in Higher Education under LEAP (Leadership for Academicians Programme)”, MHRD, GOI, at Banaras Hindu University, Varanasi on September 28, 2019, (iv) “Draft New Education Policy” at Dibrugarh University, Dibrugarh on October 26, 2019.

Delivered Convocation Address at B. N. Mandal University, Madhepura, Bihar on December 17, 2019.

#### **Prof. R. Sharma**

Chaired sessions on (i) Buckwheat in Human Health in an International conference on Buckwheat at NEHU, Shillong on September 06, 2019, (ii) Self-defence Mechanisms in neurode generation during 33rd Annual Meeting of SNCI at Jamia Hamdard, New Delhi on October 12, 2019, (iii) Tumor Biochemistry in Prof. S. N. Singh Memorial Lecture in an International conference on Current perspectives of Biochemistry in Health and Diseases held at CAS in Zoology, Institute of Science, BHU, Varanasi during January 11-12, 2020.

Delivered invited lectures on (i) “Nutraceuticals in Geroscience” in 4th International Conference on Nutraceuticals and Chronic Diseases (INCD) at Indian Institute of Technology (IIT) Guwahati during September 23 – 25, 2019, (ii) “Dietary calorie restriction and healthy brain aging” in an International conference on Frontiers in Neuroscience and Neurochemistry: Dynamic Challenges and Approaches and 33rd Annual Meeting of SNCI, at Jamia Hamdard, New Delhi during October 10 - 12, 2019, (iii) “An overview on benefits of dietary restriction in healthy aging” in Prof. S. N. Singh Memorial lecture in an International conference on Current perspectives of Biochemistry in Health and Diseases held at CAS in Zoology,

Institute of Sciences, BHU, Varanasi during January 11-12, 2020.

#### **Prof. R. N. Sharan**

Organized (i) one-day Workshop on Bio-Entrepreneurship Development in collaboration with SIDBI, IIT, Kanpur, at NEHU, Shillong on June 21, 2019, (ii) one-day Workshop on Importance of Intellectual Property Rights (IPRs) in collaboration with PH.D. Chamber of Commerce & industries and Controller General of Patents, Designs and Copy rights at NEHU, Shillong on August 30, 2019.

Co-organized an International Round-table brain-storming meeting on Global Tobacco Index in collaboration with CHRE-UK at Kolkata on August 7, 2019.

Attended an International conference on the Global Forum of Nicotine 2019 (GFN-2019) at Warsaw, Poland, and participated in International Consultative Meeting on Harm Reduction during June 13 - 15, 2019.

Chaired a technical session in the Workshop on adoption, promotion and development of MOOCs on SAWAYAM platform held at NEHU, Shillong during June 28-29, 2019.

Delivered invited lectures on (i) “Health and Safety Implications of Electronic Nicotine Delivery System (ENDS)” at Bhopal on May 14, 2019, (ii) “Molecular Radiobiology: Clinical applications of Radiation Response Proteins (RRPs) for human welfare” at SLS, Manipal Academy of Higher Education (MAHE), Manipal on October 01, 2019.

Delivered keynote address in the Second Graduation cum Farewell Function of St. Anthony’s College campus at Byndihati, East Jaintia Hills, Meghalaya and distributed graduation certificates on September 13, 2019.

#### **Prof. D. Syiem**

Co-chaired a technical session in the 14th International Symposium on Buckwheat on theme Diversifying food systems for health



and nutritional security held at Department of Botany, NEHU, Shillong during September 03 - 06, 2019.

**Dr. L. Kma**

Delivered an invited talk on “Vicenin-2 radiosensitizes non-small cell lung cancer cell” in the International conference on Clinical and Pharmaceutical Microbiology at Hotel Mercure, Rome, Italy during October 23-25, 2019.

**Dr. P. K. Ambasht**

Presented a paper on “Thermal and chemical inactivation of phytase from rice bean (*Vigna umbellata*)” in the National Symposium on Recent Trends in Chemistry held at Department of Chemistry, NEHU, Shillong during October 31-November 01, 2019.

**Dr. S. Bhan**

Delivered a lecture on “Analysing the role of *Dillenia indica* on suppressing hyperglycemia and modulating hyperglycemia induced oxidative stress and apoptosis in all oxan administered diabetic mice” in the International conference on Current Perspectives of Biochemistry in Health and Diseases held at the Department of Zoology, Institute of Science, Banaras Hindu University, Varanasi during January 11-12, 2020.

**Dr. T. Tripathi**

Delivered invited lectures on (i) “The genome of the liver fluke *Fasciolagigantica* present novel protein kinases as drug targets” in the NTDASIA-2019, International Research Network held at Khon Kaen University, Khon Kaen, Thailand during August 07 - 09, 2019, (ii) “Linked thiol-based redox metabolism of parasitic liver flukes: Novel pathway for drug discovery” in the International conference on Molecular Medicine held at AMITY University, Gurugram during August 29 - 30, 2019, (iii) “Linked thiol-based redox metabolism of parasitic liver flukes:

Novel pathway for drug discovery” in the International conference on New Horizons in Biotechnology (NHBT-2019) held at CSIR-NIIST Trivandrum during November 20-24, 2019.

**Publications**

**Research Papers**

***Published in India***

Baruah, T. J., Kma, L. (2019). Flavonoids and radiation response of cancer cells: A therapeutic prospective. *The NEHU J.*, 17: 22-29.

Bora, J., Syiem, D., Bhan, S. (2019). Quantitative analysis of total phenolic, flavonoid contents and HPTLC fingerprinting of flower extracts of *Phlogacanthus thyrsoiflorus* Nees. *J. Pharmacogn. Phytochem.*, 8: 906-911.

Kalita, T., Ambasht, P. K. (2019). Immobilization and characterization of acid phosphatase from wheat germ (Type I) in agarose gel. *J. Proteins and Proteomics*, 10: 291-297.

Kharkrang, K., Ambasht, P. K. (2019). Characterization of  $\alpha$ -amylase from *Pennisetum typhoides* immobilized inside calcium alginate beads. *J. Sci. Res.*, 63: 53-67.

Marbaniang, C., Myrthong, E., Priya, S., Lyngdoh, A., Chanu, T. M., Sharan, R. N., Kma, L. (2019). Evaluation of antioxidant properties of quercetin in DEN-induced hepatocellular carcinoma in BALB/c mice. *The NEHU J.*, 17: 94-106.

Singh, S. K., Tripathi, T. (2020). Presence of collagen-like repeats in bacteriophage-encoded hyaluronate lyase. *J. Sci. Res.*, 64: 193-197.

***Published Abroad***

Ahad, R. I. A., Syiem, M. B. (2019). Influence of calcium on cadmium uptake and toxicity to the cyanobacterium

- Nostocmuscorum Megl. Biotechnol. Res. Innov., 3: 231-241.
- Chettri, B., Singh, A. K. (2019). Kinetics of hydrocarbon degradation by a newly isolated heavy metal tolerant bacterium Novosphingobiumpanipatense P5: ABC. Bioresour. Technol., 294: 122190.
- Chettri, B., Singha, N. A., Mukherjee, A., Rai, A. N., Chattopadhyay, D., Singh, A. K. (2019). Hydrocarbon degradation potential and competitive persistence of hydrocarbonoclastic bacterium Acinetobacter pittii strain ABC. Arch. Microbiol., 201: 1129-1140.
- Das, K. C., Kalita, P., Tripathi, T. (2020). Genome-wide identification and characterization of eukaryotic protein kinases from the liver fluke Fasciolagigantica. Front. Biosci., [Landmark Ed.], 25: 1787-1827.
- Gupta, S., Shukla, H., Kumar, A., Shukla, R., Kumari, R., Tripathi, T., Singh, R. K., Anupurba, S. (2020). Mycobacterium tuberculosis nucleoside diphosphate kinase shows interaction with putative ATP binding cassette (ABC) transporter, Rv1273c. J. Biomol. Struct. Dyn., 38: 1083-1093.
- Kalita, J., Shukla, R., Tripathi, T. (2019). Structural basis of urea-induced unfolding of Fasciolagigantica glutathione S-transferase. J. Cell. Physiol., 234: 4491-4503.
- Kalita, P., Das, K. C., Shukla, H., Tripathi, T. (2019). Conserved Arg451 residue is critical for maintaining the stability and activity of thioredoxin glutathione reductase. Arch. Biochem. Biophys., 674: 108098.
- Kalita, P., Lyngdoh, D. L., Padhi, A. K., Shukla, H., Tripathi, T. (2019). Development of multi-epitope driven subunit vaccine against Fasciolagigantica using immunoinformatics approach. Int. J. Biol. Macromol., 138: 224-233.
- Lyngdoh, D. L., Shukla, H., Sonkar, A., Anupam, R., Tripathi, T. (2019). Portrait of intrinsically disordered side of the HTLV-1 proteome. ACS Omega, 4: 10003-10018.
- Mputhia, Z., Hone, E., Tripathi, T., Sargeant, T., Martins, R., Bharadwaj, P. (2019). Autophagy modulation as a treatment of amyloid diseases. Molecules, 24: 3372.
- Phukan, T., Syiem, M. B. (2019). Modulation of oxidant and antioxidant homeostasis in the cyanobacterium Nostocmuscorum Megl under UV-C radiation stress. Aquat. Toxicol., 213: 105228.
- Phukan, T., Rai, A. N., Syiem, M. B. (2019). Unstandardized UV-C dose used for killing harmful cyanobacteria may instead initiate accelerated growth in the target organisms. Ecotoxicol. Environ. Saf., 181: 274-283.
- Selvina, J., Lanong, S., Syiem, D., Mandal, S. D., Kayang, H., Kumar, N.S., Kiran, G. S. (2019). Culture-dependent and metagenomic analysis of lesser horseshoe bats' gut microbiome revealing unique bacterial diversity and signatures of potential human pathogens. Microb. Pathog., 137: 103675.
- Tripathi, T., Khan, H. (2020). Direct interaction between the  $\beta$ -amyloid core and tau facilitates cross-seeding: A novel target for therapeutic intervention. Biochemistry, 59: 341-342.
- Tripathi, T., Chetri, P. B. (2020). Potent inhibitors of thioredoxin glutathione reductase: grail of anti-schistosome drug within reach? ACS Infect. Dis., 6: 893-895.
- Tripathi, T., Kalita, P., Martins, R.,

Bharadwaj, P. (2019). Autophagy promotes memory formation. ACS Chem. Neurosci., 10: 3337-3339.

#### **Books/Book Chapters/Proceedings**

Kharwanlang, B., Sharma, R. (2019). Ageing of the endocrine system. In: Encyclopedia of Biomedical Gerontology. S. I. S. Rattan (Ed.). Elsevier, Academic

Press, Chapter 17, p. 159-172.

Kma, L., Baruah, T. J. (2020). The PI3K pathway components and their role in lung cancer: progression to therapeutics. In: Horizons in Cancer Research. H. S. Watanabe (Ed.). Nova Science Publishers, Inc. New York, Chapter 5, Vol.74, p. 79-136

#### **Funds Received from Agencies including NEHU/UGC**

**NEHU: Rs 20.03 lakhs**

**UGC SAP DRS Recurring: Rs 13 Lakhs**

#### **Research Projects**

##### **New**

<b>Title of Project</b>	<b>PI/Co-PI</b>	<b>Funding Agency</b>	<b>Amount (Rs. in lakhs)</b>
Understanding the Early Events of a-Synuclein Aggregation and its Implications in Parkinson's Disease Related Neurodegeneration	Dr. Timir Tripathi (PI)	DBT, New Delhi	106

##### **Ongoing**

<b>Title of Project</b>	<b>PI/Co-PI</b>	<b>Funding Agency</b>	<b>Amount (Rs. in lakhs)</b>
Screening of human Brucellosis infection in Northeast regions using point of care immunological and molecular tools.	Dr. Surya Bhan (PI)	DBT, New Delhi	Funds not released in the Financial year 2019-20

Enhancing Clinical Efficacy of Radiotherapy by Personalized and Precision Radiotherapy (PPRT) Utilizing the Biomarkers of Molecular Biodosimetry	Prof. R. N. Sharan (PI)	International Atomic Energy Agency (IAEA), Vienna	10
Deciphering the Molecular Mechanisms Governing the Direct A $\beta$ Aggregation Inhibition with the Serum Protein Transferrin: Implications for Alzheimer's Disease	Dr. Timir Tripathi (PI)	DBT, New Delhi	12

## **Academic Collaborations**

### **Dr. S. Bhan**

Collaborated with Dr. Rajpal Singh Kashyap, CIIMS, Nagpur, DBT Project Grant

### **Dr. T. Tripathi**

Collaborated with (i) Dr. Krishnananda Chattopadhyay, CSIR-IICB, Kolkata, DBT Project Grant, (ii) Dr. RajanishGiri, IIT Mandi, DBT Project Grant, (iii) Prof. Yaron Shav Tal, Bar Ilan University, Israel, (iv) Prof. Viatcheslav Mordvinov, Institute of Cytology and Genetics, Novosibirsk, Russia, (v) Prof. Banchob Sripa, Khon Kaen University, Khon Kaen, Thailand.

## **Honours/Awards/Recognitions**

### **Prof. A. N. Rai**

Guest of Honor: NAAC Awareness Programme, NEHU, Shillong on August 08, 2019.

Chief Guest at the (i) 3rd Convocation of B N Mandal University, Madhepura, Bihar on December 17, 2019, (ii) Annual Day of Dalimss Sunbeam School, Gandhinagar, Ghazipur, Uttar Pradesh on January 25, 2020.

Member of the Governing Council of Indian Institute of Governance and Leadership from 2019 onwards.

### **Prof. R. Sharma**

Member of the (i) Technical Expert Committee (TEC) on Chronic Disease Biology, DBT, MoST,GOI (2018-2021), (ii) TEC for Medical Biotechnology-I, DBT-NER, MoST, GOI (2018-21), (iii) Project Monitoring Advisory Group (PMAG) in Dementia Science Programme of DBT, MoST, GoI (2019-22), (iv) Screening Committee on DBT-Boost

to University Interdisciplinary Life Sciences for Education and Research (DBT-BUILDER), GoI (2020-22), (v) Screening Committee on DBT-Scientific infrastructure Access for Harnessing Academia University Research Joint Collaboration (DBT-SAHAJ) Programme, GoI (2019-20); Executive Committee, Indian Academy of Neurosciences (2018-20), (vi) Editorial Board International Journal of Developmental Neurosciences and Frontiers in Genetics of Aging.

### **Prof. R. N. Sharan**

Indian Patent application # 201831022176 (application # TEMP/E-1/23546/2018-KOL) titled “Biomonitoring Device for Detection and Monitoring of Cancer and a Method Thereof” filed under PTC at Mumbai on June 12, 2019.

Joined as Life Member of the Indian Society for Training & Development (ISTD), New Delhi (2019).

### **Dr. T. Tripathi**

Elected Member of the National Academy of Sciences, India (NASI) (2019);

Received Shakuntala Amir Chand Prize (2018) by ICMR, New Delhi on October 16, 2019.

## **Other Activities**

### **Prof. A. N. Rai**

Chairman of the (i) NAAC Team for JMJ College (Autonomous), Tenali, AP during April 03 - 04, 2019, (ii) Selection Committee, National Institute of Abiotic Stress Management (ICAR), Baramati, Maharashtra (2019 onwards).

Special Invitee during the NAAC Silver Jubilee Programme, Bengaluru on January 07, 2020.

**Prof. R. Sharma**

Delivered a lecture on “Mechanisms of drug action and detoxification” in a Refresher Course in Chemistry at HRDC, NEHU, Shillong on October 26, 2019.

Attended the National committee meetings of the (i) DBT-TEC (Technical Expert Committee) meeting on Medical Biotechnology-I for NER at NER-BPMC, New Delhi during April 09-10, 2019, (ii) 5th meeting of DBT Task Force on Star College Scheme at Pondicherry University, Puducherry during April 18-20, 2019, (iii) Pre-examination meeting of CSIR in Life Sciences at CSIR-IICB, Kolkata during April 26-28, 2019, (iv) Project Appraisal Committee (PAC) for Indo-Australian Biotechnology Fund (IABF) at DBT, New Delhi on April 30, 2019, (v) DBT-National RA selection committee meeting at IISc, Bangalore during May 07-08, 2019, (vi) 2nd DBT-TEC meeting on Chronic Disease Biology at DBT, New Delhi during August 26-28, 2019, (vii) CSIR Pre-examination meeting of Life Sciences at NIO, Visakhapatnam during September 20-22, 2019, (viii) 1st meeting of PMAG (Project Monitoring and Advisory Group) on Dementia Science Programme at INSA, New Delhi on November 11, 2019, (ix) 3rd DBT-TEC meeting on Chronic Disease Biology at DBT, New Delhi during February 03- 05, 2020, (x) 1st Meeting of DBT-BUILDER (Boost to University Interdisciplinary Life Sciences for Education and Research) at NII, New Delhi during February 18-19, 2020, (xi) Pre-examination meeting of NTA-CSIR at NAL, Bangalore during February 21-24, 2020, (xii) 7th Task Force meeting of DBT Star College Scheme at DBT, New Delhi during February 27-28, 2020.

**Reviewer** : Biogerontology, Applied Biochemistry and Biotechnology, Cellular and Molecular Neurobiology, Developmental Neurobiology, Biochimica et Biophysica Acta, International Journal of Developmental Neuroscience, Mechanisms of Ageing and Development, Indian Journal of Biochemistry and Biophysics, Molecular and Cellular Biochemistry, Comparative Biochemistry and Physiology, Neurobiology of Aging, Brain Research Bulletin, Journal of Experimental Gerontology.

**Prof. R. N. Sharan**

Attended the 2nd Steering committee meeting of the DBT-NER at its headquarters in New Delhi during July 23-24, 2019.

Delivered invited lectures on “Molecular Radiobiology: Biomarker discovery for clinical applications” and “Consequences of radiation interaction with the genetic material, DNA” in a Refresher Course on Current trends in Bioscience & Biotechnology at UGC-HRDC, Utkal University, Bhubaneswar on January 25, 2020.

**Prof. D. Syiem**

Member of the (i) organizing committee of the 14th International Symposium on Buckwheat, Department of Botany, NEHU, Shillong during September 03-06, 2019, (ii) BOS Royal Global University, Guwahati, Assam (2019-2020), (iii) Khasi Traditional Medicine Commission under the Khasi Hills Autonomous District Council (KHADC), Meghalaya (2019-20).

Delivered invited lectures at HRDC and Department of Chemistry, NEHU, Shillong on (i) “Nutrition and chronic diseases” in Summer School in Basic

sciences and Technology held on July 09, 2019, (ii) “Nutrition and Diabetes” in 48th Orientation Programme on July 12, 2019; “Nutrition and Diabetes” in 49th Orientation Programme on October 22, 2019, (iii) “Nutrition and Diabetes” in Refresher Course on the theme Chemistry Today during October 25 - 31, 2019.

**Reviewer** : Endocrine, Metabolic & Immune Disorders - Drug Targets, Bentham Science.

#### **Prof. A. K. Singh**

Member Coordinator of the NAAC team visit to Abhedananda Mahavidyalaya, Birbhum, Sainthia, West Bengal during November 20-21, 2019.

Delivered a lecture on “Chemicals as Carcinogen” in the Department of Chemistry in the Refresher Course organized by UGC-HRDC, NEHU on November 24, 2019.

**Reviewer** : Journal of Biotechnology and Bioprocess Engineering, Science of Total Environment, Biomass and Bioenergy, Journal of Pure and Applied Microbiology.

#### **Prof. M. B. Syiem**

Member of the organizing committee of the 14th International Symposium on Buckwheat, Department of Botany, NEHU, Shillong during September 03-06, 2019.

**Reviewer** : Journal of environmental management, Journal of clean soil, air water, Journal of cleaner production.

#### **Dr. L. Kma**

Panellist on the Workshop on Drug Abuse, held in Police Training School, Mawroh, Shillong on June 26, 2019.

**Reviewer** : Cell Communication and Signaling; Journal of Cancer Science &

Therapy.

#### **Dr. P. K. Ambasht**

Attended (i) a two-day Workshop on Massive Open Online Courses (MOOCs) on the theme “Adoption, Promotion and Development of MOOCs through SWAYAM platform” held in NEHU, Shillong during May 28-29, 2019, (ii) one-day North East Regional Training Programme for Administrators of Plagiarism Detection Softwares (PDS) URKUND, held in NEHU Campus, Shillong on August 23, 2019.

Delivered lectures on (i) “Enzyme Immobilization” in the Department of Biotechnology, MB Post Graduate College, Haldwani, Uttarakhand on November 20, 2019, (ii) “Primary Health Perspectives” in UGC-HRDC, 50th Orientation Programme NEHU, Shillong on March 14, 2020.

Member of the National Advisory Committee of Indian Science Congress Association, Shillong Chapter.

**Reviewer** : Journal of Proteins and Proteomics, Journal of Plant Biochemistry & Biotechnology, Current Topics in Medicinal Chemistry, Mediterranean Journal of Chemistry.

#### **Dr. T. Tripathi**

Member of the (i) EC, Bioinformatics and Drug Discovery Society, India (2020-2023), (ii) Management Council, Biotech Research Society of India (2019-2021), (iii) Editorial Board, Scientific Reports, Nature Publishing Group (2017 onwards).

Academic Editor of the PLoS ONE (January 2019).

Joint Secretary of the Bioinformatics and Drug Discovery Society, India (2017-2019).



**Reviewer** : Biochemical Journal, Communications Biology, FEBS Open Bio, BBA- Proteins and Proteomics, ACS Omega, Translational Neurodegeneration, Pharmacological Reports, Journal of Chemical Information and Modelling, Bioconjugate Chemistry, Scientific Reports, Frontiers in Bioscience, PLoS One, International Journal of Biological Macromolecules, Bioresource Technology, Environmental Pollution, Polymer Testing, Acta Tropica, Computational Biology and Chemistry, Journal of Molecular Graphics and Modelling, Cell Biochemistry and

Biophysics, Journal of the Chinese Chemical Society, International Journal of Peptide Research and Therapeutics, Current Alzheimer Research, Briefings in Functional Genomics, Journal of Biomolecular Structure & Dynamics, Journal of Interferon and Cytokine Research, Critical Reviews in Biotechnology, Protein & Peptide Letters, Indian Journal of Biotechnology, Microbial Pathogenesis, Computational and Structural Biotechnology Journal, Manual of Fundamental Bioinformatics and Other Research Tools, Springer Singapore.

## DEPARTMENT OF BIOTECHNOLOGY AND BIOINFORMATICS

**Head** : Prof. Kripamoy Aguan  
**Telephone** : 0364-272-2401/2402/2420  
**E-mail** : hodbthbic@nehu.ac.in; biotechnologynehu@gmail.com

**Faculty: 07**

Designation	Name and Qualification	Specialization
<b>Professor</b>	Prof. Anupam Chatterjee M.Sc. (Burdwan Univ.), Ph. D. (BHU)	Genetics & Molecular Biology
	Prof. S. Rama Rao M.Sc. & Ph.D. (Jodhpur Univ.)	Plant Cellular & Molecular Genetics
	Prof. Kripamoy Aguan M.Sc. (IARI), Ph.D. (Univ.of Birmingham)	Genetics & Molecular Biology
	Prof. Santa Ram Joshi, M.Sc. & Ph.D. (NEHU)	Microbiology
<b>Assistant Professor</b>	Dr. (Mrs.) Suktilang Majaw, M.Sc. (Tezpur Univ.), Ph.D. (NEHU)	Biochemistry
	Dr. Atanu Bhattacharjee M.Sc.(NEHU), M.Sc. (Annamalai Univ.), Ph.D. (NEHU)	Bioinformatics & Microbiology
	Dr. (Mrs.) Neha Chaurasia, MSc & Ph.D. (BHU)	Environmental Biotechnology

### Thrust Areas of Research

Molecular Genetics, Microbiology

### Brief Statement of Academic Activities

The Department of Biotechnology and Bioinformatics started in 2005. It offers Post Graduate (MSc and Ph.D.) academic programmes. The Department of Biotechnology and Bioinformatics provides research environment for the development of bio-resources, its exploration, conservation and sustainable utilization and offers training for skilled manpower in Biotechnology and Bioinformatics network. The Department was considered for

financial support for “MSc Biotechnology” by the Department of Biotechnology, Government of India, New Delhi. The Department’s MSc students, after their study at NEHU have been selected by different IITs, IMTECH, AIIMS, IISc for their Ph.D. degree and also by different National Biotech Companies. While giving importance to the global scenario, the Department also lays emphasis on regional priorities in research and development incorporated into its programme. The various courses being offered by the Department are 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 would ultimately contribute towards socio-economic development of the tribal people of the region. The Department has been receiving adequate extramural-financial support from various Central Government

agencies, which include Special Assistance programme of UGC-DRS-I (SAP), phase I and II programmes of DST-FIST, besides regular support from DBT for teaching and research programmes. The additional extramural support in the form of projects come from DBT, DST, UGC, CSIR, DRDI, OIL, BRNS, Ministry of Environment & Forest, GoI, Govt. of Meghalaya etc., which are received by faculty members.

### Students' Profile

**Enrolment Capacity: M.Sc. - 26, Ph.D. - 06**

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.Sc.	11	34	-	32	03	11	28	17	45
Ph.D.	02	04	-	01	-	05	02	04	06

### Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
P.G.	05	15	02	8	02	08	09	11	20
Ph.D.	05	03	-	02	-	06	03	05	08

### Students Awarded PhD Degree

Name of Student	Title of Thesis	Name of Supervisor & Joint Supervisor
Ravi Upadhyay	Studies on anti-tumor and radioprotective potential of different fractions of methanolic extracts of <i>Dioscorea alata</i> L and <i>Clerodendrum colebrookianum</i> Walp.	Prof. A. Chatterjee
Buddha Ganguly	Studies on the expression patterns of some selected tumor suppressor and mitotic checkpoint genes in betel-nut exposed mammalian cells and the effect of <i>Potentilla fulgens</i> root extract on expression of these genes.	Prof. A. Chatterjee
Debabrata Tripathy	Studies on anti-tumor and radioprotective potential of different fractions of methanolic root extract of <i>Potentilla fulgens</i> Wall. ex Hook. and characterization of its active compounds.	Prof. A. Chatterjee
Donald A. Bareh	Study on Microfungal Dynamics in Traditional Jhum Fields and Fallows of Northeast India	Prof. S. R. Joshi

Susmita Paul	Biochemical and Molecular Characterization of Oleaginous Endophytic Fungi from Biodiesel Plants	Prof. S. R. Joshi
Aishiki Banerjee	Studies on phosphate solubilizing bacteria and their response to environmental stress induced by shifting cultivation.	Prof. S. R. Joshi
Carey Vana Rynjah	Studies on the effect of anti-diabetic plants on adenosine monophosphate-activated protein kinase (AMPK) regulated metabolism in diabetic and obese mice	Dr. (Mrs.) Suktilang Majaw & Prof. D. Syiem
Arun Bahadur Gurung	Development of a pharmacophore model for screening of small molecules for their anti-inflammatory property in relation to cardiovascular diseases.	Dr. Atanu Bhattacharjee

#### Placement of Students

Name of Student	Placement
Dr. Susmita Paul	Assistant Professor, Christian Eminent College, Indore, Madhya Pradesh
Dr. Buddha Ganguly	Scientist in Glenmark Pharmaceuticals Ltd., Mumbai
Dr. Debabrata Tripathy	Post- Doc., Department of Biotechnology & Bioinformatics, NEHU, Shillong
Shilpi Sarkar	Ph.D. Student, IIT Guwahati
Abhirup Mukhopadhyay	Project JRF, CSIR-IGIB
Sheetal Joshi	Ph.D. Student, IBSD- Shillong
Vanlalhruii Famhawite	Ph.D. Student, CSIR- NEIST, Jorhat
Abhishek Banik	Project JRF, WBUAFS- Kolkata
Sunayana Dutta	Subject Matter Expert, ZoomRx Health Care Pvt. Ltd.
Atmaja Karmakar	Ph.D. Student, CSIR-IICB, Kolkata
Juthika Boro	Ph.D. Student, CSIR- NBRI
Himani Agarwal	Ph.D. Student, Department of Biotechnology & Bioinformatics, NEHU, Shillong

### Research fellowship

CSIR-UGC-NET/ GATE	UGC-Non-NET	National Fellowship for ST student	DST	DBT	ICMR
04	16	02	02	05	01

### Courses Conducted

#### Postgraduate: M.Sc. (Biotechnology)

##### *Semester I*

Cell Biology & Genetics, Biomolecules, and Microbiology.

##### *Semester II*

Molecular Biology, Immunology, and Microbial Technology.

##### *Semester III*

Animal Cell Science & Technology, Genetic Engineering, and Plant Biotechnology.

##### *Semester IV*

Bioprocess Engineering & Technology, Environmental Biotechnology, Molecular Genetics, and Applied Microbiology.

The Department offers open courses on Microbial Technology, Applied Molecular Genetics, Bioinformatics in Molecular and cellular Biology under CBCS in the MSc II and III semesters.

#### Ph.D. Courses

Research Methodology, (School Level), Biotechnology in Medicine, Agriculture and Microbiology, (Department Level), Review of literature (Department Level).

#### Seminars/Conferences/Workshops/Symposia/Extension Programmes (National/International)

##### *Organized*

##### **Dr. S. Majaw**

Organized an Indian Immunology Society sponsored programme on “International

Day of Immunology” for class XI-XII science students at the Department of Biotechnology and Bioinformatics, NEHU, Shillong on April 29, 2019.

##### *Attended*

##### **Prof. A. Chatterjee**

Delivered invited lectures on (i) “Oral and Esophageal Cancer in North-East India Continues in Epidemic Proportions: Evaluation of Carcinogenic Risks and Its Early Detection,” in an International Symposium on “Emerging Trends and Challenges in Cancer Chemoprevention, diagnosis & Therapeutics” held at Tezpur University, Assam during February 17 – 18, 2020. (ii) “Oral and Esophageal Cancer in North-East India Continues in Epidemic Proportions: Evaluation of Carcinogenic Risks and Its Early Detection” in a National Seminar on Advancement of Biology In the 21st Century” held at Department of Zoology, Visva-Bharati, Santiniketan during February 28-29, 2020.

##### **Prof. S. R. Rao**

Delivered a keynote address at International conference on Biosciences and Biotechnology-Science for Community held at Lovely Professional University, Phagwara, Punjab during November 04-05, 2019.

##### **Prof. S. R. Joshi**

Attended (i) North East Enclave 2019 and deliberated on “Transforming North East India through Science and Technology” organized by Institute of Bioresources

and Sustainable Development, Shillong during June 28-29, 2019, (ii) as organizing committee member in the 14th International Symposium on Buckwheat” and involved in discussions on “Diversifying Food systems for Health and Nutritional Security, organized by NEHU, Shillong during September 03-06, 2019.

### **Dr. S. Majaw**

Attended as a member of the MOOCs committee for two-day Workshop on Massive Open Online Courses (MOOCs) held at NEHU, Shillong during May 28 - 29, 2019

Attended a twelve-week online course on “Entrepreneurship Essentials” at SWAYAM-NPTEL IIT Kharagpur during January – April, 2020.

### **Publications**

#### **Research Papers**

##### ***Published in India***

Wahlang, D. R., Suchiang, W., Goel, S., Rao, S. R. (2019). Analysis of genetic variation using ISSR and the development of SCAR marker in synthetic autotetraploids of *Vigna mungo* (L.) Hepper. *Vegetos*:1-10.

Chanu, N. K., Chaurasia, N. (2019). A proteomic approach to pesticide stress management in microalgae. *The NEHU J.*, XVII (1-2): 41-48.

Prasad, R., Banerjee, S., Kharshiing, C. E., Bhattacharjee, A., Prasad, S. B. (2019). Rutin-mediated apoptosis and glutathione changes in ascites Daltons lymphoma cells: In silico analysis of rutin interactions with some antiapoptotic and glutathione-related proteins. *Indian J. Pharm. Sci.*, 81(4):720-728.

Biswas, S., Paul, D., Bhattacharjee, A.

(2019). Isolation and identification of cellulose degrading bacteria from gut of two herbivorous pest larvae. *The NEHU J.*, XVII (1): 50-59.

Ganguly, R., Bhattacharjee, A. (2019). Atherosclerotic plaque development: Disease Pathogenesis and emerging treatment options. *The NEHU J.*, XVII (1): 108-124.

##### **Published Abroad**

Ganguly, B., Chaudhary, A., Dkhar, H., Singh, I. P., Chatterjee, A., (2019). Methanolic extract of *Potentilla fulgens* root and its ethyl-acetate fraction delays the process of carcinogenesis in mice. *Sci. Rep.*, 9: 16985

Banerjee, A., Yadav, P., Mukherjee, S., Singh, C. S., Boruah, N., Chatterjee, P., Dkhar, H., Nongrum, H. B., Bhattacharjee, A., Chatterjee, A. (2020). Glutathione S- transferase P1AA (105Ile) allele increases oral cancer risk, interacts strongly with c-Jun Kinase and weakly detoxifies areca-nut metabolites. *Sci. Rep.*, 10:6032

Wahlang, D. R., Lamo, J. M., Goel, S., Rao, S. R. (2019). Karyo-morphological consistency and heterochromatin distribution pattern in diploid and colchitetraploids of *Vigna radiata* and *V. mungo*. *Meta Gene*, 21: 100569

Jha, S., Raina, S. N., Ohri, D., Verma, R. C., Dhar, M. K., Lekhak, M. M., Rao, S. R. (2019). A new online database on genome-related information of Indian plants. *Plant Syst. Evol.*, 305(9): 837-843.

Goswami, B., Rankawat, R., Regie, W. D., Gadi, B. R., Rao, S. R. (2020). Genetic diversity, population structure and gene flow pattern among populations



of *Lasiurus sindicus* Henr. -an endemic, C4 grass of Indian Thar desert. *Plant Gene*, 21:100206.

Ao, T., Deb, C. R., Rao, S. R. (2020). Molecular strategies for identification and characterization of some wild edible mushrooms of Nagaland, India. *Mol. Biol. Rep.*, 47(1): 621-630.

Pasha, S. V., Behera, M. D., Mahawar, S. K., Barik, S. K., Joshi, S. R. (2020). Assessment of shifting cultivation fallows in Northeastern India using Landsat imageries. *Trop. Ecol.* <https://doi.org/10.1007/s42965-020-00062-0>.

Borthakur, M., Gurung, A. B., Bhattacharjee, A., Joshi, S. R. (2020). Analysis of the bioactive metabolites of the endangered Mexican lost fungi *Campanophyllum*- a report from India. *Mycobiology*, 48(1): 58-69. DOI: 10.1080/12298093.2020.1723388.

Ingti, B., Upadhyay, S., Hazarika, M., Khyriem, A. B., Paul, D., Bhattacharya, P., Joshi, S. R., Bora, D., Dhar (Chanda), D., Bhattacharjee, A. (2020) Distribution of carbapenem resistant *Acinetobacter baumannii* with bla ADC-30 and induction of ADC-30 in response to beta-lactam antibiotics. *Res. Microbiol.*, 171: 128-133. DOI: 10.1016/j.resmic.2020.01.002

Dutta, A., Rahman, N., Khongriah, W., Nongrum, R., Joshi, S. R., Nongkhlaw, R. (2019). l-Glutamine supported on core-shell silica iron oxide nanoparticles: A highly efficient organocatalyst for synthesis of spirooxindoles. *Chemistry Select*, 4: 12399 – 12408. <https://doi.org/10.1002/slct.201902279>.

Baul, T. S. B., Nongsiej, K., Ka-Ot, A. L., Joshi, S. R., Rocha, B. G. M., daSilva,

M. F. C. G. (2020). Synthesis, crystal structures, magnetic properties and antimicrobial screening of octahedral nickel (II) complexes with substituted quinolin-8-olates and pyridine ligands. *J. Mol. Struct.*, 1200: 127106. doi.org/10.1016/j.molstruc.2019.127106

Arjun, H. A., Elancheran, R., Manikandan, N., Lakshmithendral, K., Ramanathan, M., Bhattacharjee, A., Lokanath, N. K., Kabilan, S. (2019). Design, synthesis, and biological evaluation of (E)-N'-((1-chloro-3,4-dihydronaphthalen-2-yl) methylene) benzohydrazide derivatives as anti-prostate cancer agents. *Front. Chem.*, 7:474. doi: 10.3389/fchem.2019.00474

Manikandan, N., Rajan, R. K., Elancheran, R., Lakshmithendral, K., Ramanathan, M., Bhattacharjee, A., Kabilan, S. (2020). Design, synthesis, and biological evaluation of -(2-Bromo-3-nitrophenyl) -5-phenyl-1,3,4-oxadiazole derivatives as possible anti-breast cancer agents. *Chem Biodivers.* 17(2): <https://doi.org/10.1002/cbdv.201900659>.

Gurung, A. B., Borah, P., Bhattacharjee, A. (2020). Data-mining technique identifies potential target proteins playing a dual role in inflammation and oxidative stress pathways in relation to atherosclerosis plaque development. *Inform. Med. Unlocked*, 18:1-7.

Gurung, A. B., Laso, A., Bhattacharjee, A. (2019). Identification of potential drug-like molecules for inhibition of the inflammatory activity of cyclooxygenase-2. *J. Biomol. Struct. Dyn.*, DOI: 10.1080/07391102.2019.1698465.

Ramakrishnan, E., Kabilan, S., Kotoky, J., Ramanathan, M., Bhattacharjee, A. (2019). In Silico molecular docking, synthesis of 4-(4-benzoylamino phenoxy) phenol derivatives as androgen receptor antagonists. *Comb. Chem. High Throughput Screen.*, 22(5): 307-316. DOI: <https://doi.org/10.2174/1386207322666190701124752>.

Bhattacharyya, S., Biswas, R., Roy chowdhury, A., Bhattacharjee, A., Ghosh, A. K., Das, A. K. (2019). Elucidation of the mechanism of disulfide exchange between staphylococcal thioredoxin2 and thioredoxin reductase2: A structural insight. *Biochimie*. 160: 1-13.

Mandal, M. K., Saikia, P., Chanu, N. K., Chourasia, N. (2019). Modulation of lipid content and lipid profile by supplementation of iron, zinc, and molybdenum in indigenous microalgae. *Environ. Sci. Pollut. Res.*, 26(20), 20815-20828.

Mandal, M. K., Chanu, N. K., Chaurasia, N. (2020). Exogenous addition of indole acetic acid and kinetin under nitrogen-limited medium enhances lipid yield and expression of glycerol-3-phosphate acyltransferase & diacylglycerol acyltransferase genes in indigenous microalgae: A potential approach for biodiesel production. *Bioresour. Technol.*, 297: 122439.

Baruah, P., Chaurasia, N. (2020) Ecotoxicological effects of alpha-cypermethrin on freshwater alga *Chlorella* sp.: Growth inhibition and oxidative stress studies. *Environ. Toxicol. Pharmacol.* <https://doi.org/10.1016/j.etap.2020.103347>

Yadav, S., Srivastava, A., Biswas, S.,

Chaurasia, N., Singh, S. K., Kumar, S., Srivastava, V., Mishra, Y. (2020). Comparison and optimization of protein extraction and two-dimensional gel electrophoresis protocols for liverworts. *BMC Res. Not.*, 13: 60. <https://doi.org/10.1186/s13104-020-4929-1>

### **Books/Book Chapters/Proceedings**

Rao, S. R. (2020). Status of genetic diversity and its characterization in genus *Bulbophyllum* (Orchidaceae) from North-Eastern India. In: *Orchid Biology: Recent Trends & Challenges*. Khasim, S. M., Hegde, S. N., González-Arango, M. T., and Thammasiri, K. (Eds.). Springer, Singapore, p. 149-154.

Satyawada, R. R., Wahlang, D. R., Lamo, J. M. (2020). Molecular and cytogenetical approaches for genetic diversity analysis of wild and cultivated medicinal plant species from North-East India with focus on genus *Curcuma*. In: *Medicinal Plants: Biodiversity, Sustainable Utilization and Conservation*. Khasim, S. M., Long, C., Thammasiri, K., Lutken, H. (Eds.). Springer, Singapore, p. 677-691.

Banerjee, S., Jha, D. K., Joshi, S. R. (2019). Cave microbiome for human welfare. In: *Microbial Diversity in Ecosystem Sustainability and Biotechnological Applications*. Satyanarayana T., Das S. and Johri B. (Eds.). Springer, Singapore. p. 3-30. [https://doi.org/10.1007/978-981-13-8487-5\\_1](https://doi.org/10.1007/978-981-13-8487-5_1).

Joshi, S. R., Bareh, D., Banerjee, A. (2019). Soil microbiota and sustainable Jhum agroecosystem. In: *Microbial Diversity in Ecosystem Sustainability and Biotechnological Applications*.

Satyanarayana T., Das S. and Johri B. (Eds.) Springer, Singapore. p.57-82. [https://doi.org/10.1007/978-981-13-8487-5\\_3](https://doi.org/10.1007/978-981-13-8487-5_3).

Joshi, S. R., Chettri, U. (2019). Fungi in hypogean environment: Bioprospection perspective. In: *Advancing Frontiers in Mycology and Mycotechnology: Basic and Applied Aspects of Fungi*. Satyanarayana T, Deshmukh S. K., Deshpande M. V. (Eds.) Springer, Singapore, p. 539-562.

Joshi, S. R., Khongriah, W., Biswas, K. (2020). Ethnic fermented foods and beverages of Meghalaya. In: *Ethnic Fermented Foods and Beverages of India: Science History and Culture*. J. P. Tamang (Ed.). Springer Nature Singapore Pte Ltd. p. 421-434.

Mandal, M. K., Chanu, N. K., Chourasia, N. (2020). Cyanobacterial pigments and their fluorescence characteristics: applications in research and industry. In: *Advances in Cyanobacterial Biology*. Academic Press. p. 55-72.

Chatterjee, A., Mandal, M. K., Chourasia, N. (2019). Microbial services in agro-environmental management. In: *New and Future Developments in Microbial*

*Biotechnology and Bioengineering*. Elsevier. p. 259-272.

Velmurugan, D., Gayathri, D., Ramakrishnan, C., Bhattacharjee, A. (2020). Protein–ligand interactions in molecular modeling and structure-based drug design. In: *Protein interactions*. M. Michael Gromiha (Eds.). p.351-369. [https://doi.org/10.1142/9789811211874\\_0014](https://doi.org/10.1142/9789811211874_0014).

Chandrasekaran R., Bhattacharjee A., Devadasan V. (2019). Anti-inflammatory and Antidote Drug Discovery with Secreted Phospholipase A. In: *Biocatalysis*. Husain Q., Ullah M. (Eds.). Springer, Cham. p.193-211. [https://doi.org/10.1007/978-3-030-25023-2\\_10](https://doi.org/10.1007/978-3-030-25023-2_10).

Arjun, H. A., Manikandan N. Rajan, R. K., Elancheran, R., Ramanathan, M., Bhattacharjee, A., Kabilan, S. (2020). S, Design, synthesis, and biological evaluation of 1, 3, 4-oxadiazole derivatives as anti-breast cancer agents. *Proceedings of International Conference on Drug Discovery (ICDD) 2020*. Available at <https://ssrn.com/abstract 3530734>

**Funds Received from Agencies including NEHU/UGC**

Grant in Aid (NEHU)	: Rs. 11.00 lakhs
DBT	: Rs. 396.60 lakhs
DST	: Rs. 7.50 lakhs
UGC DRS (SAP)	: Rs. 7.80 lakhs
MeiTy	: Rs. 30.47 lakhs
Env & Forest. GoI	: Rs. 11.59 lakhs
Govt. of Meghalaya	: Rs. 59.62 lakhs

**Research Projects****New**

Title of Project	PI/Co-PI	Funding Agency	Amount (Rs.)
ICT solutions for North-East India Heritage	Prof. S. R. Joshi	Ministry of Electronics & Information Technology, Govt. of India	30,47,000
Development of Drug-seeds that target TFF3 in mammary gastric, and hepatocellular Carcinoma	Dr. Atanu Bhattacharjee	Department of Biotechnology, Govt. of India	52,25,000
Comparison of herbal and semi-synthetic compounds for enhancement of the proliferation and potency of Mesenchymal Stem Cells derived from adult dental pulp and adipose tissues for diabetic wounds using 3D scaffolds	Dr. Atanu Bhattacharjee	Department of Biotechnology, Govt. of India	45,81,496

**Ongoing**

Title of Project	PI/Co-PI	Funding Agency	Amount (Rs.)
Virtual National Oral Cancer Institute	Prof. A. Chatterjee	Department of Biotechnology, Govt. of India, New Delhi	58,45,000
Technology Development, Management and Long-term Monitoring of Shifting cultivation and Coal mining in North-Eastern India	Prof. S. R. Joshi	National Mission on Himalayan Studies, Ministry of Environment, Forests and Climate Change, Govt. of India	11,59,000

Establishment of Culture-Col- lection Centre in North-East Region of India Phase II	Prof. S. R. Joshi	Department of Biotech- nology, Govt. of India	3,48,000
Whole Genome and Transcrip- tome Changes as a consequence of allo and auto polyploidy in Vigna L.: Phase II	Prof. S. Rama Rao	Department of Biotech- nology, Govt. of India	1,07,04,980
Diversity and molecular charac- terization of microsymbiont le- gume association in Meghalaya and Nagaland for developing consortia with wide host range	Prof. S. Rama Rao	Department of Biotech- nology, Govt. of India	1,05,26,988
Micropropagation of Lakadong turmeric	Prof. S. Rama Rao	Government of Megha- laya	59,62,000
Study of antiobesity property of root extract of <i>Potentilla fulgens</i> , a known anti-diabetic medicinal plant available in Meghalaya	Dr. S. Majaw	SERB, DST, New Delhi	7,50,000

### **Completed**

<b>Title of Project</b>	<b>PI/Co-PI</b>	<b>Funding Agency</b>	<b>Amount (Rs.)</b>
Integrating Herbal Medicine of NER with Contemporary Ap- proaches to Develop Therapeu- tic Strategies for Metabolic Syn- drome	Dr. Atanu Bhat- tacharjee	Department of Biotech- nology, Govt. of India	1,79,00,000

### **Academic Collaborations**

#### **Prof. S. R. Joshi**

Collaborated with (i) Dr. A. Bezbaruah, North Dakota State University, Fargo, USA (Research Study: Nanoconjugates in metal bioremediation), (ii) Dr. Kanthi Kiran Kondepudi, Dr Mahendra Bishnoi and Dr Shrikant Mantri: National Agri-Food Biotechnology Institute, Mohali, Punjab (Project: Metagenomic and Functional Characterization of Soy-based Fermented Foods of Northeastern Region), (iii) Prof. Kanwaljit Chopra: University Institute of Pharmaceutical Sciences, Panjab University, Chandigarh

(Project: Metagenomic and Functional Characterization of Soy-based Fermented Foods of Northeastern Region), (iv) Prof. S. K. Barik: CSIR-NBRI, Lucknow (Project: Technology Development, Management and Lon-term Monitoring of Shifting cultivation and Coal mining in North-Eastern India), (v) Dr. M.K. Behera. Indian Institute of Technology, Kharagpur (Project: Technology Development, Management and Lon-term Monitoring of Shifting cultivation and Coal mining in North-Eastern India), (vi) Dr. Kiranmay Sarma, Indra-Prastha University, New Delhi (Project: Technology Development, Management and Lon-term Monitoring

of Shifting cultivation and Coal mining in North-Eastern India).

#### **Prof. S. R. Rao**

Collaborated with (i) S. Goel, S. Katiyar-Agarwal, University of Delhi, NEHU, (Whole Genome and Transcriptome Changes as a consequence of allo and auto polyploidy in *Vigna L.*: Phase II,) (ii) H. S. Gehlot, N. Tak, and C. R. Deb, Jai Narain Vyas University, Jodhpur, (Nagaland University, NEHU, Diversity and molecular characterization of microsymbiont legume association in Meghalaya and Nagaland for developing consortia with wide host range).

#### **Dr. A. Bhattacharjee**

Collaborated with (i) Dr. Alan Mathew Punnoose, Department of Biotechnology and Bioinformatics, Centre for Regenerative Medicine, Sri Ramachandra University, Porur, Chennai, in one of the research project “Comparison of herbal and semi-synthetic compounds for enhancement of the proliferation and potency of Mesenchymal Stem Cells derived from adult dental pulp and adipose tissues for diabetic wounds using 3D scaffolds, (ii) Basappa Salundi, University of Mysore, Department of Studies in Organic Chemistry, University of Mysore, in one research project “Development of Drug-seeds that target TFF3 in mammary gastric, and hepatocellular Carcinoma”.

#### **Honours/Awards/Recognitions**

##### **Prof. S. R. Joshi**

Member of the (i) Board of Studies in Microbiology, Sikkim University, Sikkim, (ii) Task Force of Science and Engineering Research Board, Department of Science & Technology, Govt of India, (iii) Peer Team of National Assessment and Accreditation

Council, Bangalore, India, (iv) Board of Studies in Ayurveda and Homoeopathy, North East Institute of Ayurveda and Homoeopathy, Shillong, (v) Task Force of Meghalaya State Curriculum Framework, Govt. of Meghalaya, (vi) Board of Management, Deen Dayal Community College, Jaintia Hills, Meghalaya.

Advisory Member of the (i) Star College Scheme, St. Edmund's College, Shillong, (ii) Vigyan Jyoti Scheme for Navodaya Vidhyalaya, Mawphlang, a scheme of Department of Science & technology, Govt. of India.

Life member of The Indian Society for Training & Development, New Delhi (2019)

Mentor of M/s Caliche, A start-up company incubated at IIT Guwahati, Assam.

Secretary of The National Academy of Sciences, India (NASI) North-Eastern Region Local Chapter.

#### **Other Activities**

##### **Prof. S. R. Joshi**

Delivered lectures on (i) “Fostering Inter disciplinarity in Research” in a Refresher Course in Chemistry organized by Department of Chemistry and UGC-HRDC NEHU on October 23, 2019, (ii) “Research Publications in Scientific Journals” at the Short-term Course in Research Methodology for Basic Sciences organized by UGC-HRDC, NEHU on May 28, 2019, (iii) “Teaching at Institutions of Higher Learning: Challenges and Effectiveness” at the 48th Orientation Programme organized by UGC-HRDC, NEHU on June 26, 2019, (iv) “Teaching activities at Institutions of Higher Learning” at the 49th Orientation Programme organized by UGC-HRDC,



NEHU on October 17, 2019, (v) “Teaching Strategy and Challenges” in the Orientation Programme organized by UGC-HRDC, NEHU on March 12, 2020.

**Reviewer** : Science of the Total Environment, Plos One, Proceedings of National Academy of Sciences, India, Food Reviews International, Indian Journal of Traditional Knowledge, Journal of the Science of Food and Agriculture, Journal of Biomolecular Structure & Dynamics; Editor of The NEHU Journal.

**Dr. S. Majaw**

Delivered a lecture on “Understanding immune system and its application for the benefit of the society” at UGC-Human Resource Development Centre, NEHU, Shillong during the special summer School in Basic Sciences and Technology on July

8, 2019.

Appointed as (i) Polling Officer for Conducting NEHUSU Elections, (ii) Examiner at University of Science & Technology, Meghalaya on June 04, 2019 (iii) Observer for Central Teacher Eligibility Test (CTET) held on July 07, 2019

Guided one MSc (Biotechnology) student for Summer Internship from Kurukshetra University, Kurukshetra during June 20 – July 30, 2019.

**Reviewer** : BMC Complementary and Alternative Medicine, Journal of Applied Pharmaceutical Science.

**Dr. A. Bhattacharjee**

Reviewer: Journal of Biomolecular Structure and Dynamics.

## DEPARTMENT OF BOTANY

**Head** : Prof. Uma Shankar (up to November 24, 2019)  
 Prof. Y. Kumar (w.e.f. November 25, 2019)

**Telephone** : 0364-2722201/2202

**E-mail** : hodbot@nehu.ac.in

**Faculty: 10**

Designation	Name and Qualification	Specialization
<b>Professor</b>	Prof. N. K. Chrungoo, M.Sc. & Ph.D. (Univ. of Kashmir)	Plant Physiology and Plant Molecular Biology
	Prof. M. S. Dkhar, M.Sc. & Ph.D. (NEHU)	Microbial Ecology and Microbiology
	Prof. S. K. Barik*, M.Sc. (Behram-pur Univ.), Ph.D. (NEHU)	Forest Ecology and Management, Biodiversity Conservation and EIA
	Prof. Uma Shankar, M.Sc. (Agra Uni.), Ph.D. (NEHU)	Ecology, Biosystematics, Biodiversity Conservation
	Prof. Y. Kumar, M.Sc. (Agra Univ.), Ph.D. (NEHU)	Plant Taxonomy and Biosystematics
	Prof. H. Kayang, M.Sc. & Ph.D. (NEHU)	Microbial Ecology and Microbiology
	Prof. S. Kumaria, M.Sc. & Ph.D. (NEHU)	Plant Biotechnology and Physiology
	Prof. L. Kharlukhi, ** M.Sc. (NEHU), Ph.D. (IARI)	Seed Biology
<b>Associate Professor</b>	Dr. P. Ramanujam, M.Sc. & Ph.D. (NEHU)	Plant Ecology, Algal Ecology
<b>Assistant Professor</b>	Dr. M. C. Das, M.Sc. & Ph.D. (NEHU)	Plant Biotechnology

\*On lien since November 04, 2016 (as Director, NBRI, Lucknow); \*\* Retired in August, 2019

### Thrust Areas of Research

Plant and Microbial Diversity: Assessment, Characterization, Bio-prospection, and Conservation.

### Brief Statement of Academic Activities

The Department offers two MSc Programmes, viz., MSc (Botany) and MSc (Plant Molecular Biology), and Ph.D.

Programme in Botany. 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 four multi-institutional research projects. Eleven individual research projects are also going on. The Department received a research

grant of 78.72 lakhs (Rupees Seventy-eight lakhs and seventy-two thousand) from different funding agencies (including non-plan grant from the UGC) during 2019–20. 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 one International Symposium on Buckwheat, several Workshops and training programmes. 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. Dr. Seraj Ahmad, Dr. Diana Kharkongor, Dr. Macmillan Nongkhlaw, Dr. Fenella Nongkhlaw, Dr. Kuldeep Singh and Dr. Jauti Sharma taught some courses as Guest Faculty during the year. The faculty, staff and students received a number of awards and fellowships during the year.

Thirty-three students were admitted to

MSc in Botany and ten students to MSc in Plant Molecular Biology during the year. Twenty-nine students were awarded the MSc degree in Botany and nine students were awarded the MSc degree in Plant Molecular Biology. Eight students were admitted to the Ph.D. programme. Nine students were awarded the Ph.D. degree 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. One student qualified NET and four students qualified GATE during the year. A total of thirty research papers were published in peer-reviewed scientific journals of National and International repute and conference proceedings.

Several distinguished scientists delivered talks on different topics during the year. Prof. Praveen K. Verma, Scientist VI, National Institute of Plant Genome Research, New Delhi on the topic entitled, “National insights in plant fungus interactions: from secreted effector to host target”.

### Students' Profile

**Enrolment Capacity: M.Sc. (Botany)– 30, M.Sc. (Plant Molecular Biology (PMB)) –10, Ph.D. - 08**

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.Sc. (Botany)	09	24	01	25	01	06	19	14	33
M.Sc. (PMB)	02	06	-	06	-	02	06	02	08
Ph.D.	03	05	-	07	-	01	05	03	08

### *Degrees Awarded*

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.Sc. (Botany)	07	22	01	26	-	02	19	10	29
M.Sc. (PMB)	02	06	-	06	-	02	06	02	08
Ph.D.	01	08	-	05	-	04	06	03	09

### *Students Awarded PhD Degree*

Name of Student	Title of Thesis	Names of Supervisors/ Joint Supervisors
Ms. Deehunkimin Khonglah	Antagonistic effects of rhizospheric fungal isolates against phytopathogens of <i>Solanum lycopersicum</i> L.	Prof. H. Kayang (Supervisor)
Ms. Ehkupar Gary Suting	Assessment of Arbuscular Mycorrhizal Fungi association in native plants colonizing limestone mine spoils of Mawsmi, Meghalaya.	Dr (Mrs) Laxmi Rawat (FRI, Dehradun) (Supervisor) Prof. H. Kayang (Jt. Supervisor)
Mrs. Yarielyn Saio	Studies on biological control of <i>Colletotrichum linduthianum</i> (Sacc. & Magn.) Briosi & Cav. infecting french bean ( <i>Phaseolus vulgaris</i> L.).	Prof. M. S. Dkhar (Supervisor)
Ms. Parismita Sarma	Studies on diversity and antimicrobial and growth promoting activity of endophytic fungi associated with selected medicinal plants of Meghalaya.	Prof. M. S. Dkhar (Supervisor) Prof. H. Kayang (Jt. Supervisor)
Ms. Reema Varen Diengdoh	Asymbiotic seeds germination and cryopreservation of <i>Paphiopedilum insigne</i> Wall.exLindl. and <i>P. villosum</i> Lindl.	Dr. Meera C. Das (Supervisor), Prof. Suman Kumaria (Jt. Supervisor)
Ms. Jean Valrie Marbaniang	Analyses of genetic diversity and phylogenetic relationships in <i>Malaxis</i> spp. (Orchidaceae) using suitable DNA based markers	Prof. Suman Kumaria (Supervisor)
Mr. Prasenjit Paul	Molecular characterization and chemoprofiling of <i>Dendrobium fimbriatum</i> Hook. of Northeast India	Prof. Suman Kumaria (Supervisor)

Ms. Swagata Nag	Molecular characterization and differential expression of phenylalanine ammonia lyase (PAL) gene from <i>Vanda coerulea</i> Griff. Ex Lindl.	Prof. Suman Kumaria (Supervisor)
Ms. Seram Devika Devi	Cryopreservation strategies and in vitro propagation of <i>Aquilariamalaccensis</i> Lam.	Dr. Meera C. Das (Supervisor) Prof. Suman Kumaria (Jt. Supervisor)

#### Placement of Students

1. Dr. (Ms.) Parismita Sarma joined as Assistant Professor, University of Science and Technology Meghalaya.
2. Dr. (Ms.) Deehunkimin Khonglah joined as Assistant Professor, St Mary's College, Shillong.
3. Dr. (Ms.) Pynbeitsyon Nongkling joined as Assistant Professor, Synod College, Shillong
4. Dr. (Mr.) Puranjoy Mipun joined as Assistant Professor in B. N Collage, Dhubri, Assam.
5. Dr. (Mrs.) Nilofer Seikh joined as Assistant Professor in Biswanath Sariali College, Assam.
6. Dr. (Mr.) Prasenjit Paul joined as Assistant Professor in St. Edmund's College, Shillong. Meghalaya.
7. Dr. (Ms.) Jean Valrie Marbaniang joined as Assistant Professor in Nongstoin College, West Khasi Hills District, Meghalaya.
8. Dr. (Ms.) Reema Varen Diengdoh appointed as scientist in Bio Resource Development Centre, Shillong, Meghalaya.
9. Dr. (Ms.) Neeta Pathaw joined Manipur University, Imphal as DBT-Post Doc. Fellow.

#### Research Fellowship

CSIR-UGC-NET	UGC Non-Net	National Fellowship for SC/ST	Meritorious Maulana Azad Minority Fellowship	Project Fellowship	DST-Inspire Fellowship
05	11	05	01	07	01

#### Courses Conducted

##### Postgraduate: M.Sc.

##### 1. M.Sc. (Botany)

##### *Semester I*

Microbiology, Mycology and Plant Pathology; Microbiology, Mycology and Plant Pathology (Practical); Algae, Bryophytes and Pteridophytes; Algae,

Bryophytes and Pteridophytes (Practical); Gymnosperms and Plant Anatomy, Gymnosperms and Plant Anatomy (Practical).

##### *Semester II*

Angiosperm Taxonomy, Economic Botany and Ethnobotany, Angiosperm Taxonomy, Economic Botany and Ethnobotany

(Practical), Plant Biochemistry and Molecular Biology, Plant Biochemistry and Molecular Biology (Practical), Stress Biology (Open), Bioprocess Development (Open), Techniques in Molecular Biology (Open).

### ***Semester III***

Genetics, Cytogenetics and Plant Breeding; Genetics, Cytogenetics and Plant Breeding (Practical); Plant Physiology, Plant Physiology (Practical), Biodiversity and Phytogeography, Environmental Pollution and Conservation (Open), Biostatistics (Open).

### ***Semester IV***

Plant Reproductive Biology and Biotechnology, Plant Reproductive Biology and Biotechnology (Practical), Plant Ecology and Ecosystem Analysis, Plant Ecology and Ecosystem Analysis (Practical), Project Work.

### **Broad Areas for Specialisation through Project Work**

Plant Ecology, Microbial Ecology, Plant Molecular Biology, Advanced Plant Physiology, Taxonomy and Diversity of Angiosperms, Development and Reproduction of Angiosperms, Plant Biotechnology, Plant Genetics and Cytogenetics, Lower plants.

## **2. M.Sc. (PMB)**

### ***Semester I***

Microbiology, Cell Biology and Plant Physiology, Fundamentals of Genetic Engineering, Lab Work/ Practical (Practical).

### ***Semester II***

Plant Biochemistry and Molecular Biology, Eukaryotic Genome Organization, Stress

Biology (Open), Bioprocess Development (Open), Techniques in Molecular Biology (Open), Lab Work/ Practical (Practical).

### ***Semester III***

Genetics, Cytogenetics and Plant Breeding; Metabolite Engineering (Open), Environmental Pollution and Conservation (Open), Computer Applications and Bioinformatics (Open), Lab Work/ Practical (Practical).

### ***Semester IV***

Plant Biotechnology, Molecular Basis of Differentiation, Lab Work/Practical, Project Work and Dissertation.

Broad areas for Specialization through Project Work.

Microbiology, Molecular Ecology, Plant Biotechnology, Plant Molecular Biology.

### **Ph.D. Courses**

Research Methodology, Plant Sciences, Review of Literature and Seminar.

### **Seminars/Conferences/Workshops/ Symposia/Extension Programmes**

#### ***Organized***

The Department organized the following events: World Environment Day on May 22, 2019, Hands on training Workshop on “Techniques in Molecular Biology” under DBT State level Biotech Hub Project during June 26 - July 02, 2019. (Coordinator: Prof. N. K. Chrungoo).

#### ***Attended***

#### **Prof. N. K. Chrungoo**

Delivered invited talks on (i) “Accelerating domestication of buckwheat for utilization to meet challenges of nutritional security”, in the National Symposium on Potential Crops for Food and Nutritional Security



held at Tamil Nadu Agricultural University, Coimbatore on December 14, 2019, (ii) “Crop Biofortification: Current status and prospects for utilization to meet challenges of food and nutritional security”, at the National conference on Bio-exploration for human welfare-An integrative approach held at Assam Don Bosco University, Guwahati on November 08, 2019, (iii) “Bio resource-based entrepreneurship in North East India: issues and challenges”, at the 4th edition of Northeast Green Summit 2019 at IIT, Guwahati on November 01, 2019, (iv) “Accelerated domestication of neglected and underutilized crops: Issues and Perspectives”, at the 1<sup>st</sup> National Conference on Neglected and Underutilized Crop species for Food, nutrition, Energy and Environment held at National Institute for Plant Genome research, New Delhi on August 02, 2019, (v) “Biotechnology in North East India: A view Beyond 2020”, at Institute of Advanced Study in Science & Technology, Guwahati on June 15, 2019.

#### **Dr. Meera C. Das**

Delivered a lecture as a resource person on the topic “In vitro Conservation of some Medicinal Plants of Meghalaya” during the Special Summer School in Basic Sciences and Technology on the theme “Basic Sciences and Technology on Society” organized by UGC-MHRDC NEHU, Shillong on July 08, 2019.

Participated and made an Oral presentation in San Diego on the International conference “CRYO 2019”, The 56th Annual Meeting of the Society for Cryobiology held in San Diego, July 22-25, 2019 conducted by International Society for Low Temperature Biology and Medicine, Society for Cryobiology on the

topic “Cryopreservation: an approach for long-term storage of phyto-diversity of North-East India”.

#### **Publications**

##### **Research Papers**

##### ***Published in India***

Diengdoh, R. V., S. Kumaria, S., Das, M. C. (2020). In vitro seed storage of *Paphiopedilum villosum* Lindl., an endangered lady's slipper orchid. The NEHU J., XVIII (1):21-31

Hajong, S., Kumaria, S., Tandon, P. (2019). Synergistic effect of PPFD and mycorrhization for efficient in vitro propagation of *Dendrobium chrysanthum* Wall. ex Lindl. Int. J. Curr. Microbiol. Appl. Sci., 8(10): 1290-1308

Singh, N., Kumaria, S. (2019). Ex-situ multiplication of *Coelogyne ovalis* Lindl.: Nutrient optimization for asymbiotic seed germination and mass scale propagation of genetically stable plantlets. Int. J. Life Sci. Res., 7 (2): 503-512.

Singh, N., Kumaria, S. (2020). A combi National phytomolecular-mediated assessment in micropropagated plantlets of *Coelogyne ovalis* Lindl. A horticultural and medicinal orchid. Proc. Natl. Acad. Sci., India, Sect. B. Biol. Sci., 90 (2):455-466

##### **Published Abroad**

Barman, D., Dkhar, M. S. (2020). Endophytic microorganisms: colonization, plant-microbe interaction, diversity and their Bioprospecting. Res. J. Biotechnol., 15(7): 151-179.

Barman, D., Dkhar, M. S. (2020). Seasonal variation influences endophytic actinobacterial communities

of medicinal plants from tropical deciduous forest of Meghalaya and characterization of their plant growth-promoting potentials. *Curr. Microbiol.*, 77:1689–1698. <https://doi.org/10.1007/s00284-020-01988-3>.

Borah, D., Singh, R. K., Mipun, P., N, D., Kumar, Y. (2020). Rediscovery of *Pseudobartsia glandulosa* (Orobanchaceae), a little known, critically endangered herb after 179 years from India, and first report from Eastern Himalayan state Arunachal Pradesh. *Phytotaxa*, 451(1): 097–102.

Chaudhari, A. K., Singh, A., Singh, V. K. A., Dwivedy, K., Das, S., Ramsdam, M. Y., Dkhar, M. S., Kayang, H., Dubey, N. K. (2020). Assessment of chitosan biopolymer encapsulated  $\alpha$ -Terpineol against fungal, aflatoxin B1 (AFB1) and free radicals mediated deterioration of stored maize and possible mode of action. *Food Chem.*, <https://doi.org/10.1016/j.foodchem.2019.126010>.

Chettry, U., Chrungoo, N. K. (2020). A multifocal approach towards understanding the complexities of carotenoid biosynthesis and accumulation in rice grains. *Brief. Funct. Genomics*, doi:10.1093/bfpg/elaa007.

Chrungoo, N. K., Devi, R. K. J., Goel, S., Das, K. (2019). Deciphering species relationships and evolution in *Chenopodium* through sequence variations in nuclear internal transcribed regions and amplified fragment-length polymorphism in nuclear DNA. *Jour. Genetics*, 98:37. DOI: 10.1007/s12041-019-1079-0.

Dohtdong, L., Chrungoo, N. K. (2019).

Functional characterization of an endosperm specific promoter p1062 from common buckwheat (*Fagopyrum esculentum* Moench) for driving tissue specific gene expression. *Folia Biologica et Geologica*, 61/1: 45-54.

John, R. I. W., Mipun, P., Borah, D., Lod, Y., Kumar, Y. (2019). *Strobilanthes wangensis* (Acanthaceae), a new species from the East Himalayas. *Kew Bull.*, 74:41.

Mipun, P., Adhikari, D., Bora, A., Bhat, N. A., Kumar, Y. (2019). Species distribution modelling of *Buceamollis wall. ex kurz* in Northeast India for its conservation. *Plant Arch.*, 19(2):3191-319.

Mipun, P., Bhat, N. A., Borah, D., Kumar, Y. (2019). Non-timber forest products and their contribution to healthcare and livelihood security among the Karbi tribe in Northeast India. *Ecol. Process.*, 8:41.

Mipun, P., Borah, D., Bhat, N. A., Kumar, Y. (2019). Checklist for phytodiversity of east Karbi Anglong wildlife sanctuary, Assam, Northeast India: Part I. *Ambient Sci.*, 06(2).

Momang, T., Mipun, P., Borah, D. (2020). *Rhynchoetichum parviflorum* Blume (Gesneriaceae): a new record to mainland India. *J. Threat. Taxa*, 12(1): 15208–15211.

Narah, D., Bhat, N. A., Mipun, P., Kumar, Y. (2020). *Zingiber flavofusiforme* (Zingiberaceae), a new record for the Flora of India. *J. Jap. Bot.*, 95 (2): 102-105.

Nongkynrih, C. J., Mipun, P., Kumar, Y. (2019). Bamboos: Diversity and its utilization in Meghalaya, Northeast

India. *Plant Arch.*, 19(2): 3106-3110.

Pathaw, N., Gurung, A. B., Chrungoo, N. K., Bhattacharjee, A., Saikat, R., Subhra, A.M.A., Sharma, S. K. (2020). In silico molecular modelling, structural dynamics simulation and characterization of antifungal nature of  $\beta$ -glucosidase enzyme from *Sechium edule*. *J. Biomol. Struct. Dyn.*, DOI:10.1080/07391102.2020.1791956.

Sarma, N., Shankar, U., Mao, A. A. (2019). An assessment of the invasive flora of Amchang wildlife sanctuary, Kamrup, Assam. *Pleione*, 13(2): 326-335. doi:10.26679/Pleione.13.2.2019.326-335.

Sarma, P., Dkhar, M. S., Kayang, H., Kumar, M., Dubey, N. K., Raghuwanshi, R. (2020). Diversity of endophytic fungi associated with *Hedychium spicatum* Ham ex Sm. and their antifungal activity against the phytopathogen *Alternaria solani*. *Stud. Fungi*. 5(1), 84–93. Doi 10.5943/sif/5/1/8.

Singh, N., Kumaria, S. (2020). Deciphering the role of stress elicitors on the differential modulation of chalcone synthase gene and subsequent production of secondary metabolites in micropropagated *Coelogyne ovalis* Lindl., a therapeutically important

medicinal orchid. *S. Afr. J. Bot.* <https://doi.org/10.1016/j.sajb.2020.06.019>

Srivastava, G., Tao, S., Mehrotra, R. C., Kumari, P., Shankar, U. (2019). Bamboo fossils from Oligo–Pliocene sediments of northeast India with implications on their evolutionary ecology and biogeography in Asia. *Rev. Palaeobot. Palyno.*, 262: 17-27. (<https://doi.org/10.1016/j.revpalbo.2018.12.002>).

Shankar, U. (2019). Phytosociology of stratification in a lowland tropical rainforest occurring north of the tropic of cancer in Meghalaya, India. *Plant Divers.*, 41: 285-299. (<https://doi.org/10.1016/j.pld.2019.08.001>).

### **Books/Book Chapters/Proceedings**

Mipun, P., Kumar, Y. (2020). Quantitative ethnobotanical study of the medicinal plant *Geophilarepens* (L.) I.M. Johnst. (Rubiaceae) used by the Karbi indigenous group in Assam, India, New India Publishing Agency, India.

Bhat, N. A., Mipun, P., Kumar, Y. (2020). Ethnobotanical survey of wild edible plants used by the Indigenous people of East Khasi Hills District of Meghalaya, North East India, New India Publishing Agency, India.

### Funds Received from Agencies including NEHU/UGC

Sl.No.	Funding Agency	Amount (Rs. in lakhs)
1.	NEHU	20.00
2.	DBT	58.72
	Total	78.72

### Research Projects

#### Ongoing

Title of Project	PI/Co-PI	Funding Agency	Amount (Rs.)
Chemical Ecology of the North East Region (NER) of India: A Collaborative Programmeme Linking NER and Bangalore Researchers	Prof. N. K. Chrungoo (PI)	DBT-NER/ Agri/24/2013	-
Biotech Hub	Prof. N. K. Chrungoo (Co-ordinator)	DBT, New Delhi	30.25 lakhs
Fungal and mycotoxin contamination of stored maize ( <i>Zea mays</i> Linn) samples in Meghalaya and antimicrobial and mycotoxin inhibitory efficacy of some biocontrol agents and essential oils of traditionally used medicinal plants of the region".	Prof. M. S. Dkhar (PI), H. Kayang (Co-I) Collaborators: Prof. N. K. Dubey (PI); Dr. Bhanu Prakash (Co-I), BHU	DBT, New Delhi (NER - BPMC), Govt of India, New Delhi Twinning Project Sanction No. BT/01/17/NE/TAX, dated 29.03.2018 (Total 75.542 lakhs)	5.92 lakhs
A Multi-institutional Networking Project entitled "Bioresource and sustainable livelihoods in North East India: Component 4: Biodiversity based livelihoods Sub Project: 4- Development of captive farming, sustainable harvest technologies, integration with plantation programmes and agroforestry, and value addition of targeted bioresources <i>Zanthoxylum</i> and <i>Gaultheria</i> species	Prof. H. Kayang (PI) Dr. P. Ramanujam (Co-PI)	DBT, New Delhi	Rs. 22,55, 857/-

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 programme for the NE	Prof. Suman Kumaria (PI) Dr. Meera Chetri Das (Co-PI) Collaborators: Prof. Manu Agarwal Univ. of Delhi, North Campus (PI) Prof. S. Goel, Univ. of Delhi (Co-PI)	Department of Biotechnology, (NER-BPMC), Govt. of India, New Delhi (Sanction No. BT/PR16385/NER/95/124/2015 Dated: 09/11/2016)	-
Non-Timber forest products used by local tribes in Meghalaya: database, distribution and capacity building.	Prof. Uma Shankar (PI)	GBPI/IERP (MoEFCC), Almora, vide letter no. GBPI/IERP/17-18/55/ dated 26.03.2018	Rs. 13.3628 Lakh
A Multi-institutional Networking Project entitled "Invasive alien plants in Himalayas: status, ecological impact and management"	Prof. Uma Shankar (PI)	NMHS, GBPNHESD, Almora (Rs. 468.39 Lakh vide letter no. NMHS-2017/LG-01/475 dated 22.12.2017, vide letter no. NMHS-2017/LG-01/475 dated 22.12.2017; (Rs. 64.17 Lakhs)	Rs. 468.39 lakhs
A Multi-institutional Networking Project entitled "Bioresource and sustainable livelihoods in North East India: Component 1: Inventories and mapping of bioresources in North East India, Sub-project 10: Quantitative assessment and mapping of plant diversity and biological resources in Meghalaya"	Prof. Uma Shankar (PI)	DBT, New Delhi, vide letter no. BT/01/17/NE/TAX dated 29.03.2018; (Rs. 22.016 Lakhs)	Rs. 78.49 lakh

A Multi-institutional Networking Project entitled “Bioresource and sustainable livelihoods in North East India: Component 1: Inventories and mapping of bioresources in North East India, Sub-project 17: Quantitative assessment and mapping of the diversity of Cicadas of North East India”	Prof. Uma Shankar (Co-I) Dr. S. R. Hajong (PI)	DBT, New Delhi, vide letter no. BT/01/17/NE/TAX dated 29.03.2018; (Rs. 19.616 Lakhs)	Rs. 69.74 lakh
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### Academic Collaborations

#### Prof. N. K. Chrungoo

Collaborated with (i) Prof. Ashwani Pareek of JNU, Prof. Manoj Dhar of Jammu University, Dr. Mukesh Jain of JNU on network programme on saffron, (ii) Prof. Melliang Zhou of Institute of Crop Sciences, Chinese Academy of Sciences, Beijing on Global Tertiary Buckwheat Genome Project.

Prof. N. K. Chrungoo and Prof. S. K. Barik

Collaborated with Bangalore researchers on the project Chemical Ecology of the Northeast Region of India: A Collaborative Programme Linking NER and Bangalore Researchers.

#### Prof. M. S. Dkhar and Prof. H. Kayang

Prof. M.S. Dkhar and Prof. H. Kayang collaborated with Prof. N. K. Dubey and Dr. Bhanu Prakash, BHU, Varanasi, on the project 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 under the DBT programme for the NE.

#### Prof. H. Kayang and Dr. P. Ramanujam

Collaborated with Dr. R. Ganesan (ATREE, Bangalore) on a multi-institutional networking project, entitled Bioresource and Sustainable Livelihoods in North-East India: Component 4: Biodiversity based livelihoods Sub Project: 4- Development of captive farming, sustainable harvest technologies, integration with plantation programmes and agroforestry, and value addition of targeted bioresources *Zanthoxylum* and *Gaultheria* species.

#### Prof. Uma Shankar

Collaborated with (i) Prof. R. K. Kohli, Central University of Punjab, Bathinda on a multi-institutional networking project entitled “Invasive alien plants in Himalayas: status, ecological impact and management”, (ii) Dr. R. Ganesan (ATREE, Bangalore) on a multi-institutional networking project entitled Bioresource and Sustainable Livelihoods in North-East India: Component 1: Inventories and Mapping of Bioresources in North-East India, Sub-Project 10: Quantitative Assessment and Mapping of Plant Diversity and Biological Resources in Meghalaya.

**Prof. Suman Kumaria**

Collaborated with Prof. Manu Aggarwal and Dr. S. Goel, University of Delhi, North Campus, Delhi. Project titled '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 programme for the NE'.

**Honours/Awards/Recognitions****Prof. N. K. Chrungoo**

Member of the (i) Editorial Board of the *Fagopyrum*, the official journal of the International Buckwheat Researchers Association. (ii) Advisory Committee (UGC nominee), UGC-SAP in Botany, Annamalai University. Annamalai Nagar, Tamil Nadu, (iii) Board of Post-Graduate Studies in Botany, Cotton University, Guwahati, (iv) Advisory Committee DRS-III, Department of Botany, Annamalai University, (v) DBT Steering Committee on Biotechnology Based Programme for Societal Development, (vi) Technical Expert Committee on Energy, Environment and Biodiversity Conservation for NER, Department. of Biotechnology, Govt. of, India, (vii) DBT Committee for Rasmalingasamy Fellowship Programme, (viii) DBT Apex committee on Basic Plant Biology Agriculture and Frontier Areas.

Elected President of the International Buckwheat Research Association (2019-2022).

Co-Chaired the Steering Committee on Biotechnology Based Programme for Societal Development, Department. of Biotechnology, Govt. of, India.

**Prof. M. S. Dkhar**

Member of the Governing body of Sankardev College, Shillong

**Prof. Uma Shankar**

Member of the (i) Board of Studies, Tripura University, Suryamaninagar, Tripura, (ii) Research Advisory Committee, Birbal Sahni Institute of Palaeosciences (BSIP), Lucknow, (iii) AICOPTAX, MoEFCC, New Delhi, (iv) Governing Body, Buddha Bhanu Saraswati College, Upper Mawprem, Shillong, Meghalaya, (v) Board of Studies, Indira Gandhi National Tribal University, Amarkantak.

**Prof. H. Kayang**

Convener and Chairman of the Board of Studies in Home Science w.e.f. 2018 – 2021.

Member of the (i) Examination Consultative Committee w.e.f. 2018, (ii) Institutional Bio-Safety Committee (IBSC) w. e. f. June, 2018, (iii) Programme Advisory Committee (PAC) on Organismal and Evolutionary Biology (OEB) under the Life Sciences Programme of the Science and Engineering Research Board (SERB, Department of Science and Technology (DST), New Delhi for a period of three years w.e.f. July 05, .2019, (iv) Expert Committee for Identification of Critical Wildlife Habitats in Nongkhyllam Wildlife Sanctuary, Government of Meghalaya, Forest And Environment Department, (v) Board of Studies and member of Board of Management (BOM) of Deen Dayal Upadhyaya Community College for Skill Development, Wahiajer, West Jaintia Hills for a period of two years w.e.f. June 17,



2020, (vi) Board of Studies in North Eastern Institute of Ayurveda and Homeopathy (NEIAH) for a period of three years w.e.f. June 06, 2020.

**Prof. Suman Kumaria**

Member of the Governing body of Women's College, Shillong.

Councillor of the Journal of the Orchid Society of India (TOSI).

***Other Activities***

**Prof. N. K. Chrungoo**

Reviewer: BMC Genomics, BMC Plant Biology, Plant Science, Scientific Reports, Agricultural Research, Plant and Cell Physiology, Biological Journal of the Linnean Society.

**Prof. Uma Shankar**

Presented a paper on "Evolution and diversity of orchids in the Himalaya" in the International meeting on "From sea level to world roof: uplift history and biological evolution of the Himalaya", held at the Institute of Botany, Chinese Academy of Sciences, Beijing during July 08-14, 2019.

Participated in the (i) two-day Workshop on massive Open Online Courses (MOOCs) on the theme "Adoption, Promotion and Development of MOOCs through SWAYAM platform", held during May 28-

29, 2019, organized by NEHU, Shillong, (ii) AICTE Training and Learning (ATAL) Academy FDP on "Artificial Intelligence", held at NEHU, Shillong during October 21-25, 2019., (iii) AICTE Training and Learning (ATAL) Academy FDP on "3d Printing & Design", held at NEHU, Shillong, during March 02-06, 2020

**Prof. Suman Kumaria**

Participated in a two-day Workshop on Massive Open Online Courses (MOOCs) on the theme "Adoption, Promotion and Development of MOOCs through SWAYAM platform" organized by NEHU, Shillong during May 28-29, 2019.

Co-chaired the technical session on "Germplasm Resources, Evolutionary and Developmental Biology" during the 14th International Symposium on Buckwheat on 'Diversifying Food Systems for Health and Nutritional Security' organized by NEHU, Shillong during September 03- 06, 2019.

Reviewer: Scientific Reports, The Journal of Horticultural Science & Biotechnology, BMC Plant Biology, Journal of Separation Science, Natural Product Research, Acta Physiologia Plantarum, Gene, Current Journal of Applied Science and Technology, Proceedings of the National Academy of Sciences, India Section B: Biological Sciences

## DEPARTMENT OF ZOOLOGY

**Head** : Prof. A. K. Yadav  
**Telephone** : 0364-2722301  
**E-mail** : hodzoo@nehu.ac.in

**Faculty: 13**

Designation	Name and Qualification	Specialization
<b>Professor</b>	Prof. B. B. P. Gupta, M.Sc. & Ph.D. (BHU)	Endocrinology and Reproductive Physiology
	Prof. S. B. Prasad, M.Sc. & Ph.D. (BHU)	Cell and Tumour Biology
	Prof. R. N. K. Hooroo, M.Sc. & Ph.D. (NEHU)	Developmental Biology
	Prof. N. Saha, M.Sc. & Ph.D. (NEHU)	Biochemical Adaptation and Metabolic Regulation
	Prof. (Late) S.N. Ramanujam *, M.Sc. (Bangalore Univ.), Ph.D. (NEHU)	Fish Biology
	Prof. A. K. Yadav, M.Sc. (Agra Univ.), Ph.D. (NEHU)	Parasitology and Ethnopharmacology
	Prof. B. Roy, M.Sc. (NBU), Ph.D. (NEHU)	Parasitology and Toxicology
	Prof. A. S. Dixit, M.Sc. (Gorakhpur Univ.), Ph.D. (BHU)	Endocrinology and Chronobiology
	Prof. B. Keshan, M.Sc. & Ph.D. (Calcutta Univ.)	Insect Endocrinology and Molecular Biology
<b>Associate Professor</b>	Dr. S. Ghosh, M.Sc. & Ph.D. (Calcutta Univ.)	Genetics
	Dr. S. R. Hajong, M.Sc. & Ph.D. (NEHU)	Insect Biodiversity and Entomology
<b>Assistant Professor</b>	Dr. S. Choudhury, M.Sc. & Ph.D. (NEHU)	Entomology
	Dr. B. Das, M.Sc. (Berhampur Univ.), Ph.D. (NEHU)	Biological Chemistry

\*Superannuated on September 30, 2019.

### **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 signalling 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 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 organised several national and regional seminars, symposia and workshops having direct regional and national relevance. Besides book(s)/book chapters, many research papers were published in reputed national and international journals. The Department offers the MSc and PhD Programmes. The Department has adopted the choice-based credits 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. Faculty members and research students of the 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 the 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 the 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 the MSc students to deliver talks 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: M.Sc. - 38, Ph.D. – 07**

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.Sc.	09	29	-	26	02	10	28	10	38
Ph.D.	03	04	01	01	-	05	02	05	07

***Degrees Awarded***

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.Sc.	08	21	-	26	-	03	25	04	29
Ph.D.	04	02	-	03	-	03	05	01	06

***Students Awarded PhD Degree***

Name of Student	Title of Thesis	Name of Supervisor
Dr. Shngainlang Khongsti	Whole genome DNA methylation profiling of oral cancer patients from Meghalaya.	Dr. S. Ghosh
Dr. Philayung Z.A.S	Studies on the diversity of helminth parasites in edible fishes of Manipur.	Prof. B. Roy
Dr. Sanborlang Byrsat	Expression of gnrh-I and gnih genes and their roles in photoperiodic control of seasonal breeding in tree sparrow, <i>Passer montanus</i> L.	Prof. A. S. Dixit
Dr. Suman Kumari	Effects of hyper-osmotic and hyper-ammonia stress on induction of genes for ornithine-urea cycle, amino acid metabolism-related enzymes and nitric oxide synthase in air-breathing catfish, <i>Clarias magur</i> (Hamilton).	Prof. N. Saha
Dr. Saurav Saha	Studies on the role of photoperiod and temperature in entrainment of circadian rhythm of expression of clock genes in photoreceptive pineal organ of catfish, <i>Clarias gariepinus</i> (Burchell)	Prof. B. B. P. Gupta
Dr. Amar Deep Soren	Studies on Anthelmintic Efficacy and Toxicity of some Traditionally Used Plants in Albino Rat.	Prof. A. K. Yadav

## **Placement of Students**

Dr. Bodhisattwa Banerjee has been placed as a Post-doctoral Fellow at the Azrieli Faculty of Medicine, Bar-Ilan University, Israel.

## **Research Fellowships**

**UGC Non-Net** 34

**National Fellowship for Higher Education**  
17

## **Courses Conducted**

**Postgraduate: M.Sc.**

### ***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 Papers: Biochemical Adaptation and Metabolic Regulation; Developmental Biology; Endocrinology and Reproductive Physiology; Fish Biology; Helminth Parasitology; Insect Physiology; Molecular Cell Biology and Immunology.

## **Ph.D. 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***

The Department organized the (i) “National Symposium of Recent trends in Zoological Sciences (NSRTZS 2020)” during February 28-29, 2020, and (ii) “Refresher course in Zoology” during March 28 - April, 7, 2019. (Co-ordinator: Prof. A.S. Dixit).

### ***Attended***

#### **Prof. B. B. P. Gupta**

Delivered a keynote address in the Author Workshop on Scholarly Writing and Intellectual Ethics, jointly organized by Elsevier and NEHU, Shillong on August 20, 2019.

Chaired a session and acted as Convener in the “National Symposium on Recent Trends in Zoological Sciences (NSRTZS 2020)” held in the Department of Zoology, NEHU, Shillong during February 28-29, 2020.

#### **Prof. S. B. Prasad**

Presented papers on (i) “Studies on the antitumor and antimutagenic activity of rutin-cisplatin combination in mice bearing ascites Dalton’s lymphoma” in the International conference on “Chemical ecology, environment and human health: Emerging frontiers and synthesis (ICCEEHH 2019)” organized by Department of Zoology, Sikkim University during August 09-10, 2019, (ii) “The antitumor and antimutagenic effects of rutin in mice bearing ascites Dalton’s lymphoma” at the 14<sup>th</sup> International Symposium on Buckwheat “Diversifying food systems for health and nutritional security” held at NEHU, Shillong, India

during September 03-06, 2019.

**Prof. R. N. K. Hooroo**

Presented a paper on “Studies on the effect of chlorpyrifos on hatching and morphology of anuran amphibian: *Polypedatere aiensis* and *Duttaphrynus melanostictus* using scanning electron microscopy” at the 3rd World Chemistry Conference and Exhibition at Brussels, Belgium during June 13-15, 2019.

Chaired a session at the “National Symposium on Recent Trends in Zoological Sciences (NSRTZS 2020)” held at the Department of Zoology, NEHU, Shillong on February 28 – 29, 2020.

**Prof. N. Saha**

Delivered a keynote lecture in the “3rd International Symposium on Genomics in Aquaculture” organized by the ICAR-CIFA, Bhubaneswar during January 21-23, 2020.

**Prof. A. K. Yadav**

Chaired a session in the “National Symposium on Recent Trends in Zoological Sciences (NSRTZS 2020)”, organized by the Department of Zoology, NEHU, Shillong during February 28 - 29, 2020.

**Prof. A. S. Dixit**

Delivered an invited talk and chaired a session in the National Symposium on Avian Biology held at IISER, Tirupati during December 07 - 10, 2019.

Chaired a session in the “National Symposium on Recent Trends in Zoological Sciences (NSRTZS 2020)” held at the Department of Zoology, NEHU, Shillong during February 28-29, 2020.

**Prof. B. Keshan**

Chaired two scientific sessions in the

“National Symposium on Recent Trends in Zoological Sciences (NSRTZS 2020)”, Department of Zoology NEHU, Shillong during February 28-29, 2020.

**Dr. S. R. Hajong**

Chaired a session and acted as Organising Secretary in the “National Symposium on Recent Trends in Zoological Sciences (NSRTZS 2020)” organized by the Department of Zoology, NEHU, Shillong during February 28-29, 2020

**Dr. B. Das**

Attended (i) a one-day North East Regional Training Programme for Administrators of Plagiarism Detection Software (PDS) URKUND held at NEHU, Shillong, jointly organized by Central Library, NEHU, and INFLIBNET, Gandhinagar, under the aegis of the MHRD, Govt. of India on August 23, 2019, (ii) the “Training Workshop on Leica Confocal Laser Scanning Microscope” held at Central Instrumentation Facility, School of Life Sciences, NEHU, Shillong, jointly organized by School of Life Sciences, NEHU, and Leica Microsystems, India during April 18, 2019, (iii) the “Workshop on MOOC’s, e-content Development and Open Educational Resources” held at the UGC-HRDC, NEHU, Shillong sponsored by UGC, New Delhi, during March 11 - 16, 2019.

**Publications**

**Research Papers**

***Published in India***

Prasad, R., Prasad, S. B. (2019). A review on the chemistry and biological properties of rutin, a promising nutraceutical agent. *Asian J. Pharm. Pharmacol.*, 5(S1): 1-20.

Prasad, R., Banerjee, S., Kharshiing,

C. E., Bhattacharjee, A., Prasad, S.B. (2019). Rutin-mediated apoptosis and glutathione changes in ascites Dalton's lymphoma cells: in silico analysis of rutin interactions with some anti-apoptotic and glutathione related proteins. *Indian J. Pharm Sci.*, 81(4):720-728.

Sangma, G. T., Borah, M.P., Turnia, I., Prasad S.B. (2019). Evaluation of smokeless tobaccos-induced hepatotoxicity and nephrotoxicity in swiss albino mice. *Toxicol. Int.*, 25(4): 240–252.

Prasad, S. B., Turnia, I. (2019). Studies on the effect of propolis from Meghalaya, India on the biochemical and ultrastructural changes in murine ascites Dalton's lymphoma. *J. Bioresources*, 6(2): 44-55.

Shangpliang, P. W., Hooroo, R.N.K., Dutta, S.K. (2020). Unique breeding activity and oviposition in Annandale's high-altitude tree frog, *Kurixalus nasos* (Annandale, 1912) in Meghalaya, North East India. *Curr. Sci.*, 118 (3): 467-472.

Dey, P., Roy, B. (2020). Effect of *Lysimachia amara* Wall. Ex Duby and its n-butanol fraction on glycogen content and some energy related enzymes in the cestode, *Raillietina echinobothrida*. *Proc. Zool. Soc.*, 73: 255-264.

Khongsti, S., Shunyu, N. B., Ghosh, S. (2019). Promoter-associated DNA methylation and expression profiling of FLT3, EPB41L3 and SFN genes in patients with OSCC in the Khasi and Jaintia population of Meghalaya, India. *Indian J. Med. Res.*, 150: 584-591.

## Published Abroad

Saha, S., Singh, K. M., Gupta, B. B. P. (2019). Melatonin synthesis and clock

gene regulation in the pineal organ of teleost fish compared to mammals: Similarities and differences. *Gen. Comp. Endocrinol.*, 279: 27-34.

Saha, S., Singh, K. M., Gupta, B. B. P. (2020). Circadian rhythm of expression of core clock genes in the photosensitive pineal organ of catfish, *Clarias gariepinus* under different photoperiodic regimes. *Biol. Rhythm Res.*, DOI: 10.1080/09291016.2020.1728922.

Premabati, Y., Singh, K. M., Gupta, B. B. P. (2020). Opposite effects of photoperiod and temperature on circadian rhythms of pineal arylalkylamine N-acetyltransferase (AANAT) activity and circulating levels of thyroid hormones in airbreathing catfish, *Clarias gariepinus*. *Biol. Rhythm Res.*, DOI:10.1080/09291016.2020.1734370.

Banerjee, B., Koner, D., Hasan, R., Bhattacharya, S., Saha, N. (2019). Transcriptome analysis reveals novel insights in air-breathing magur catfish (*Clarias magur*) in response to high environmental ammonia. *Gene*, 703: 35-49.

Kumari, S., Choudhury, M.G., Saha, N. (2019). Hyper-ammonia stress causes induction of inducible nitric oxide synthase gene and more production of nitric oxide in air-breathing magur catfish, *Clarias magur* (Hamilton). *Fish Physiol. Biochem.*, 45 (3), 907-920.

Patra, S. K., Sen, B., Sheet, S. K. Banerjee, B. Saha, N. Khatua, S. (2019). Single molecular dual analyte thio-urea based probes for colorimetric Hg<sup>2+</sup> and fluorometric AcO<sup>-</sup>-detection and its' application in bioimaging. *Inorganica*



Chim. Acta, 492: 119-130.

Sen, B., Sheet, S. K., Patra, S. K., Koner, D., Saha, N., Khatua, S. (2019). Highly selective detection of hypochlorous acid by a bis-heteroleptic Ru (II) complex of pyridyl-1,2,3-triazole ligand via C(sp<sup>2</sup>)-H hydroxylation. *Inorg. Chem.*, 58: 9982-9991.

Banerjee, B., Koner, D., Hasan R., Saha, N. (2020). Molecular characterization and ornithine-urea cycle genes expression in air-breathing magur catfish (*Clarias magur*) during exposure to high external ammonia. *Genomics*, 112: 2247-2260.

Dutta, A., Chhetri, B., Nongrum, R., Kharmawlong, G.K., Yadav, A.K., Nongkhaw, R. (2020). Ultrasound-assisted synthesis of nitrogen and oxygen containing heterocycles using fluorinated graphene oxide as catalyst: Evaluation of their anthelmintic activities. *ChemistrySelect*, <https://doi.org/10.1002/slct.202001442>.

Basumatary, G., Dhar, E.D., Das, D., Deka, R. C., Yadav, A.K., Bez, G. (2020). Coumarin-based trisubstituted methanes as potent anthelmintic: synthesis, molecular docking and in vitro efficacy. *J. Chem. Sci.*, 132, Article No. 40. <https://doi.org/10.1007/s12039-020-1737-z>

Soren, A. D., Yadav, A.K., Dhar, E.D. (2019). Toxological evaluation of *Cyperus compressus* Linn., a traditionally used anthelmintic plant in India. *Orient. Pharm. Exp. Med.*, <https://doi.org/10.1007/s13596-019-00413-w>.

Kharmawlong, G. K., Nongrum, R., Chhetri, B., Rani, J.W.S., Rahman, N. Yadav, A.K., Nongkhaw, R. (2019). Green and efficient one-pot synthesis

of 2,3-dihydroquinazolin-4(1H)-ones and their anthelmintic studies. *Synth. Commun.*, 49(20): 2683-2695.

Dixit, A. S., Singh, N.S. (2020). Circadian versus circannual rhythm in the photoperiodic programming of seasonal responses in European tree sparrow (*Passer montanus*). *Photochem. Photobiol. Sci.*, 19(3): 371-381.

Kh, S. D., Keshan, B. (2020). Larval feeding status regulates the transcript levels of genes encoding PTTH and allatregulatory peptides in silkworm *Bombyx mori*. *Insect Sci.*, 1-12, <https://doi.org/10.1111/1744-7917.12802>.

Malakar, K., Mihsill, K.R.R., Keshan, B. (2019). Pseudonemophas versteegitrehalose-6-phosphate synthase mRNA, partial cds. GenBank Accession Number- MK955883.

Khongsti, S., Lamare, F. A., Shunyub, N. B., Ghosh, S., Maitra, A., Ghosh, S. (2018). Whole genome DNA methylation profiling of oral cancer in ethnic population of Meghalaya, North East India reveals novel genes. *Genomics*, 110:112-123

Marthong, L., Ghosh, S., Palodhi, A., Imran, S.M., Shunyu, N. B., Maitra, A., Ghosh, S. (2020). Identification of novel biomarkers of oropharyngeal cancer prevalent in North-Eastern states of India by whole genome DNA methylation and gene expression profiling. *Frontiers in Genetics-Epigenomics and Epigenetics*. (Accepted)

Kharbispn, B., Hajong, S.R. (2019). New records of two genera of Mymaridae (Hymenoptera: Chalcidoidea) from Northeast India. *Halteres*, 10: 75-79, doi: 10.5281/zenodo.3594370.

Pasupuleti, B.G., Khongsti, K., Das, B., Bez, G. (2020). 1,2,3-Triazole tethered 1,2,4-trioxanes: Studies on their synthesis and effect on osteopontin expression in MDA-MB-435 breast cancer cells. Eur. J. Med. Chem., 186:111908 DOI 10.1016/j.ejmech.2019.111908.

Tariang, K., Ramanujam, S.N., Das, B. (2019). Effect of arsenic (As) and lead (Pb) on glycogen content and on the activities of selected enzymes involved in carbohydrate metabolism in freshwater

catfish, *Heteropneustes fossilis*. Int. Aquat. Res., 11:253-266 DOI: 10.1007/s40071-019-00234-2.

### Books/Book Chapters/Proceedings

Roy, B., Bharti, R. R. (2020). *Millettia pachycarpa* Benth: A herbal medicinal plant of Southeast Asia. In: Advances in Pharmaceutical Biotechnology (Recent Progress and Future Application). J. K. Patra, A. C. Shukla and G. Das (Eds.). Springer, Singapore, Chapter 15, p. 175-192.

### Research Projects

#### Ongoing

Title of Project	PI/Co-PI	Funding Agency	Amount (Rs. in lakhs)
DSA Phase-III (Thrust Area: Faunal Diversity and Ecophysiology)	Co-ordinator	UGC, New Delhi	119.00
"Influence of altitudinal variations on breeding activity of anurans prevailing in the Hilly terrain of Meghalaya"	Prof. (Mrs). R.N.K.Hooroo	DST-SERB, New Delhi	38.86
To elucidate the unique biochemical adaptational strategies that allow two air-breathing catfishes ( <i>Clarias batrachus</i> and <i>Heteropneustes fossilis</i> ) to survive in ammonia enriched toxic waste"	Prof. N. Saha	NASF-ICAR	93.2
Molecular adaptation during exposure to zinc oxide and titanium dioxide nanoparticles with special reference to oxidative stress, nitric oxide production, heat shock protein expression and induction of apoptosis in air-breathing catfish, <i>Clarias batrachus</i>	Prof. N. Saha	DST-SERB, New Delhi	77.27

Quantitative assessment and mapping of cicadas from northeast India	Dr.S.R.Hajong	DBT	69.70
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### **Completed**

Title of Project	PI/Co-PI	Funding Agency	Amount (Rs. in lakhs)
Effect of Climate Change on Breeding Strategy of Songbirds	Prof. A. S. Dixit	Department of Biotechnology, New Delhi	62.01
Identification of Biomarkers of oropharyngeal cancer prevalent in North-Eastern states of India by whole genome Methylation and Expression profiling	Dr. Srimoyee Ghosh (PI), Dr. B.Syunyu (Co-PI), Dr. Arindam Maitra (Co-PI), Dr. Sharmila Sengupta (Co-PI)	DBT (NER) GOI	85.20
Identification and development of DNA methylation biomarkers for stomach cancers prevalent in Mizoram, India	Dr. Srimoyee Ghosh (PI), Dr.Saia Chenkual, (Co-PI)	DST, GOI	46.54
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

### **Academic Collaborations**

#### **Prof. R.N.K. Hooroo**

Collaborated with (i) Prof. S. K. Dutta, Nature Environment and Wildlife Society, Angul, Odisha, India, (ii) Prof. S. Dey, SAIF, NEHU, Shillong, (iii) Prof. Indraneil Das, Institute of Biodiversity and Environmental Conservation, University Malaysia, Sarawak, Malaysia.

#### **Prof. N. Saha**

Collaborated with (i) Prof. S. Bhattacharya, FNA, FASc, FNASc, Emeritus Professor, Department of Zoology, Visva-Bharati, Santiniketan, (ii) Dr. H. K. Barman, Principal Scientist Fish Genetics & Biotechnology

Division, ICAR-CIFA, Bhubaneswar (iii) Dr. V. Mohindra, Principal Scientist, ICAR-NBFGR, Lucknow.

#### **Prof. A. K. Yadav**

Collaborated with (i) Prof. G. Bez, Department of Chemistry: Studies on anthelmintic efficacy and potential toxicity of some selected coumarin derivatives. Co-authored publication and Joint Ph.D. Supervisor, (ii) Dr. R. L. Nongkhaw, Department of Chemistry: Synthesis of some quinazoline derivatives and evaluation of anthelmintic efficacy in rodents. Co-authored publication and Joint Ph.D. Supervisor, (iii) Prof. Andreas-Schmidt Rhaesa, University of Hamburg, Germany

on Biodiversity studies on biodiversity of Nematomorpha in Northeast India: Co-authored six publications.

#### **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, (v) Prof. Sanjay Bhardwaj, Chaudhary Charan Singh University, Meerut, (vi) Dr. Sushindrajeet Singh, Cotton University, Guwahati, (vii) Prof. Kazuyoshi Tsutsui, Laboratory of Brain Science, Faculty of Integrated Arts and Sciences, Hiroshima University Higashi-Hiroshima, Japan.

#### **Dr. S. Ghosh**

Collaborated with (i) Dr. Arindam Maitra, National Institute of Biomedical Genomics (NIBMG), Kalyani, W. Bengal, (ii) Dr. Neizekhotuo Brian Shunyu of (NEIGRIHMS), (iii) Dr. Saia Chenkual, Civil Hospital, Aizawl, Mizoram.

#### **Dr. S. R. Hajong**

Collaborated with (i) Prof. Hambok Syiemlieh, Department of Geography, NEHU, Shillong.

#### **Dr. B. Das**

Collaborated with (i) Prof. K. Satyamoorthy, Director, MLSC, Manipal University, Manipal, (ii) Prof. S. Mishra, Scientist-E, ILS, Bhubaneswar, Odisha, (iii) Dr. Todd Holyoak, Associate Professor, Department of Biology, University of Waterloo, 200 University Avenue West Waterloo, ON N2L 3G1, Canada

### **Honours/Awards/Recognitions**

#### **Prof. N. Saha**

Member of the (i) PAC, DST-SERB Animal Science Group, New Delhi (2018- 2021), (ii) Task Force, DST-SERB Empowerment and Equity Opportunities for Excellence in Science Committee (2018-2021), (iii) Research Advisory Committee, ICAR-National Bureau of Fish Genetic Resources, Lucknow.

#### **Prof. A. K. Yadav**

Member of the (i) Editorial Board, Journal of Parasitic Diseases (Springer), (ii) Technical Expert Committee for NER Medical Biotechnology, DBT, Ministry of Science & Technology, Govt. of India (2018-2019).

Academic Editor of the PLOS ONE.

Associate Editor, BMC Complementary Medicine & Therapies (Springer Nature).

LEAP Fellow of the UGC-MHRD, Govt. of India, Banaras Hindu University, Varanasi.

#### **Prof. A. S. Dixit**

Member of the (i) International Ornithological Society, (ii) International Society for Chronobiology.

Elected as the (i) Vice-President of Society of Avian Biologists in India from April 1, 2019 to March 31, 2021, (ii) EC Member of the Indian Society for Chronobiology.

#### **Dr. S. R. Hajong**

Member of the Expert Committee for identification of Critical Wildlife Habitats in National Parks and Wildlife sanctuaries in the state of Meghalaya by Deputy Conservator of Forests, Government of Meghalaya.

### ***Other Activities***

#### **Prof. B. B. P. Gupta**

Acted as the Member of the Selection Committee for Summer Research Fellowship (2019-2020), Indian Academies of Sciences.

#### **Prof. N. Saha**

Member of the BPGS, Department of Zoology, Sikkim University, Gangtok and BOS, Department of Zoology, Tripura University, Agartala.

Reviewers: Plos One, Frontiers in Molecular Biology, Ecotoxicology and Environmental Safety, Aquatic Toxicology, Aquaculture, Comparative Biochemistry and Physiology, Journal of Comparative Physiology, Biology Letters, Chemosphere, Science of the Total Environment,

#### **Prof. A. K. Yadav**

Editorial Advisory Member of the Humanitis Medicine, South Korea.

Life Member of the Indian Society for Parasitology

Fellow of the Zoological Society (FZS).

Member-Secretary of the Institutional Ethics Committee (Animals Models), NEHU.

**Reviewer** : Journal of Parasitic Diseases (Springer).

#### **Prof. B. Roy**

Reviewer: Veterinary Parasitology, Elsevier, Journal of Parasitic Diseases, Springer

#### **Prof. A. S. Dixit**

**Reviewer** : (i) J. Exp. Biol., Ind. J. Exp. Biol., Chronobiol. Int., Photochem. & Photobiol. Sci., Comp. Biochem.

Physiol., Experimental Brain Research.

(ii) Research proposals, DST, New Delhi.

Examiner: Undergraduate, Post-graduate, Ph. D. and competitive examinations of own and other Indian Universities.

Appointed as selection committee member for the recruitment and promotion of Faculty in some Indian Universities.

Editorial Board member of “The NEHU Journal”.

#### **Prof. B. Keshan**

Participated in the (i) “Author’s Workshop on Scholarly Writing & Intellectual Ethics 2019” organized by NEHU Central Library in collaboration with Elsevier: a global information analytics, on August 20, 2019 at NEHU, Shillong, (ii) “One Day Regional Training Programme on Plagiarism Detection Software (PDS) - URKUND” under the aegis of MHRD, Government of India on August 23, 2019 at NEHU, Shillong

Life Member of the (i) Indian Science Congress Association, Kolkata, (ii) The Zoological Society, Kolkata

Reviewer: Insect Science (Wiley); Journal of Thermal Biology (Elsevier); Journal of Insect Science (Oxford Academic); Biological Trace Element Research (Springer).

#### **Dr. S. Ghosh**

**Reviewer** : Current Science

#### **Dr. S. R. Hajong**

Member of the expert committee, Department of Zoology, Kohima Science College, Nagaland.

**Reviewer** : Journal of Photochemistry and

Photobiology, Elsevier.

**Dr. B. Das**

Acted as a course Co-ordinator for Special Summer School in Basic Sciences and Technology held at UGC-HRDC, NEHU, Shillong during July 08 – 21, 2019.

Delivered lectures on (i) “Basics of Life” in Special Summer School in Basic Sciences and Technology (July 08 – 21, 2019) at UGC-HRDC, NEHU, Shillong on July

08, 2019, (ii) “Recent developments in analyses of macromolecules” in Refresher Course in Zoology, NEHU, Shillong on March 23, 2019

Reviewer: Biochemical Journal, Diabetes, Obesity and Metabolism, The Journal of Nutritional Biochemistry, Bioscience Reports, Comparative Biochemistry and Physiology Part B, Molecular and Biochemical Parasitology, Veterinary Parasitology, Journal of Parasitic Diseases, and Biochemistry and Biophysics Reports.

## VI

### SCHOOL OF PHYSICAL SCIENCES

**Dean** : Prof. R. H. D. Lyngdoh (up to February 02, 2020)  
Prof. K. Mohan Rao (w.e.f. February 03, 2020)  
**Telephone** : 0364-2722503(O) / +91 9436166937 (M)  
**E-mail** : kmrao@nehu.ac.in

The School of Physical Sciences consists of the Departments of Chemistry, Mathematics, Physics and Statistics. All the Departments are involved in postgraduate teaching and Ph.D. programme. Besides the Departments of Mathematics and Statistics offer M.Phil. programme. Every Department has its chosen thrust areas for carrying out research work. The 37 faculty members of the School have

altogether produced 77 research papers of National and International repute. In addition, faculty members have National / International collaborations with various external organizations. The Department of Chemistry is recognized as a Centre of Advanced Study by UGC. Some Departments have also received extramural support from DST-FIST and UGC-SAP.



## DEPARTMENT OF CHEMISTRY

**Head** : Prof. A. K. Chandra  
**Telephone** : 0364-2722601 (O)/9436163024 (M)  
**E-mail** : akchandra@nehu.ac.in

### Faculty: 16

Designation	Name and Qualification	Specialization
<b>Professor</b>	Prof. A. K.Chandra, M.Sc. & Ph.D. (Univ. of Burdwan)	Physical Chemistry
	Prof. B. Myrboh, M.Sc. & Ph.D. (NEHU)	Organic Chemistry
	Prof. R. H. Duncan Lyngdoh, M.Sc. (NEHU), Ph.D. (IIT Madras)	Organic Chemistry
	Prof. K. Mohan Rao, M.Sc. (S. V. Univ.), Ph.D. (IIT Kanpur)	Inorganic Chemistry
	Prof. G. Bez, M.Sc. & Ph.D. (Gauhati Univ.)	Organic Chemistry
	Prof. H. Askari, M.Sc. & Ph.D. (AMU)	Physical Chemistry
	Prof. T. S. Basu Baul, M.Sc. (Jabalpur), Ph.D. (N. Bengal Univ.)	Inorganic Chemistry
	Prof. S. Mitra, M.Sc. (Vidyasagar Univ.), Ph.D. (IACS, Jadvpur Univ.)	Physical Chemistry
<b>Associate Professor</b>	Dr. M. K. Sahoo, M.Sc. (Utkal Univ.), Ph.D. (Comenius, Czechoslovakia)	Organic Chemistry
	Dr. M. Velusamy, M.Sc. & Ph.D. (Bharathidasan Univ.)	Inorganic Chemistry
	Dr. R. L. Nongkhlaw, M.Sc. & Ph.D. (NEHU)	Organic Chemistry
<b>Assistant Professor</b>	Dr. P. S. Negi, M.Sc.& Ph.D. (IIT Roorkee)	Physical Chemistry
	Dr. E. K. Rymmai, M.Sc. & Ph.D. (NEHU)	Inorganic Chemistry
	Dr. B. Sarkar, M.Sc. (N. Bengal Univ.), Ph.D. (IIT Guwahati)	Physical Chemistry
	Dr. A. K. Pal, M.Sc. (Calcutta Univ.), Ph.D. (Kalyani Univ.)	Organic Chemistry
	Dr. S. Khatua, M.Sc. (Vidyasagar Univ.), Ph.D. (IIT Kharagpur)	Inorganic Chemistry

### Thrust Areas of Research

Organometallic Chemistry, Coordination Chemistry, Computational Chemistry, Theoretical Reaction Kinetics, Synthetic Organic Chemistry, Heterocyclic Chemistry, Chemistry of Surfactants, Photo catalysts, Environmental Chemistry, Natural Product Chemistry.

### Brief Statement of Academic Activities

The Department has been accorded as a Centre for Advanced Studies in Chemistry

by UGC and was also supported by DST through FIST. The Department offers the MSc and Ph.D. programmes. Forty-One MSc and Eleven Ph.D. students were admitted to the Department in 2019-20. Thirteen students were awarded the Ph.D. degree. All faculty members are engaged in active research. At present there are two new project and five ongoing individual research schemes funded by DST-SERB and DBT.

### Students' Profile

Enrolment Capacity: M.Sc. – 40, Ph.D. – 11

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.Sc.	13	28	-	27	3	11	26	15	41
Ph.D.	06	05	-	07	-	04	07	04	11

### Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.Sc.	18	14	0	16	07	09	15	17	32
Ph.D.	05	08	01	08	-	04	08	05	13

### Students Awarded PhD Degree

Name of Student	Title of Thesis	Name of Supervisor
Mr. Baskhemlang Kshiar	Applications of Multicomponent Reactions (MCRs) for the Synthesis of Some Important N- Heterocycles and Other Related Compounds	Prof. B. Myrboh.
Mr. Ajay Gupta	Synthesis of Biologically Relevant Heterocycles and Amides by Heterogeneous Catalyst	Dr. A. K. Pal
Ms. Thamila Khamrang	Studies on DNA Binding and Anticancer Activities of Organometallic Ruthenium (II) Complexes of Diamenes	Dr. M. Velusamy
Mr. Sanjoy Kumar Sheet	Luminescent d6 Metal Complexes for Sensing Cations, Anions, Biorelevant Species and Chemical Warfare Agents	Dr. S. Khatua

Ms. Ibaniewkor L. Mawnai	Synthesis and Characterization of Platinum Group Metal Complexes with N- Donor Ligands	Dr. E. K. Rymmai
Mr. Donkumar Kharbani	Synthesis, Characterization and Structural Studies of Some Metal Complexes with Homo-Scorpionate Ligands	Dr. E. K. Rymmai
Mr. Debojit Kumar Deb	Theoretical Studies of Some Atmospheric Reactions and Non-Covalent Interaction in Atmospheric Aerosols	Dr. B. Sarkar
Ms. Ibanphylla Syiemlieh	Synthesis, Characterization and Reactivity Studies of Manganese and Vanadium Complexes Derived from Some Oxaloyldihydrazones	Prof. R. A. Lal
Ms. Ridaphun Nongrum	Studies on the Synthesis of Nitrogen and Oxygen Containing Heterocycles	Dr. R. L. Nongkhaw/ Prof. B. Myrboh
Ms. Martina Devi	Computational Investigations on the Molecular Basis of the Genetic Code	Prof. R. H. D. Lyngdoh
Mr. Mostofa Ataur- Rohman	Spectroscopic Studies on Some Fluorescent Organic Molecules and Their Complexes with Supramolecular Hosts	Prof. S. Mitra
Ms. Wandibahun Warjri	Studies on the Synthesis and Efficiencies of Semiconductor Based Photocatalysts	Dr. D. P. S. Negi
Ms. Esther Chingbiak- nem	Computational Studies on H-Bonded Segments of Some Inter-Macromolecular Complexes	Dr. R. H. D. Lyngdoh

### Research Fellowship

CSIR- UGC-NET	UGC Non- Net	Rajiv Gandhi SC/ST	ICPR Fellowship	Meritorious Fellowship	Maulana Azad Minority Fellowship	Others
08	18	-	-	02	01	08

### Courses Conducted

#### Postgraduate: M.Sc.

##### *Semester I*

Inorganic Chemistry I, Organic Chemistry I, Physical Chemistry I, Laboratory Course in Organic Chemistry.

##### *Semester II*

Inorganic Chemistry II, Organic Chemistry II, Physical Chemistry II, Laboratory

Course in Inorganic Chemistry.

Topics in Organic Synthesis, Computer Programming in Chemistry, Organometallic Chemistry, Bio-organic Chemistry, Chemistry of Surfactants.

##### *Semester III*

Inorganic Chemistry III, Organic Chemistry III, Physical Chemistry III, Laboratory Course in Physical Chemistry, Environmental and Analytical Chemistry,

Photochemistry, Bio-inorganic 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/Physical Chemistry.

#### **Ph.D. 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/Workshops/ Symposia/Extension Programmes (National/International)**

##### ***Organized***

The Department organized the following events: (i) Refresher Course in “Chemistry on Chemistry Today”, at the Department of Chemistry, NEHU, Shillong, during October 21 – November 03, 2019. (Co-ordinator: Prof. S. Mitra), (ii) National Symposium on “Recent Trends in Chemistry: 2019 (RTC-19)” at the Department of Chemistry, NEHU, Shillong during October 31–November 01, 2019 (Conveners: Dr. Amarta Kumar Pal & Dr. M. Velusamy), (iii) Salters Chemistry Camp in collaboration with Royal Society of Chemistry, Bangalore at the Department of Chemistry, NEHU, Shillong during January 28 – 30, 2020 (Convener: Dr. R.L. Nongkhaw), (iv) National Seminar and Discussion Meeting on “150th Year of Periodic Table (NSDPT 2020)” at the Science Seminar Hall, NEHU, Shillong during March 13 - 14, 2020, (Convener: Dr. M. K. Sahoo).

##### ***Attended***

#### **Prof. G. Bez**

Delivered invited talks on (i) “1,2,4-trioxane: A new molecular architecture for osteopontin down regulation in MDA-MB-435 breast cancer cells” at the International conference on Emerging Trends in Chemical Sciences (ETCS-2020) held at Gauhati University, Guwahati during February 13-15, 2020, (ii) “Asymmetric C-C bond-forming reactions catalyzed by L-proline derivatives” held at NIT Meghalaya in the National conference on “Recent Advances in Chemistry (RAC)” during October 14 - 15, 2019, (iii) “Catalytic applications of L-proline derived oragnothiourea in multicomponent reaction” held at Cotton University in the National conference on Green, Sustainable and Evolving Sciences (GSES-2019) and 64th Annual Technical Session of Assam Science Society during June 28 – 29, 2019, (iv) “Dissection of enzymatic catalysis for simpler asymmetric synthesis” held at Gauhati University in a National conference with the theme “Recent Advances in Applied Sciences (RAAS’ 2019)” during May 17 - 18, 2019.

Delivered a keynote lecture on “Make Research A Culture: The Way Forward for Education and Research in India” in the two-day National Seminar on Re-configuring Indian Culture and Scientific Temperament in 21st Century” held at Bodoland University, Kokrajhar during January 28 – 29, 2020.

Delivered a lecture on “Synthesis and application of 1,2,4-trioxanes for osteopontin down regulation in MDA-MB-435 breast cancer cells” held at Calcutta University in the International Conference on Chemistry for Human Development (ICCHD-2020) during January 09 - 11, 2020.

Chaired a technical session in the National conference on (i) “Recent Advances in Chemistry (RAC)” held at NIT Meghalaya during October 14 – 15, 2019, (ii) “Emerging Trends in Chemical Sciences (ETCS-2020) held at Gauhati University during February 13 – 15, 2020.

#### **Prof. S. Mitra**

Delivered an invited talk on “Modulation in the relative activity of anti-cholinergic compounds: Importance of H-bonding and weak forces” held at NIT Meghalaya in Recent Advances in Chemistry, 2019(RAC 2019)” during October 14 – 15, 2019.

#### **Dr. S. Khatua**

Delivered a talk on “Recent Advances in Chemistry (RAC)” held at NIT Meghalaya during October 14-15, 2019.

Delivered invited talks on (i) “Modern trends in Inorganic Chemistry (MTIC)–XVIII” held at IIT Guwahati during December 10-14, 2019. (ii) Delivered invited talk on “National Seminar and Discussion Meeting on 150th anniversary of Periodic Table (NSDPT-2020)” held at Department of Chemistry, NEHU, Shillong during March 13 - 14, 2020.

#### **Publications**

##### **Research Papers**

##### ***Published in India***

Lapasam, A., Venkanna. B., Uma, A., Mohan Rao, K. (2020). Half-sandwich arene ruthenium, rhodium and iridium thiosemicarbazone complexes: Synthesis, characterization and biological evaluation. J Chemical Science 132: 34.

Warjri, W., Negi, D. P. S. (2019). pH dependant competitive N-de-ethylation and degradation of Rhodamine B

photocatalyzed by cationic surfactant stabilized ZnS nanoparticles. Indian J. Chem., 58A (5): 554-560.

##### ***Published Abroad***

Lapasam, A., Ibaniewkor, L. Mawnai, Venkanna, B., Werner, K., Mohan Rao, K. (2020). Ruthenium, rhodium and iridium complexes containing pyrimidine based thienyl pyrazoles: Synthesis and antibacterial studies. J. Organomet. Chem. 911:121155.

Shadap, L., Venkanna, B., Uma, A., Adhikari, S., Mohan Rao, K. (2020). Variable structural bonding modes and antibacterial studies of thiosemicarbazone ligands of ruthenium, rhodium and iridium metal complexes. J. Coord. Chem. 73: 175–187.

Shadap, L., Jaya Lakshmi, T., Krishna Mohan, P., Pinder, E., Roger, M. P., Werner, K., Mohan Rao, K. (2020). Synthesis, structural and in-vitro functional studies of half-sandwich platinum group metal complexes having various bonding modes of benzhydrazone derivative ligands. Polyhedron, 176: 114293.

Lapasam, A., Pinder, E., Roger, M. P., Werner, K., Mohan Rao, K. (2019). Synthesis, structure and bonding modes of pyrazine-based ligands of Cp\*Rh and Cp\*Ir complexes: The study of in-vitro cytotoxicity against human cell lines. J. Organomet. Chem., 899:120887.

Shadap, L., Siewdorlang, D., Jaya Lakshmi, T., Krishna Mohan, P., Werner, K., Mohan Rao, K. (2019). Synthesis, biological evaluation and colorimetric sensing studies of platinum group metal complexes comprising pyrazine based thiourea derivatives. J. Organomet. Chem., 897:207-216.

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- Bhattarai, S., Sutradhar, D., Chandra, A.K., Zeegers-Huyskens, T. (2020). Nature of the Interaction of Pyridines with OCS. A Theoretical Investigation. *Molecules* 25, 416 (1-15).
- Sutradhar, D., Chandra, A.K. (2020). Cl...Cl Halogen bonding: Nature and effect of substituent at electron donor Cl atom. *Chemistry Select* 5, 554-563.
- Brattarai, S., Sutradhar, D., Chandra, A. K., Zeegers-Huyskens, T. (2020) A theoretical investigation of the interaction between substituted pyridines and CS<sub>2</sub>. Versatility of the CS<sub>2</sub> molecule. *J. Mol. Struct.* 1202, 127309 (1-10).
- Baidya, B., Lily, M., Chandra, A.K. (2019). Kinetics of Reactions of CHF<sub>2</sub>CF<sub>2</sub>CH<sub>2</sub>OH with Cl Atoms and CHF<sub>2</sub>CF<sub>2</sub>CHO with OH Radicals and Atmospheric Degradation Pathways of CHF<sub>2</sub>CF<sub>2</sub>CH<sub>2</sub>OH: A Theoretical Investigation. *Chemistry Select* 4, 7134-7143.
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- Pasupuleti, B. G., Khongsti, K., Das, B., Bez, G. (2020). 1,2,3-Triazole tethered 1,2,4-trioxanes: Studies on their synthesis and effect on osteopontin expression in MDA-MB-435 breast cancer cells, *Eur J Med Chem.* 186, 111908.
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- Mohanta, R., Bez, G. (2019). Cu (II)-L-prolinamide: First catalytic application of metal-amidoamine complex in enantioselective Henry reaction, *Catal. Commun.* 129, 105728.
- Basumatary, G., Mohanta, R., Bez, G. (2019). L-proline derived secondary aminothioureorganocatalyst for synthesis of coumarin derived trisubstituted methanes: Rate enhancement by bifunctional catalyst



over cooperative catalysis. *Catal. Lett.* 149(10), 2776-2786.

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Basu Baul, T. S., Chaurasiya, A., Lyčka, A., León, I. R., Höpfl, H. (2019). Molecular aggregations of bicyclo dioxaza stannone produced from multicomponent reactions involving functionalized 2-hydroxybenzaldehydes,  $\alpha$ - or  $\beta$ -amino acids and a dimethyltin precursor. *J. Organomet. Chem.*, 898: 120859. <https://doi.org/10.1016/j.jorganchem.2019.07.010>

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Höpfl, H. (2019). Coordination-driven self-assembly of macrocycles and 1D or 2D coordination polymers using heteroditopic pyridyl-carboxylate ligands – the case study of 5-[(E)-2-(3-pyridyl)-1-diazenyl]-2-hydroxybenzoate in combination with {RnSn} (n= 2 and 3). *Cryst. Growth Des.*, 19, 6656-6671. DOI: 10.1021/acs.cgd.9b01045

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Kharmawlong, G. K., Nongrum, R., Chhetri, B., Rani, J.W. S., Rahman, N., Yadav, A. K., Nongkhaw, R. (2019). Green and efficient one-pot synthesis of 2,3-dihydroquinazolin-4(1H)-ones and their anthelmintic studies, *Synthetic Communications*. 49(20), 2683-695. doi. org/10.1080/00397911.2019. 1639754.

Hou, S. M., Hsia, C. W., Tsai, C. L., Hsia, C. H., Jayakumar, T., Velusamy, M., Sheu, J. R. (2020). Modulation of human platelet activation and in vivo vascular thrombosis by columbianadin: regulation by integrin  $\alpha$ IIb $\beta$ 3 inside-out but not outside-in signals. *J. Biomed. Sci.* 27(60): <https://doi.org/10.1186/s12929-020-0619-5>.

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Attenuation of microglia and platelet activation, *J. Clin. Med.*, 9(4): <https://doi.org/10.3390/jcm9040996>.

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the mortality in pulmonary thrombosis by auraptene. *Int. J. Mol. Sci.*, 20(22): <https://doi.org/10.3390/ijms20225585>.

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Paul, D., Borah, A., Khatua, S., Chatterjee, P. N. (2019). pTSA-catalyzed, ultrasound promoted, one-pot, three-component coupling of aldehydes,  $\beta$ -dicarbonyls/amides and electron-rich arenes, *Asian J. Org. Chem.*, 2019, 8 (10), 1870-1878.

### **Books/Book Chapters/Proceedings**

Moyon, N. S., Singh, I. R., Rohman, M. A., Baruah, P., Sonu, V. K., Mitra, S. (2019). Application of luminol as solvatochromic probe and fluorescent biomarker for heterogeneous media. In: *Advances in Chemistry Research*. J. C. Taylor (Ed.). Nova Science Publishers Inc. (USA), vol. 54, Chapter 6, p. 177 – 245.

**Funds Received from Agencies including NEHU/UGC****NEHU: Rs. 17.71 lakhs****Research Projects****New**

<b>Title of Project</b>	<b>PI/Co-PI</b>	<b>Funding Agency</b>	<b>Amount (Rs. in lakhs)</b>
Theoretical Studies on Understanding and Tuning of Some Non-Covalent Interactions	Prof. A.K. Chandra	SERB, Department of Science & Technology (DST)	6.60
Computational Elucidations on Codon-Anticodon Pairing and the Genetic Code	Prof. R. H. D. Lyngdoh	Human Resource Development Group, Council of Scientific and Industrial Research, New Delhi	16.05

**Ongoing**

<b>Title of Project</b>	<b>PI/Co-PI</b>	<b>Funding Agency</b>	<b>₹ in lakhs</b>
Molecular Mechanism of Designated Ferrocene Scaffold Appended with Organostannyl Benzoates for Anticancer Activity	Prof. T. S. BasuBaul	DBT	43.12
Photophysical Studies on Polypyridyl Complexes: Towards the Development of Nanoscopic Fluorescent Targets	Prof. S. Mitra	DST (SERB)	24.09
Cyclometalated Platinum Based Triplet Emitter for OLED Applications	Dr. M Velusamy	DST-SERB	35.05
Preparation and characterization of stabilized magnetic nanoparticles (MNPs) supported with Pd complex and catalytic uses in C-H activation and asymmetric synthesis	Dr. A. K. Pal	SERB	25.55
Assessment of Climate Change Impact on Soils and Various Water Basins of Meghalaya Using Existing and Newer Techniques.	Dr. S. Khatua	DST	,

### Completed

Title of Project	PI/Co-PI	Funding Agency	₹ in lakhs
"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"	Dr. R. L. Nongkhlaw	DST-SERB	28.51
Theoretical Investigations of Hydrogen Bond Interactions Involved in the Reactions of Volatile Organic Compounds Presents in the Atmosphere	Dr. Biplab Sarkar	DST-SERB,	27.50
"Isolation and characterization of bioactive components from indigenous plants of NEH region for antiurolithiatic potential with standardized phytochemical and pharmacological Parameters	Dr. A. K. Pal	DBT	79.83

### Academic Collaborations

#### Prof. K. M. Rao

Collaborated with (i) Prof. Yuriy Mozharivskyj, Department of Chemistry and Chemical Biology, McMaster University, Canada, (ii) Prof. Roger M Phillips, Department of Cancer Pharmacology, Institute of Cancer Therapeutics, University of Bradford, Bradford, UK, (iii) Dr. Werner Kaminsky, Department of Chemistry, University of Washington, Seattle, WA 98195, USA, (iv) Prof. Krishna Mohan, P. Department of Biotechnology and Centre for Nanotechnology, Indian Institute of Technology Roorkee, Roorkee, India, (v) Prof. A. Uma, Centre for Biotechnology (CBT), Institute of Science & Technology (IST), Jawaharlal Nehru Technological University Hyderabad (JNTUH), Kukatpally, Hyderabad, Telangana, India.

#### Prof. A. K. Chandra

Collaborated with (i) Quantum Chemistry Group, University of Leuven, Belgium, (ii) Department of Chemistry, Quy Nhon

University, Vietnam.

#### Prof. T. S. B. Baul

Collaborated with (i) Andrew Duthie, School of Life & Environmental Science, Deakin University, Australia, (ii) M. Fátima C. Guedes da Silva, Centro de Química Estrutural, Instituto Superior Técnico, Universidade de Lisboa, Portugal, (iii) H. Höpfl, Centro de Investigaciones Químicas, Universidad Autónoma del Estado de Morelos, Mexico, (iv) Edward R. T. Tiekink, Research Centre for Crystalline Materials, Sunway University, Malaysia, (v) Edit Y. Tshuva, Institute of Chemistry, The Hebrew University of Jerusalem, Israel, (vi) A. Lyčka, University of Hradec Králové, Faculty of Science, Czech Republic, (vii) B. Koch, Department of Zoology, Banaras Hindu University, Varanasi, (viii) S. K. Manna, Centre for DNA Fingerprinting & Diagnostics, Hyderabad, (ix) S. R. Joshi, Department of Biotechnology & Bioinformatics, NEHU, (x) S. Mitra and S. Khatua, Department of

Chemistry, NEHU.

**Prof S. Mitra**

Collaborated with (i) Prof. Semen O. Yesylevskyy, Department of Physics of Biological Systems, Institute of Physics of the National Academy of Sciences of Ukraine, Ukraine, (ii) Dr. P. R. Bangal (IICT, Hyderabad) – Ultrafast time-resolved spectroscopy, (iii) Prof K. Aguan (Department. of Biotechnology, NEHU) – Quantitative assay of novel AD drugs.

**Dr. M. Velusamy**

Collaborated with (i) Prof. Joen-Rong Sheu, Graduate Institute of Medical Sciences, College of Medicine, Taipei Medical University, Taipei 110, Taiwan, (ii) Dr. R. Mayil Murugan, School of Chemistry, Madurai Kamaraj University, Madurai 625021.

**Dr. R. L. Nongkhlaw**

Collaborated with Prof. A.K. Yadav, Department of Zoology, NEHU, Shillong.

**Dr. D. P. S. Negi**

Collaborated with Dr. L. Robindro Singh, Department of Nanotechnology, NEHU.

**Dr. B. Sarkar**

Collaborated with (i) Dr. Alope Das, Associate Professor, Department of Chemistry, IISER Pune, Dr. Homi Bhabha Road, Pashan, Pune, Maharashtra, (ii) Dr. Amit Kumar Paul, Assistant Professor, Department of Chemistry, NIT, Meghalaya.

**Dr. A. K. Pal**

Collaborated with (i) Department Physics, National Dong Hwa University, Hualien-97401, Taiwan, (ii) Department

of Energy and Chemical Engineering/Innovation Centre for Chemical Engineering, Incheon National University, 119 Academy-ro, Yeonsu-gu, Incheon, Republic of Korea.

**Reviewer** : Journals of National & International repute.

**Dr. S. Khatua**

Collaborated with (i) Prof. K. Aguan (Department of Biotechnology and Bioinformatics, NEHU, Shillong) on DST project ‘A Lab on a molecule for cation and anion sensing’, (ii) Dr. Debesh R. Roy, Applied Physics Department, S. V. NIT, Surat on DST project ‘A Lab on a molecule for cation and anion sensing’, (iii) Prof. N. Saha, Department. of Zoology, NEHU, Shillong on DST project ‘A Lab on a molecule for cation and anion sensing’, (iv) Dr. P. N. Chatterjee, Department. of Chemistry, NIT Meghalaya, (v) Prof. T. S. Basu Baul, Department of Chemistry, NEHU. Shillong.

**Other Activities**

**Prof. B. Myrbob**

Attended (i) International conference on the Chemistry of Selenium & Tellurium, University of Cagliari, Sardinia, Italy during June 03 – 07, 2019, (ii) World Chemistry Conference & Exhibition, Brussels, Belgium during June 13 – 17, 2019.

**Prof. K. M. Rao**

Delivered a lecture in Refresher Course conducted by Department of Chemistry, organized by HRDC, NEHU, Shillong during October 21 – November 03, 2019.

Reviewer: Applied Organometallic Chemistry, J. Organometallic Chemistry,



Polyhedron, J. Chemical Science, J. Coordination Chemistry, Chemistry Select.

**Prof. A. K. Chandra**

Delivered a lecture on “Emerging Trends in Chemistry” at USTM on October 24, 2019.

Reviewer: ACS, Elsevier and Wiley journals in Chemistry.

**Prof. T. S .B. Baul**

*Reviewer* : J. Organ met. Chem., Main Gr. Met. Chem., Inorg. Chim. Acta.

**Prof. S. Mitra**

Life member of the Indian Association for the Cultivation of Science (IACS), Kolkata, Indian Society for Radiation & Photochemistry (ISRAPS), Fluorescence Society of India, and Member of the American Chemical Society (ACS), Indian Photobiology Society.

Reviewer: J. Phys. Chem. (A &B), Phys. Chem. Chem. Phys., Chem. Phys. Letts., J. Photochem. Photobiol. A & B, Org. & Biomol. Chem., J. Mol. Struct., J. Biomol. Str. Dyn.

**Dr. R. L. Nongkhlaw**

Reviewer: Tetrahedron (Elsevier), Chemistry Select (Wiley), Journal of Inorganic and Organometallic Polymers and Materials (Springer), Dyes and Pigments (Elsevier), Journal of Heterocyclic chemistry (Wiley), Reactive Intermediates and Synthetic Communications (Taylor and Francis) and Polycyclic Aromatic Compounds.

**Dr. D. P. S. Negi**

Delivered a lecture on “Semiconductor

Photocatalysis” at the Refresher Course in Chemistry, NEHU Shillong in October 2019.

Reviewer: Analytica Chimica Acta (Elsevier).

**Dr. S. Khatua**

Delivered an invited lecture in the XVIII Modern trends in Inorganic Chemistry (MTIC) held at IIT Guwahati during December 10- 14, 2019.

Delivered an invited lecture in (i) Recent Advances in Chemistry (RAC) held at NIT, Meghalaya during October 14-15, 2019, NIT Meghalaya, (ii) National Seminar and Discussion Meeting on 150th anniversary of Periodic Table (NSDPT-2020) held at NEHU, Shillong during March 13- 14, 2020.

Life member of the Chemical Research Society of India (CRSI), Bangalore.

Member of the (i) BOS of Statistics Department (from 2020), (ii) Departmental Research Committee, Department. of Chemistry, NIT Meghalaya.

Prof. Patrick Y. Lam, LLC, USA delivered lecture on Drug discovery and Chan-Lam reaction in the Department of Chemistry, NEHU, Shillong, on June 24, 2019.

Prof. V.K. Tiwari, BHU, delivered a lecture on “Click Reaction” on October 16, 2019.

The Chemistry Club, Department of Chemistry, NEHU, Shillong, organized (i) Science Education and Motivational Programme at St. Peter’s High School Laitlyngkot, East Khasi Hills District,



Meghalaya on September 20, 2019 where Science Lectures, Presentations and demonstrations etc were conducted for the School children by a 13 member team including Teachers, Research Scholars and MSc students of the Department of Chemistry, NEHU, Shillong, (ii) 3rd Social Outreach Programmeme at Umsaw

Mawjynrong Secondary School, Mawlai, East Khasi Hills District, Meghalaya on November 14, 2019 where School bags, stationery items besides clothes, toys etc. were donated to the School children. The programme was funded by members of the chemistry club.

**Reviewer** : Royal Society of Chemistry (RSC) and American Chemical Society (ACS), Willey and Elsevier journals.

## DEPARTMENT OF MATHEMATICS

**Head** : Prof. D. Bhattacharjee  
**Telephone** : 0364-2722722 (O)/ +91 9436309613 (M)  
**E-mail** : debashis\_bhattacharjee@yahoo.com, hodmath@nehu.ac.in

**Faculty: 06**

Designation	Name and Qualification	Specialization
<b>Professor</b>	Prof. Debashis Bhattacharjee, M.Sc. (NEHU), Ph.D. (Warsaw Univ., Poland)	Number Theory
<b>Assistant Professor</b>	Dr. A. M. Buhphang, M.Sc. & Ph.D. (NEHU)	Ring Theory
	Dr. A.T.Singh, M.Sc. & Ph.D. (NEHU)	Algebraic and Differential Topology
	Dr. S. Dutta, M.Sc. & Ph.D. (NEHU)	Rings of Continuous Functions
	Dr. John Paul JalaKharbhih, M.Sc. & Ph.D. (NEHU)	Rings of Continuous Functions
	Shri Ph. Chinglensana, M.Sc. (Delhi)	Algebraic Topology

### Thrust Areas of Research

Algebra, Algebraic and Differential Topology, Dynamical Systems, Geometry and Number Theory.

such as Algebra, Analysis, Linear Algebra, Mechanics, Number Theory, Topology, Commutative Algebra and Discrete Mathematics. The Department conducted regular Seminar and colloquia on the topics in the thrust areas of research.

### Brief Statement of Academic Activities

The Department conducted M.Phil. and Pre – Ph.D. courses on various topics

### Students' Profile

**Enrolment Capacity: M.Sc. – 41, Ph.D. – 04**

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.Sc.	26	15	-	29	-	12#	32	09	41
Ph.D.	03	01	-	02	-	02	01	03	04

#Out of the 12 general candidates 4 are in the EWS category and 1 is a supernumerary.

### Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.Sc.	18	13	-	27	-	04	19	12	31
Ph.D.	02	-	-	02	-	-	02	-	02

### Placement of Student

Name of student	Department	Date of selection	Posts held	Place of work
Raplang Nongsiej	BCA	September 23, 2019	Asst. Prof.	Lady Keane College
Shekstar Thabah	Mathematics	September, 2019	Asst. Prof.	Nongstoin College
Sabrina Dkhar	Mathematics	December 19, 2019	Asst. Prof.	Seng Khasi College

### Research Fellowship

CSIR-UGC-NET	UGC Non-Net	Rajiv Gandhi SC/ST	ICPR Fellowship	Meritorious Fellowship	Maulana Azad Minority Fellowship	Others
06	09	-	-	-	-	-

### Courses Conducted

#### Postgraduate: M.Sc.

##### *Semester I*

Analysis I; AMES; Linear Algebra; ODE; Classical Mechanics.

##### *Semester II*

Elementary Graph Theory, Algebra, Topology; PDE, Analysis II.

##### *Semester III*

CFT; Theory of Field Extensions; ENT, Programming in C and Applications, Computer Programming practical.

##### *Semester IV*

Numerical Analysis, Computer Oriented Numerical Analysis, Operations Research, Discrete Mathematics, Algebraic Topology.

#### Ph.D. Courses

Research Methodology in Mathematics

#### Optional Courses

Galois Theory, Rings of Continuous Functions, Commutative Algebra; Advanced Ring Theory, Advanced Algebraic Topology, Differential Topology, Cosmology, Analytic Number Theory,

Algebraic Number Theory.

#### Seminars/Conferences/Workshops/Symposia/Extension Programmes (National/International)

##### *Organized*

The Department organized (i) Instructional School for Teachers on Rings and Modules sponsored by the National Center for Mathematics (NCM) at NEHU, Shillong during June 24 - July 06, 2019, (Convener: Dr. A. M. Buhphang), (ii) Indian National Mathematical Olympiad Training Camp sponsored by the National Board for Higher Mathematics (NBHM) at NEHU, Shillong during January 13-18, 2020.

##### *Attended*

#### Prof. D. Bhattacharjee

Presented a paper on “On Some generalized multiplicative and generalized additive arithmetic functions” at the International conference on Recent Advances in Mathematics and its applications (ICRAMA-2019) held at Tripura University during July 16-18, 2020.

Attended as a guest of honour and delivered an invited lecture on “Some

Rings of Arithmetic Functions” at the 13th Conference of the Murshidabad Mathematical Society held at Rabindra Sadan and Govt.College of Engineering and Textile Technology, Berhampore, Murshidabad, West Bengal, India during September 21-22,2019.

#### **Dr. A. M. Buhphang**

Presented papers on (i) “left HQ-rings” at the International conference on Recent Advances in Mathematics and its Applications – ICRAMA-2019 held at Tripura University, Agartala during July 16-18, 2019, (ii) “Matrix rings which are left HQ-rings” at the International conference on Mathematical Modelling, Applied Analysis and Computation-2019 (ICMMAAC-19), organized by JECRC University, Jaipur during July 08-10, 2019 .

#### **Dr. S. Dutta**

Presented papers on (i) “Some generalized prime ideals in  $C_m(X)$ ” at the International conference on Recent Advances in Mathematics and its (ICRAMA-2019) held at Tripura University, Agartala during July 16-18, 2019, (ii) “Some Properties of Essential Graph of Commutative Rings” at the 2nd International Conference on Mathematical Modelling, Applied Analysis and Computation-2019 (ICMMAC-19) held at JECRC University, Jaipur during August 08- 10, 2019, (iii) “The Regular 2-total Graph of a Commutative Ring” at the 13th International Conference MSAST 2019 held at Institute for Mathematics, Bioinformatics, Information Technology and Computer Science, Kolkata during December 21 - 23, 2019.

Attended a Workshop on MOOCs organized by UGC-HRDC, NEHU, Shillong during December 02-07, 2019.

#### **Dr. A. T. Singh**

Presented papers on (i) “On some split short exact sequence of singular chain complexes of pairs of spaces” at the “International Conference on Recent Advances in Mathematics and its Applications – ICRAMA2019” held at Tripura University, Agartala during July 16-18, 2019, (ii) “Some Properties of Poisson Vector Spaces” at the “International Conference on Mathematical Modelling, Applied Analysis and Computation-2019 (ICMMAAC-19) held at JECRC University, Jaipur during July 08-10, 2019.

#### **Publications**

##### **Research Papers**

##### ***Published in India***

Das, S., Buhphang, A.M. (2020). Rings whose cyclic modules are radical lifting modules, JP Journal of Algebra, Number Theory and Applications., 45(2):137-155.

##### ***Published Abroad***

Das, S., Buhphang, A.M. (2019). Principally-injective Leavitt path algebras over arbitrary graphs, Journal of Mathematics and System Science, 9:86--89. doi: 10.17265/2159-5291/2019.03.002.

Das, S., Buhphang, A.M. (2019). Rings characterized by dual-Utumi-modules, Journal of Algebra and its Applications, 2050229 (11 pages), doi:10.1142/S0219498820502291.

##### **Funds Received from Agencies including NEHU/UGC**

1. UGC-SAP(DRS-II) (Non-Recurring) – Rs. 21.16 lakhs
2. UGC-SAP(DRS-II) (Recurring) – Rs. 6,06,822.00
3. NEHU (Annual Budget Allocation) – Rs. 4.25 lakhs

### ***Other Activities***

#### **Dr. A. Tiken Singh**

Delivered two lectures at the Advanced Training in Mathematics Workshop on “Sheaf Theory, Sheaf Cohomology and Spectral Sequences”, organized by University of Delhi during November 18-30, 2019.

#### **Dr.A. M. Buhphang**

Delivered (i) an invited lecture on “A shift towards Endomorphism Algebras” at the

National Seminar on Recent Advancements in Science and Technology, organized by Union Christian College through the Science Society, in collaboration with North-Eastern Space Application Centre, Umiam during June 12-14, 2019, (ii) two lectures at the Indian National Mathematical Olympiad Training Camp sponsored by the National Board for Higher Mathematics (NBHM) at Mathematics Department, NEHU, Shillong during January 13-18, 2020.

## DEPARTMENT OF PHYSICS

**Head** : Prof. Atul Saxena (up to February 02, 2020)  
 Prof. M. C. Mahato (w.e.f. February 03, 2020)

**Telephone** : 0364-2722833 / 2722801 (O)

**E-mail** : mangal@nehu.ac.in, hodphy@nehu.ac.in

**Faculty: 09**

Designation	Name and Qualification	Specialization
<b>Professor</b>	Prof. B. M. Jyrwa, M.Sc.&Ph.D.(NEHU)	Nuclear Physics (Theoretical)
	Prof. P. Nongkynrih*, M.Sc.& Ph.D. (NEHU)	Nuclear Physics Experiment
	Prof. Y. N. Tiwari, M.Sc., Ph.D.&L.L.B. (Patna Univ.)	Atomic, Molecular, Optical and Laser Physics (Theoretical)
	Prof. A. Saxena, M.Phil. (Institute of Advanced Studies, Meerut Univ.), Ph.D. (NEHU)	Nuclear Physics (Experimental)
	Prof. M. C. Mahato, M.Sc. (Ranchi Univ.), Ph.D. (IISc Bangalore)	Condensed Matter Physics and Statistical Physics, Fluid Mechanics (Experimental)
	Prof. P. K. Patra, M.Sc. (Sambalpur Univ.) Ph.D. (NEHU)	Nanoscience, High Energy Physics
<b>Associate Professor</b>	Dr. S. S. Khatri, M.Sc. & Ph.D. (NEHU)	Laser Physics (Experimental)
	Dr. A. K. Biswas, M.Sc. (IIT, Kharagpur), Ph.D. (IOP, Utkal Univ., Bhubaneswar)	High Energy Physics
<b>Assistant Professor</b>	Dr. S. S. Pohlong, M.Sc. & Ph.D.(NEHU)	Solid State Physics (Theoretical)

\*Superannuated on September 30, 2019.

### Thrust Areas of Research

**Theoretical Nuclear Physics** : Calculation of covariance matrix of nuclear data used in nuclear reactors.

**Experimental Nuclear Physics** : Measurement of high energy photon and neutron nuclear reaction cross-sections in structural materials, study

of pre-equilibrium processes, EXFOR Compilations, characterization of radiation detectors and measurement of environmental radioactivity (hazard indices) with particular emphasis on radon measurement, and measurement of trace elements in soil samples.

**Solid State Physics/ Condensed Matter Physics** : Study of Stochastic resonance (theory and experiment), ratchet effect, nonlinear dynamics, instability of liquid jets (experiment), density-functional study of alloys and other materials.

#### High Energy Physics (Theoretical)

#### Laser Physics (Experiment) :

Spectroscopic study of organic liquid mixtures.

**Nanoscience** : Mechanical, electronic and optical properties of Carbon Nanotubes (CNTs)

Nuclear Physics both experimental and theory, as well as applications in analysing

clay and rock samples found in the Sung Valley of Jaintia Hills, Meghalaya.

#### Brief Statement of Academic

The main academic activity of the Department is the teaching MSc (Physics) courses. The Department also conducts mandatory Ph.D. course work. In addition to teaching MSc and Ph.D. courses, members of the Faculty have been engaged in guiding research for Ph.D. scholars and in carrying out their own research works. Faculty members visited various institutions to carry out their research collaborations and delivered talks on their research contributions.

#### Students' Profile

**Enrolment Capacity: M.Sc. - 39, Ph.D. - 06**

Degree	Male	Female	SC	ST	OBC	GEN	EWS	Meghalaya	Non-Meghalaya	Total
M.Sc.	23	16	01	24	01	09	04	26	13	39
Ph.D.	04	02	-	02	-	03	01	02	04	06

#### Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.Sc.	14	13	01	20	02	04	20	07	27
Ph.D.	-	01	-	01	-	-	-	01	01

#### Students Awarded Ph.D. Degree

1	Ms. Sylvia Badwar	"Measurement of High Energy (1.7-20) Neutron and Proton Induced Reaction Cross-Sections for Material Related to Medical Isotopes and Reactors"	Prof. B. M. Jyrwa
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#### Research Fellowship

CSIR-UGC-NET	UGC Non-Net	Rajiv Gandhi SC/ST	ICPR Fellowship	Meritorious Fellowship	Maulana Azad Minority Fellowship	Others
01	07	05	-	-	-	02



**Courses Conducted**  
**Postgraduate: M.Sc.**

***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, Laboratory III, Environmental Physics.

***Semester IV***

Thermal Physics, Computational Techniques and Numerical Methods, Computational Techniques-Laboratory, Optional Papers offered are Solid State Physics II, High Energy Physics, Laser Physics and Nuclear Physics II.

**Ph.D. Courses**

Nuclear Physics, Experimental Techniques and Their Applications, Statistical and Numerical Methods in Physics

**Seminar/Conference/Symposium/  
Extension Programme etc.**

***Attended***

**Prof. B. M. Jyrwa**

Delivered an invited talk in the 4th International conference on “New Energy and Future Energy” held at Macao University, Macao China during July 21 - 24, 2019.

**Prof. Y. N. Tiwari**

Visited as NAAC member Coordinator at Durgapur Institute of Advanced Technology and Management, Durgapur, West Bengal during April 08 - 09, 2019.

**Prof. A. Saxena**

Delivered an invited talk on “Range and energy loss measurement by a nuclear track technique” at the National Seminar on Recent Advancements in Science and Technology held at Union Christian College, Umiam, Shillong during June 12-14, 2019.

**Prof. P. K. Patra**

Participated in the Academic Leadership Development Programme (under LEAP) organized by NIEPA, New Delhi during March 13-21, 2020.

**Publications**

**Research Papers**

***Published in India***

Pyngrope, A., Khardewsaw, A., Jami, N., Talang, T., Maibam, D., Sharma, Y., Walia, D., Saxena, A. (2019). Measurement of indoor radon activity levels in Jowai region, Meghalaya, India. Journal of Applied and Fundamental Science, 5(1): 29-33.

Mawphlang, B. R. K. L. L., Patra, P. K. (2019). Buckling analysis of a simply supported single-walled carbon nanotube using nonlocal continuum model and Laplace Transform. Journal of Applied and Fundamental Sciences 5(1): 23-28.

***Published Abroad***

Limbu, N., Saxena, A., Thapa, R.K., Shankar, A. (2020). Study of electronic and the thermoelectric properties of Gd filled skutterudites. Journal of Solid-State Chemistry, 282:121081

Ram, M., Saxena, A., Aly, A.E., Shankar, A. (2019). Study of half metallicity, structural and mechanical properties in inverse Heusler alloy  $\text{Mn}_2\text{ZnSi}(1-x)$

Gex and a superlattice, RSC Adv., 9: 36680. DOI: 10.1039/c9ra06903h

Ram, M., Saxena, A., Aly, A.E., Shankar, A. (2020). Half-metallicity in new Heusler alloys  $\text{Mn}_2\text{ScZ}$  ( $Z = \text{Si}, \text{Ge}, \text{Sn}$ ), RSC Adv., 10: 7661.

Thapa, B., Patra, P. K., Subba, N., Shankar, A. (2019). Effect of Mn doping in mechanical properties of  $\text{Cd}_{1-x}\text{Mn}_x\text{Te}_2$ , Material Research Express 6, 116322.

Rai, D. P., Vu, Tuan V., Laref, A., Ghimire, M.P., Patra, P.K., Srivastava, S. (2020). Electronic and optical properties of 2D monolayer (ML)  $\text{MoS}_2$  with vacancy defect at S sites, Nano-Structures & Nano-Objects 21, 100404.

Sawkmie, I. S., Mahato, M.C. (2019). Stochastic resonance in a sinusoidal potential system: An analog simulation experiment. Commun Nonlinear Sci Numer Simulat, 78: 104859 (1-14).

Sawkmie, I. S., Mahato, M.C. (2019). Free oscillations of a damped simple pendulum: An analog simulation experiment. The Physics Educator, 1(4): 1950015 (1-10).

Rudra, S., Nayak, A. K., Koley\*, S., Chakraborty, R., Maji, P.K., Pradhan, M. (2019). Redox-mediated shape transformation of  $\text{Fe}_3\text{O}_4$  nanoflakes to chemically stable  $\text{Au-Fe}_2\text{O}_3$  composite nanorods for a high-performance asymmetric solid-state super capacitor device, ACS Sustainable Chemistry and Engineering, 7, 724-733

Rudra, S., Chakraborty, R., Maji, P.K., Koley\*, S., Nayak, A.K., Paul, D., Pradhan, M. (2019). Intercalation pseudocapacitance in chemically stable  $\text{Au-}\alpha\text{-Fe}_2\text{O}_3\text{-Mn}_3\text{O}_4$  composite

nanorod: Towards highly efficient solid-state symmetric super capacitor device. Electrochimica Acta, 324, 134865 (1-13)

\*Note: S. Koley worked as a DST Woman Scientist in the Department of Physics NEHU, Shillong under the mentorship of Prof. M.C. Mahato.

### **Books/Book Chapters/Proceedings**

Walia, D., Saxena, A., Maibam, D., Sharma, Y. (2020). Calibration factor for LR-115 type II detector for soil-gas radon measurement. Radon: Detection, Exposure and Control. R.C. Tiwari (Ed). Nova science publishers, Inc., NY, USA, Chap.

Walia, D., Maibam, D., Sharma, Y., Saxena, A. (2020). Radon Testing and Mitigation in Schools of Shillong City, Meghalaya. Radon: Detection, Exposure and Control. R.C. Tiwari (Ed). Nova science publishers, Inc., NY, USA, Chap.

Gewali, J. P., Munjal, N., Thakur, A., Singh, I., Jaishy, B., Saxena, A. (2019). Measurement of range and energy loss measurement of heavy ion in  $\text{ZnP-glass}$ . In AIP Conference Proceedings, 2050(1): 020012. AIP Publishing LLC.

Mawphlang, B. R. K. L. L., Rai, D.P., Patra, P.K. (2020). Study of buckling behaviour of a single-walled fixed-fixed carbon nanotube using nonlocal continuum model and Laplace transform, In: Advances in Nuclear Physics and Condensed Matter, L. K. Singh (Ed.). EBH Publishers (India) Guwahati, p. 245-253; ISBN: 978- 93-88881- 20-3.

Thakur Singh, Y., Rai, D.P., Patra,

P. K. (2019). Electronic and Optical properties of (6,1) carbon nanotube from CAO-DFT approach at the National conference on “Functional materials and Applications-2019(NCFMA-2019), held at NIT, Mizoram during November 22-23.

Chhetri, B., Rai, D.P., Patra, P.K.,

Srivastava, S. (2019). Electronic Properties of Hydrogenated Hexagonal Boron-nitride (h-BN) from Density Functional Theory at the International conference on “Nanotechnology (ICNT-2019) held at institute of Fire and Safety Engineering, Haldia, West Bengal during December 28-29.

## Research Projects

### Ongoing

Title of Project	PI/Co-PI	Funding Agency	Amount ( in Rs)
Climate Change assessment in selected areas of Meghalaya using meteorological measurements and its impact on water resources	Prof. A. Saxena	Department of Science Technology (SPLIC: Climate Change Programmeme)	Rs.63,04,230/-

## Academic Collaborations

### Prof. B. Jyrwa

Member of the (i) GB of St. Edmunds College, Shillong, Meghalaya, (ii) BOS of Physics Department of Don Bosco University, Azara, Assam, (iii) International Advisory Committee of the forthcoming Conference on Trends in Modern Physics (TIMP) to be held at Don Bosco University, Azara, Assam, February, 2021, (iv) discussion panel “On the Proposal for Installation and operation of Accelerator technology in NE region” (collaboration of North - East Universities for Cotton University Particle Accelerator Centre (CUPAC) held on July 29, 2020.

### Prof. A. Saxena

Collaborated with (i) Prof. R. J. Buenker, Bergische Universitaet–Gesamthochschule Wuppertal FachbereichC-Theoretische Chemie, Gaussstr. 20-42097, Wuppertal,

Germany, on “Elastic Scattering and electron capture in collisions of ion with molecule”, (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”, (iii) Dr. B. K. Sahoo, Scientific Officer (E), Radiological Physics Division BARC, Mumbai, on “Radon, Thoron and Gamma radiation”, (iv) Dr. Amit Shankar, Kurseong College, Kurseong, Darjelling, on “Density Function Theory calculations”, (v) Prof. Devesh Walia, Department of Environmental Studies, NEHU, on “Micro Earthquake and Magneto telluric technique”.

### Prof. P. K. Patra

Collaborated with Dr. D. P. Rai, Physics Department, Pachhunga University College, Aizawl, Mizoram.

***Other Activities***

**Prof. A. Saxena**

Life Member of the Indian Society for Training & Development (ISTD).

**Prof. M. C. Mahato**

***Reviewer*** : Physical Review E.

**Prof. P. K. Patra**

Participated in a (i) two-day Workshop on Massive Open Online Courses (MOOCs) on the theme “Adoption, Promotion and Development of MOOCs through SWAYAM platform”, organized by NEHU, Shillong during May 28-29, 2019, (ii) Workshop on Plagiarism organized by Central Library, NEHU & INFLIBMENT, Gandhinagar on August 23, 2019.

***Reviewer*** : J. Micromech. Microeng.

## DEPARTMENT OF STATISTICS

**Head** : Prof. R. Singh (up to May 01, 2019)  
 Prof. T. K. Chakrabarty (w.e.f. May 02, 2019)

**Telephone** : 0364-2722901(O)

**E-mail** : hodsta@nehu.ac.in

### Faculty: 06

Designation	Name and Qualification	Specialization
<b>Professor</b>	Prof. G. Das, M.A. (Delhi Univ.), Ph.D. (NEHU)	Survey Sampling
	Prof. R. Singh, M.Sc. & Ph.D. (Patna Univ.)	Econometrics, Demography, Poverty & Human Development
	Prof. T. K. Chakrabarty, M.Stat. (Agra Univ.), Ph.D. (Manipur Univ.)	Modeling with quantile functions, Time Series Modeling, Statistical Demography and Health Analytics
<b>Associate Professor</b>	Dr. B. K. Gupta, M.Sc. (AMU), Ph.D. (Gauhati Univ.)	Survey Sampling
	Dr. S. K. Jha, M.Sc. & Ph.D. (Patna Univ.)	Probability Distribution, Correlated Data Analysis, Computation and Spatial Statistics
<b>Assistant Professor</b>	Dr. B. Das, M.Sc. & Ph.D. (Gauhati Univ.)	Distribution Theory

### Thrust Areas of Research

Distribution Theory, Survey Sampling, Modelling with quantile functions, Spatial Statistics, Event History and life course data analysis, Demography, Econometrics, Poverty & Human Development.

### Brief Statement of Academic Activities

The Department is financially supported by the FIST programme of DST, Government of India. It offers choice-based credit system in MSc, M.Phil. and Ph.D. Programmes. The Department also imparts adequate training in theoretical and practical areas of the subject using softwares, namely STATA,

SPSS, R, S-PLUS, SYSTAT, MINITAB and MS-EXCEL. The Department offers a compulsory paper on Research Methodology in the M.Phil./Ph.D. courses. All the faculty members are actively engaged in research areas such as Econometrics, Demography, Spatial Statistics, Statistical Distribution Theory, Survey Sampling Theory and Time Series. The Department organized a two-day National Seminar on Statistics, Big Data and Data Science during November 21-22, 2019, with financial support from NEHU, Shillong.

### Students' Profile

Enrolment Capacity: M.Sc. - 27, Ph.D. - 03

Degree	Male	Female	SC	ST	OBC	GEN	EWS	Meghalaya	Non-Meghalaya	Total
M.Sc.	15	10	-	21	-	03	01	11	14	25
M.Phil.	01	-	-	01	-	-	-	-	01	01
Ph.D.	-	03	-	01	-	02	-	02	01	03

### Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.Sc.	03	10	01	-	01	-	05	08	13
Ph.D.	01	01	-	01	01	01	-	02	02

### Students Awarded PhD Degree

Name of Student	Title of Thesis	Name of Supervisor
Ms. Deepshikha Deka	A Study on Transmuted Exponentiated Gumbel Distribution	Dr. B. Das
Mr. N. Vikimchandra Singh	A Study on Spatial Autoregression Based Areal Models With Applications	Dr. S. K. Jha

### Research Fellowship

CSIR-UGC-NET	UGC Non-Net	Rajiv Gandhi SC/ST	ICPR Fellowship	Meritorious Fellowship	Maulana Azad Minority Fellowship	National Fellowship for ST(NFST)	Others
-	12	-	-	-	-	01	-

### Fieldwork/Educational Tour of Students

**Teacher-in-Charge** : Dr. B. Das

**Place /Institutions Visited:** Indian Statistical Institute, Kolkata and Tezpur University

**Duration of Tour** : 10 days (January 06 – 15, 2020)

**Purpose of Tour** : Educational Tour

### Courses Conducted

**Postgraduate: M.Sc.**

#### Semester I

Mathematical Analysis and Linear Algebra, Distribution Theory, Probability Theory, Practical I: Statistical Computing in R, Practical II: Distribution and Linear Algebra.

#### Semester II

Survey Sampling, Statistical Inference I, Linear Models and Regression Analysis, Poverty, Human Development and

Environmental Statistics, Practical III: Sampling, Inference I and Regression.

### ***Semester III***

Design and Analysis of Experiments, Statistical Inference II, Econometrics, Stochastic Processes, Practical IV: Design, Inference II and Econometrics.

### ***Semester IV***

Applied Multivariate Analysis, Time Series Analysis and Forecasting, Project Work, Practical V: Multivariate and Time Series and components from Optional Paper, One of the following optional papers: Reliability Theory, Operation Research, Population Dynamic and Demography.

### **M.Phil./Ph.D. Courses**

Research Methodology in Statistics, Bayesian Inference and Analysis, Statistical Modelling, Topics on Statistical Inference and Survey Sampling.

### **Seminars/Conferences/Workshops/ Symposia/Extension Programmes (National/International)**

#### ***Organized***

The Department organized a National Seminar on Statistics, Big data and Data Science at NEHU, Shillong during November 21 - 22, 2020. (Convener: Prof. T. K. Chakrabarty).

#### ***Attended***

#### **Dr. B. K. Gupta**

Presented a paper on “Allocation of sample size in stratified SRSWOR design using separate ratio estimator under a Super population model” in the eighth International Conference on Agricultural Statistics (ICAS-VIII) held at Ministry

of Agriculture and Farmers Welfare, Government of India at New Delhi during November 18 - 21, 2019.

#### **Dr. B. Das**

Presented a paper on “Concomitant of Record Values of Bivariate Exponentiated Inverted Weibull Distribution” on Recent Advances in Statistics and Data Science for Sustainable Development organized by Department of Statistics, ISPS & Utkal University during December 21-23, 2019.

### **Publications**

#### **Research Papers**

##### ***Published in India***

Das, B., Deka, D. (2019). On Concomitants of Upper Record Statistics and Survival Analysis for a Morgenstern Type Bivariate Transmuted Exponentiated Gumbel Distribution. IJSRMSS, 6(2): 239-251. (ISSN: 2348-4519)

Das, B., Deka, D. (2019). Percentage Points of Transmuted Exponentiated Gumbel Distribution (TEGD). IJSRMSS, 6(4): 62-66. (ISSN: 2348-4519)

##### ***Published Abroad***

Maji, S. G., Chakrabarty, T.K. (2019). Heterogeneity in the intellectual capital and performance of Indian commercial banks: panel data quantile regression analysis. Bank Parikrama, XLIV (1-2): 27-52.

Sharan, R.N., Chanu, T.M., Chakrabarty, T.K., Farsalinos, K.(2020). Patterns of tobacco and e-cigarette use status in India: a cross sectional survey of 3000 vapers in eight Indian cities. Harm



Reduction Journal, 17(21): <https://doi.org/10.1186/s12954-020-00362-7>.

### **Books/Book Chapters/Proceedings**

Deb, J., Chakrabarty, T. K. (2020). Unsupervised learning of the sequences of adulthood transition trajectories. In: Applications of Machine Learning: Algorithms for Intelligent Systems. Johri, P., Verma, J., and Paul, S. (Eds.). Springer, Singapore. [https://doi.org/10.1007/978-981-15-3357-0\\_20](https://doi.org/10.1007/978-981-15-3357-0_20).

Sharma, D., Chakrabarty, T. K. (2020). A quantile-based approach to supervised learning. In: Applications of Machine Learning: Algorithms for Intelligent Systems. Johri, P., Verma, J., and Paul, S. (Eds.). Springer, Singapore. [https://doi.org/10.1007/978-981-15-3357-0\\_21](https://doi.org/10.1007/978-981-15-3357-0_21).

### **Funds Received from Agencies including NEHU/UGC**

NEHU Grant in Aid General (OH-31): Rs. 3.00 lakhs

Departmental Wise Fund under EWS Scheme: Rs. 3.00 lakhs

### **Other Activities**

#### **Dr. B. K. Gupta**

Participated in training on the “Use of administrative data in agricultural statistics” held at New Delhi organized by EUROSTAT-European commission on November 22, 2019.

#### **Dr. T. K. Chakrabarty**

Delivered invited lectures on (i) “Categorical Data Analysis using Statistical Software” in one-week Workshop on “Quantitative Techniques and use of Statistical Software

in Research” organized by Department of Statistics, Dibrugarh University during December 03 – 07, 2019. (ii) ‘National Workshop on Research Methodology in Social Sciences for Research Scholars and Faculty Members’ held at ICSSR, NEHU, Shillong during December 04 - 13, 2019.

Delivered two lectures on Bio and Ecological Statistics in the Refresher Course in Zoology held at Department of Zoology, NEHU, Shillong during March 28 - April 17, 2019.

Delivered an invited talk on “Statistical Foundation for Artificial Intelligence” in the one-week AICTE Training and Learning Workshop on Artificial Intelligence-2019, organized by the Department of ECE, School of Technology, NEHU during October 21-29, 2019.

Delivered a key note address as the Chief Guest on the occasion of ‘National Statistics Day’, organized by the National Statistical Office (NSO), MoS & PI, Shillong on June 29, 2019.

Acted as a member of the State Level Task Force on Mobility, Government of Meghalaya during 2018-2019.

**Reviewer** : Elsevier journal Clinical Epidemiology and Global Health.

#### **Dr. S. K. Jha**

Delivered invited talk on ‘Sustainable Development Goals’ on the occasion of ‘National Statistics Day’ organized by the National Statistical Office (NSO), MoS & PI, Shillong on June 29, 2019.

Delivered lectures in the ‘National Workshop on Research Methodology in Social Sciences for Research Scholars and

Faculty Members' held at ICSSR, NEHU, Shillong during December 04 – 13, 2019.

**Dr. B. Das**

Delivered invited lecture on Concomitant of Order Statistics for Bivariate Exponentiated Gumbel distribution in National Seminar on Recent Trends in Theoretical and Applied Statistics-IV (RTTAS-IV) held

at the Department of Statistics, Dibrugarh University on March, 19, 2019.

Completed Short term course in Research Methodology for Basic Sciences held in NEHU, Shillong organized by HRDC, NEHU, Shillong during May 27- June 01, 2019.

## VII

### SCHOOL OF SOCIAL SCIENCES

**Dean** : Prof. Cecile A. Mawlong  
**Telephone** : 0364 - 2723001 (O)  
**E-mail** : deansss@nehu.ac.in, camawlong@hayoo.com

The various Departments under this School have been offering M.Phil./ Ph.D. courses along with the Postgraduate programmes. Besides the Department of Law offers Five-year integrated B.A. LLB. (Hons) course and the Department of Cultural and Creative Studies also offers Diploma courses in Music and Painting. These Departments also carry out extension activities along with the students, as part of their academic programmes. These Departments are well known for carrying out several pioneering researches on various aspects of North-East India, as part of their designated thrust areas of research.

In the last one-year, several educational tours to various parts of India were undertaken by the (a) Department of Cultural and Creative Studies to Goa and Kolkata, (b) Department of Political Science to Mumbai and Goa, (c) Department of Law to Manali and Delhi, to familiarise the students of this university with diverse culture and historical heritage of these cities. Several Departments also undertook field trips, as part of their academic courses. The Department of History under the supervision of Prof. Cecile A. Mawlong, organized field studies for the students in Umiam, Ri-Bhoi district and the Department of Cultural

and Creative Studies under the leadership of Prof. D. Kharmawplang of NEHU and Prof. Damrung Pornrat of CU, also jointly organized a field trip to Pahambir and Pamlatar villages in Ri-Bhoi district during May 07- 09, 2019, as part of Chulalongkorn University, Bangkok - NEHU Innovative ASEAN – India Academic Cooperation 2019-2021.

The Departments of History, Political Science and Sociology are also recognized as UGC-SAP Departments.

All Departments under the School regularly hold several Seminars/ Conferences/ Workshops etc on various important National and International issues for the benefit of young students and faculty members of this university. A large number of faculty members of the School also were invited to present their research papers in various regional, National and International events held in different parts of India and abroad. Many of them were also invited to deliver keynote address and to chair technical sessions. The faculty members of the School also were invited to deliver lectures as resource persons in their respective field of expertise in different Refresher Courses/ orientation courses and

other academic programmes, organized by different UGC-HRDCs and other universities. Some of the faculty members also served as members of the editorial boards of various reputed National and International journals. The Departments of the School also organized various National/ International Seminars / Workshops in collaboration with other academic institutions within the country and abroad,

namely Bangladesh and Thailand. Prof. D. Kharmawphlang was invited as a resource person at the Welsh-Khasi Cultural Dialogues at University of South Wales in Cardiff and St. Fagan Museum of National History during October 05-10, 2019. Faculty members of the School have also published their research papers as book chapters, books, and various National and International research journals.

## DEPARTMENT OF CULTURAL AND CREATIVE STUDIES

**Head** : Prof. D. L. Kharmawphlang (up to May 26, 2019)  
 Prof. S. K. Nanda (w.e.f. May 27, 2019)  
**Telephone** : 0364-2723382/3371/3372 (O); 09436702498 (M)  
**E-mail** : hodcccs@nehu.ac.in; nanda\_subrat2@yahoo.com; sknanda@nehu.ac.in

### Faculty: 04

Designation	Name and Qualification	Specialization
<b>Professor</b>	Prof. Desmond L. Kharmawphlang, Ph.D. (NEHU)	Folkloristics
	Prof. Subrat Kumar Nanda, Ph.D. (JNU)	Folkloristics
<b>Associate Professor</b>	Dr. Lapyinshai Syiem, Ph.D. (NEHU)	Music
<b>Assistant Professor</b>	Shri Bedanta Kalita, M.F.A. (M S Univ., Baroda)	Painting

### Thrust Areas of Research

Study of various theoretical, conceptual, analytical, contextual and empirical issues related to different aspects in the fields of folklore, folk and traditional music and visual arts.

### Brief Statement of Academic Activities

The Department offers regular courses at both PG and PG Diploma level. The courses offered by the Department comprise MA course in folkloristics, PG Diploma course in music / painting. In addition, the Department offers the Ph.D. course in folkloristics and traditional/folk music, which covers primarily research studies related to different aspects and dimensions

of folklore and other cognate 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 by subject matter experts and supervisors. Both theoretical knowledge and practical training are provided to the students admitted to the postgraduate course in folkloristics and the postgraduate diploma courses in music and painting. Besides full-time teaching and research activities, the Department is regularly engaged in extension activities as part of its outreach academic programmes.

### Students' Profile

**Enrolment Capacity:** M.A. (Folkloristics) - 30, P.G. Diploma (Music) - 20, P.G. Diploma (Painting) - 10, Ph.D. - 04

Degree	Male	Female	ST	OBC	GEN	Meghalaya	Non Meghalaya	Total
M.A. (Folkloristics)	10	20	30	-	-	25	05	30

PG Diploma Music	06	05	11	-	-	09	02	11
PG Diploma Painting	04	06	10	-	-	08	02	10
PhD	03	01	04	-	-	03	01	04

### ***Degrees Awarded***

Degree	Male	Female	ST	OBC	GEN	Meghalaya	Non Meghalaya	Total
MA Folkloristics	12	14	26	-	-	23	03	26
PG Diploma Music	-	03	03	-	-	03	-	03
PG Diploma Painting	02	04	06	-	-	06	-	06

### ***Research Fellowships: 16***

CSIR-UGC-NET	UGC NON-NET	Rajiv Gandhi SC/ST	ICPR Fellowship	Meritorious Maulana Azad Minority Fellowship	Any other	Others
10	04	01	-	-	(Swami Vivekananda Single Child Fellowship)	---

### **Fieldwork/Educational Tour of Students:**

**Teacher-in-Charge** : Mr. Pynjanai Mallai and Mr. Barikupar Paswett

**Places/Institutions Visited:** Goa and Kolkata

**Duration of Tour** : 16 days (January 19- February 03, 2020)

**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. Besides the educational tour, a field trip for the students

of MA(Folkloristics) was conducted at Pahambir village in Ri-Bhoi district of Meghalaya on 16th November 2019 under the supervision of Prof. Desmond L. Kharmawphlang to study the folk material culture of the region.

### **Courses Conducted**

#### **Postgraduate: M.A. (Folkloristics)**

##### ***Semester I***

Introduction to Folkloristics, History of Folklore Studies, Introduction to Semiotics, Folklore Theories I, Field Methods and 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

### **P. G. 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 Traditional 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)

### **P. G. Diploma (Music)**

#### ***Semester I***

Brief History of Indian Classical Music (Theory), Introducing 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)

### **Ph.D. Coursework**

Research Methodology, Recent Trends in Folkloristics, Advanced Course in Performing Arts

### **Seminars/Conferences/Workshops/Symposia/Extension Programmes**

#### ***Organized***

The Department organized a two-day National Symposium on “Urban Folklore with Special Reference to Northeast India” at NEHU, Shillong Campus during August 22 - 23, 2019. (Coordinators: Prof. Desmond L. Kharmawphlang and Prof. S. K. Nanda)

#### ***Attended***

#### **Prof. Desmond L. Kharmawphlang**

Presented papers on (i) “Performing the Visual: Texting Textile” at the two-day National Seminar on Contesting the Site of Sights: The Discourse of Visual Media Cultures with Special Reference to Northeast India” organized by EFL University, Shillong during June 10 – 11, 2019, (ii) “Subaltern Spaces: Khasi Sacred Forest and the Colonial Experience” in the International conference on Custom, Law and the Colonial State in North-East India: Dynamics and Challenges for the Post-colonial State” organized by the Nehru Memorial Museum and Literary, New Delhi held at NEHU, Shillong on June 13, 2019, (iii) “Performing the Sacred: The Sun Story as a Khasi Oral Epic” in the National Seminar on “Celebrating Indigenous Literatures in India” organized by St. Xavier’s College, Mumbai during January 08 – 09, 2020, (v) “Ecocriticism and Folklore in Khasi Fiction” in the National



Seminar on Regionality, Environment and Literature organized by Sahitya Akademi, New Delhi during February 27-29, 2020, (v) “Privileging the Pagan: Colonial Construction of the Cosseah” in the National Seminar on Colonial Writings on North-East India, organized by Tezpur University during November 28 -29, 2019.

Delivered the Fr. Noel Kenny Memorial Lecture on “Folklore: From Peasantry to Patrician, from Rural to Urban” at St. Anthony’s College, Shillong on September 14, 2019.

Resource Person in the Welsh-Khasi Cultural Dialogues research activities at University of South Wales in Cardiff and St. Fagan Museum of National History during October 05 – 10, 2019.

#### **Prof. Subrat K. Nanda**

Presented a paper on “Gender and Visual Media Culture: A Critical Appreciation of their Interrelationship” at the two-day National Seminar on “Contesting the Site of Sights: The Discourse of Visual Media Cultures with Special Reference to Northeast India” organized by the English and Foreign Languages University, Shillong Campus in association with ICSSR-NERC, Shillong and Maulana Abul Kalam Azad Institute of Asian Studies (MAKAIAS), Kolkata during June 10-11, 2019.

Chaired a session on “Gender and Urban Folklore” at the National Symposium on “Urban Folklore with Special Reference to Northeast India” organized by the Department of Cultural and Creative Studies, NEHU, Shillong, Meghalaya during August 22-23, 2019 on the occasion of World Folklore Day.

#### **Other Activities**

##### **Prof. Desmond L. Kharmawphlang**

As part of the Chulalongkorn University (C.U.), Bangkok, NEHU innovative ASEAN-India academic cooperation 2019 -2021, supervised a field trip to Pahambir and Pamlatar villages in Ri-Bhoi District during May 07– 09, 2019. The joint team from C.U., Bangkok and NEHU, Shillong was led by Prof. Damrung Pornrat of C.U. and Prof. Desmond L. Kharmawphlang, NEHU.

Chaired (i) the plenary lectures in the International conference on “Custom, Law and the Colonial State in North-East India : Dynamics and Challenges for the Post-colonial State” organized by the Nehru Memorial Museum and Library, New Delhi at NEHU, Shillong on June 13, 2019, (ii) a session at the two-day National Seminar on “Contesting the Site of Sights: The Discourse of Visual Media Cultures with Special Reference to Northeast India” organized by EFL University, Shillong during June 10 -11, 2019, (iii) a session in the National Seminar on “Colonial Writings on North East India” organized by the Centre for Assamese Studies and Department of Cultural Studies under the aegis of UGC’s Centre with Potential for Excellence in Particular Areas, Tezpur University during November 28 – 29, 2019

As part of the Chulalongkorn University (C.U.)-NEHU innovative ASEAN-India academic cooperation 2019-2021, jointly conducted with Prof. D. Suppakorn of C.U, the Design Innovative Centre Workshop in the Department of Cultural and Creative Studies during June 17-18, 2019.

Delivered lectures on (i) Tribal Studies

in the Orientation Course in the Human Resource Development Cell, NEHU, Shillong on June 27, 2019, (ii) Living Root Bridges of the Khasis of Meghalaya at Ca Foscari University, Venice, Italy during July 02 – 04, 2019, (iii) “Cultural and Linguistic Studies in North-East India: Prospects and Challenges” as a keynote speaker at the National Seminar organized by Sankardev College, Shillong on October 30, 2019.

As coordinator, conducted the Refresher Course in Folkloristics and Semiotics, organized by the UGC-Human Resource Development Centre, NEHU, Shillong during September 16 – 28, 2019.

### **Prof. Subrat K. Nanda**

As co-coordinator, conducted the Refresher Course in Folkloristics and Semiotics, organized by the UGC-Human Resource Development Centre, NEHU, Shillong during September 16 – 28, 2019.

Delivered two lectures on “Structuralism, Post structuralism and Semiotics” and one lecture each on “Semiotics and Folkloristics” and “Folk Culture and Popular Culture”, respectively at Refresher Course in Folkloristics and Semiotics, organized by the UGC-Human Resource Development Centre, NEHU, Shillong during September 16 - 28, 2019.

## DEPARTMENT OF HISTORY

**Head** : Prof. Vanlalruata Rengsi  
**Telephone** : 0364-2723019  
**E-mail** : ruatarengsi@yahoo.co.in

**Faculty: 10**

Designation	Name and Qualification	Specialization
<b>Professor</b>	Prof. F. A. Qadri, M.Phil. & Ph.D. (AMU)	Medieval Indian History & North-east India.
	Prof. C. A. Mawlong, M.A. & Ph.D. (NEHU)	Archaeology & Early Northeast India
	Prof. T. Gurung Nag, M.Phil. & Ph.D. (NEHU)	Modern Indian History & North-east India
	Prof. A. K. Thakur, M.A. & Ph.D. (BU, Muzaffarpur)	Medieval Indian History & North-east India.
	Prof. V. R. Rengsi, M.Phil. & Ph.D. (NEHU)	History of Sciences & Non-Indian History
	Prof. S. N. Lamare, M.Phil. & Ph.D. (NEHU)	Modern Indian History & Modern Northeast India.
<b>Associate Professor</b>	Dr. A. Mathur, M.A. & Ph.D. (Rohilkhand Univ.)	Ancient Indian History, Culture & Archaeology.
	Dr. M. S. N. Rahman, M.A. & Ph.D. (Calcutta)	Medieval Indian History
<b>Assistant Professor</b>	Dr. B. Dutta, M.A. & Ph.D. (NEHU)	Modern Indian History

### Thrust Areas of Research

North-East India.

### Brief Statement of Academic Activities

During the period under report the faculty members of the Department were involved

in several academic programmes like attending /organizing Seminars, field and study tours, conducting Refresher Course for College/University teachers, and holding dialogues with colleagues engaged in undergraduate teaching within the region.

## Students' Profile

**Enrolment Capacity:** MA-50, MPhil/PhD -Variable

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.A.	11	43	-	47	-	07	22	32	54
M.Phil.	-	02	-	-	-	02	-	02	02
Ph.D.	06	11	-	10	-	07	05	12	17

## Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.A.	13	29	-	40	-	02	21	21	42
M.Phil.	01	03	-	01	-	03	-	04	04
Ph.D.	03	01	-	04	-	-	02	02	04

## Students Awarded PhD Degree

Name of Student	Title of Thesis	Name(s) of Supervisor(s)/ Joint Supervisor
Mr. Raktim Patar	The Tiwa: An Ethnohistory	Prof. Cecile A. Mawlong
Mr. Saramwung Raikhan	Ecological History of the Tangkhul of Manipur in the Pre-Colonial and Colonial Period	Prof. S. N. Lamare
Mr. Eric Hynniewta	Role of Ecology and Environment in Social and Cultural Formations in Khasi Hills	Prof. A. K. Thakur
Ms. Patricia Warjri	Deforestation in the Khasi Hills: A Study in Environmental History	Prof. Vanlalruata Rengsi

## Placement of Students

Dr. Lasoborki Pyrngap, Assistant Professor, Shillong College, Shillong, July 2019

Dr. Eric Hynniewta, Assistant Professor, Sankar Dev College, Shillong, July, 2019

## Research Fellowship

CSIR-UGC-NET	UGC Non-Net	Rajiv Gandhi SC/ST	ICPR Fellowship	Meritorious Fellowship	Maulana Azad Minority Fellowship	Others ICHR
-	25	05	-	-	-	01

## **Educational Tour of Students**

**Teacher-in-Charge** : Prof. C. A. Mawlong

**Places/Institutions Visited**: Umiam, Ri Bhoi District

**Duration of Tour** : One day (May 29, 2019)

**Purpose of Tour** : Field study on Archaeology: Methods and Approaches – an 'observations.

## **Courses Conducted**

### ***Semester I***

Historical Methods I, Prehistoric to Ancient Societies, Modern Indian Society, British Expansion and Imperial Policy in India, Economy and Society in Medieval India, Economy and Society in Ancient India, Technology in the Making of Early China, The Rise of Islam and the Early Caliphate, Social Movement in USA.

### ***Semester II***

Historical Methods II, Feudalism, Colonialism, Imperialism and Economic Change in India, Ancient Indian Polity and Society, Polity and Society in Medieval India, History of the Greco Roman Civilization, The Umayyad and Abbasid Empires, Colonialism in South East Asia, (Open Course): Society, Technology and History: Prehistoric Age to Industrial Revolution

### ***Semester III***

Capitalism and Imperialism, I, Religion and Society in Ancient India, Indian Nationalism, History of Ideas in Modern India, Political Ideas and Institutions During the Sultanate Period, (Open Courses)

Social Forces and Social Mobilization, Introduction to Gender History.

### ***Semester IV***

Capitalism and Imperialism II, Social and State Formations, Perspective in the History of North-East India, Colonialism, Communalism and Secularism, Political History of the Delhi Sultanate, Political History of the Mughal Empire, Contemporary India.

## **M.Phil./P.h.D. Courses**

Research Methodology, History and Theory, Critical Reading of History (Seminar Paper)

## **Seminars/Conferences/Workshops/Symposia/Extension Programmes (National/International)**

### ***Organized***

#### **Dr. M. S. N. Rahman**

Organized an International Seminar on Sufism and its Influence in Indian Subcontinent as the Seminar Coordinator in the Department of History, NEHU in collaboration with Allama Rumi Society Bangladesh, Dhaka, Bangladesh held in NEHU, Shillong on September 03, 2019.

### ***Attended***

#### **Prof. C. A. Mawlong**

Presented a paper on “Matriliny, Power-Relations and Governance in Khasi-Jaintia Society: A Study of Traditional Political Institutions and their Modern Counterparts”, at an International Seminar on the theme Custom, Law and the Colonial State in Northeast India: Dynamics and Challenges for the Postcolonial State organized by Nehru Memorial Museum & Library, New Delhi in collaboration with the Department of History, NEHU, Shillong during June 13-14, 2019.

Delivered a key note talk in a National Seminar on the theme “Transitional Aspects of Indigenous People of Northeast India: Contemporary Issues on Sustainability”, organized by Netaji Subhas Mahavidyalaya, Udaipur, Tripura during January 11 - 12, 2020.

**Prof. T. Gurung Nag**

Presented papers on (i) “Of Pirs and Dargahs: An Exploratory Study of Sufi Saints and Shrines in Assam” in an International Seminar on Sufism and its Influence in Indian Subcontinent, organized by Department of History, NEHU, Shillong and Allama Rumi Society, Bangladesh on September 03, 2019, (ii) “The Colonial State, ‘Small Wars’ and Gurkhas in the North-East Frontier of India” International Conference on ‘Warfare in South Asia: From Ancient to Modern Times’, organized by the Department of History, Jadavpur University, Kolkata during January 07 – 08, 2020.

Acted as a Coordinator in a one-day Symposium on ‘Writing Histories of Resistance: From Transgression to Transformation’, organized by Global South Asian History Network, NEHU, Shillong on October 01, 2019

**Prof. A. K. Thakur**

Presented a paper on “Writing a History of the Now: Journalists’ Travels in Contemporary Northeast India” during the 40<sup>th</sup> Annual Conference of North-East India History Association held at K. S. Hiteswar Saikia College, Guwahati, Assam during October 24 – 26, 2019 (Co-author: Chinmaya Lal Thakur).

**Prof. V. Rengsi**

Presented a paper on ‘The Evolution of

pre - Colonial Mizo Society with special reference to Law’ in an International conference on ‘Custom, Law and the Colonial State in Northeast India: Dynamics and Challenges for the Post colonial State’, organized by Nehru Memorial Museum and Library and Department of History, NEHU, Shillong during June 13 - 14, 2019.

**Prof. S. N. Lamare**

Attended as Resource person in (i) International Seminar on “Community and Cultural Multiplicity in North East India and South Asia: Ethnography, History and Society”, organized by the North East India Council for Social Science Research, held at Law College Shillong and presented a paper on “Ethnicity and Acculturation: The Jaintia Perspective” during May 20 - 22, 2019, (ii) International Seminar on Sufism and its Influence in Indian Subcontinent, held at the Department of History, NEHU, Shillong in Collaboration with Allama Rumi Society, Bangladesh, and presented a paper on “Beyond the Borders of the Sacred to the Secular” on September 03, 2019, (iii) Workshop on preservation of Vulnerable and Endangered Heritage, organized by Thomas Jones College, Jowai in Collaboration with the Indian National Trust for Art and Cultural Heritage (INTACH) and presented a paper on “Of Colours and Other Forms of Aesthetics: Challenging Change lessness” on November 15, 2019.

Co-Chaired a Technical Session on “History, Migration and Social Movement” in an International Seminar on “Community and Cultural Multiplicity in North East India and South Asia: Ethnography, History and Society”, organized by the North East India Council for Social Science Research, held

at Law College Shillong on May 21, 2019

Attended a National conference on “External Dimensions of Security of the Northeast Region”, Sapru House, New Delhi, held at the Indian Council of World Affairs (ICWA) and Asian Confluence during October 10 – 11, 2019

### **Prof. A. N. Passah**

Presented papers on (i) “Subhas Chandra Bose as viewed through the lens of the I.N.A” in a National Seminar on I.N.A and North East India, organized by Maulana Abul Kalam Azad Institute of Asian Studies, Kolkata, Moirang during August 03 – 04, 2019, (ii) “The Jaintia and Customary Law: The Colonial Interface,” in the International conference on ‘Custom, Law and the Colonial State in Northeast India: Dynamics and Challenges for the Post-Colonial State’ held at Nehru Memorial Museum and Library, New Delhi in collaboration with the Department. of History, NEHU, Shillong during June 13-14, 2019, (iii) “South East Asia and North East India: Some Perspectives” in the International Seminar on ‘Community and Cultural Multiplicity in North East India and South Asia: Ethnography, History and Society’ held at the North East India Council for Social Science Research, at Shillong Law College, Shillong during May 20 – 22, 2019.

### **Dr. M. S. N. Rahman**

Presented papers on (i) ‘Indo-Iran Cultural Relations as reflected in the writings of Rabindranath Tagore’, in an International Seminar on “Historical Silk Road and Inter cultural Communication between India, Iran, Afghanistan, Turkey, Azerbaijan & Central Asia” held in the Department of Persian, Gauhati University during

February 06 - 08, 2020, (ii) ‘Religious and Cultural Syncretism in Medieval Bengal’, Presidential address, Medieval India Section, Paschim Banga Itihas Samsad, held at Brahmananda Keshab Chandra College, Kolkata during January 24-26, 2020, (iii) ‘Vaishnavism as a Syncretic Force in Medieval Bengal’ Public lecture delivered at Nehru Memorial Museum and Library, New Delhi on November 22, 2019, (iv) ‘Social Reforms of Vidyasagar’ Regional Seminar on Life and Times of Iswarchandra Vidyasagar, held in Bangiya Shahitya Parishad, Shillong on September 29, 2019, (v) ‘Sufism in Indian Environment’ International Seminar on Sufism and its Influence in Indian Subcontinent held in the Department of History, NEHU, Shillong in collaboration with Allama Rumi Society Bangladesh, Dhaka, Bangladesh on September 03, 2019, (vi) ‘Problems and Prospects of the Minorities of Assam’, Regional Seminar on Minorities in Assam: Advancement through Challenges held at Kayakuchi College, Barpeta, Assam on July 01, 2019, (vii) ‘Composite Culture in India with special reference to Bengal’, International Seminar on Composite Culture in South-East Asia through Ages, organized by Garia Suchintan Society for Culture and Indian Association, Kolkata during June 15-16, 2019, (viii) ‘Patriotism in Bengali Literature’, Dr. Md. Mozaharul Islam Memorial Lecture – 2019 organized by Dr. Md. Mozaharul Islam- Shirley Islam Foundation, Khulna, Bangladesh on April 12, 2019.

### **Dr. B. Dutta**

Presented papers on (i) ‘From Lines to Belts: Legislating Anxiety, immigration and community relations in late colonial Assam’ in the International conference on



‘Custom, Law and the Colonial State in Northeast India: Dynamics and Challenges for the Post colonial State’ organized by Nehru Memorial Museum and Library and Department of History, NEHU during June 13 – 14, 2019, (ii) ‘NRC in Assam and its Impact on Security in North-East India’ in a National Conference on External Dimensions of Security of the North-Eastern Region organized by Indian Council of World Affairs, Sapru House, New Delhi during October 10 - 11, 2019, (iii) ‘NRC and the citizenship Imbroglio in north-east India’ in a National Conference on Citizenship in Contemporary times, organized by the Institute of Development Studies Kolkata during November 20 – 21, 2019.

## **Publications**

## **Research Papers**

### ***Published in India***

Dutta, B. (2019). “The Long Shadow of Partition and the predicament of Citizenship in Post-colonial Assam”. *Dialogue Quarterly*, 21 (1): 45-55. ISSN: 0973-0095.

Dutta, B. (2019). “A Legacy of Divided Nations: Understanding North-East India partitions in light of the Look-East/Act-East Policy”. *Man, and Society*, XVI: 7-20. ISSN 2229-4058.

Dutta, B. (2019). “Metaphor of Oil and Water: Dietary Practices and Communal Mobilization in Colonial Eastern Bengal and Assam”. *The Heritage*, X, (2): 16-27. ISSN 2229-5399.

Dutta, B. (2019). “Lest We Forget...: The Many Partitions and its legacy in North-east India’ *Partition Studies Quarterly International Online Journal*,

1 (1).

Rahman, M. S. N. (2019). Sushil Chaudhury (1937-2019). *Itikotha*, VII, (2): 21-25. ISSN 2320-3447.

Rahman, M. S. N. (2020). *Samaj Samaskarak Vidyasagar, Karmoshala, Shillong Bangiya Sahitya Parishad, Shillong*, 3rd Issue, Paus, 1426 B.S. (Bengali).

Rahman, M. S. N. (2019). Obituary of Sushil Chaudhury, *Monthly Bulletin*, Asiatic Society, Calcutta.

## **Books/Book Chapters/Proceedings**

Thakur, A. K. (2020). Historical reconstruction of the past of Northeast India: An assessment of colonial writings. In: *Tribal Studies in India: Perspectives of History, Archaeology and Culture*. Maguni Charan Behera (Ed.). Springer Nature Singapore Pvt. Ltd., Gateway East, Singapore, Chapter 4, p.67-79.

Thakur, A. K. (2019). Colonial ethnography in North-East India: A critique. In: *Ethnography, Historiography and North-East India*. H. Sudhir (Ed.). The Asiatic Society, Kolkata, Chapter 4, p.57-75.

Dutta, B. (2020). ‘Scented Love Notes, Cats and other Stories: Revisiting moments of violence and uprooting in partitioned north-east India’ In: *Violence and Terror: Narratives from North-East India*. Mala Renganathan (Ed.). DVS Publishers, Guwahati/New Delhi, p. 27-36, ISBN-978-93-85839-35-1.

Mawlong, C. A. (2019). *Perspectives on the Material Cultures of Northeast India*. Tilok Thakuria (Ed.) Lakshi Publishers & Distributors, New Delhi, ISBN: 978-

93-82120-56-8 (HB).

Mawlong, C. A. (2020). History Etched in Stone: A Study of the Khasi-Jaintia Megalithic tradition. In: The Cultural Heritage of Meghalaya. Queenbala Marak & Sarit K Chaudhuri (Eds.), IGRMS, Bhopal and Manohar Publishers & Distributors, New Delhi, Chapter 3, p. 47-68. ISBN 13:9780367499600.

Thakur, A. K. (2019). Questions of clothing and civilisation in pre-colonial Northeast India. In: Proceedings of

North East India History Association 39th session, Shillong, 2018. Amrendra Kumar Thakur (Ed.). North East India History Association, Shillong, Chapter 2, p. 27-32.

Passah, Amena N. (2019), The Proverbs of the Khasi-Jaintia: A Preliminary Study In: Proceedings of North East India History Association, 39th Session, Synod College, Shillong, p.553-559. ISSN: 2349-753X.

#### **Funds Received from Agencies including NEHU/UGC: Rs. 1,98,000.00**

##### **Research Projects**

##### **Ongoing**

<b>Title of Project</b>	<b>PI/Co-PI</b>	<b>Funding Agency</b>	<b>Amount (Rs.)</b>
Borders, Identities and the Predicament of Citizenship in Post-Colonial Assam (1947-2005)	Dr. B. Dutta	OKDISCD	Rs. 4,00,000.00

##### **Academic Collaborations**

##### **Dr. M. S. N. Rahman**

Collaborated with Allama Rumi Society Bangladesh, Dhaka, Bangladesh (i) for translation work from Bengali to English on a book entitled Syed Ahamadul Huq Rachanabali (Vol.3), (ii) for material collections for Ph.D. research work.

##### **Dr. B. Dutta**

Collaborated with Allama Rumi Society Bangladesh, Dhaka for Book Translation Project.

##### **Honours/Awards/Recognitions**

##### **Dr. M. S. N. Rahman**

Member of the (i) Meghalaya State Wakf Board (2017 - 2022), (ii) Indian Historical Record Committee (2017 - 2022), (iii) Asiatic Society, Kolkata, etc.

##### **Other Activities**

##### **Prof. C. A. Mawlong**

Resource Person at a Refresher Course on Tribal Studies organized by the UGC-HRDC, NEHU September – October, 2019.

Chief Guest at a National Seminar on “Urban Folklore with Special Reference to Northeast India” organized by the Department of Cultural & Creative Studies, NEHU on August 22 - 23, 2019.

Chaired an academic session at the National Seminar on “Transitional Aspects of Indigenous People of Northeast India: Contemporary Issues on Sustainability”, organized by Netaji Subhas Mahavidyalaya, Udaipur, Tripura, sponsored by the Maulana Abul Kalam Institute of Asian Studies during January 11 - 12, 2020.

Attended as Vice – Chancellor’s nominee in the inaugural programme of the National conference on Fifty Years of India-Bangladesh Relations: Regionalism, Connectivity and the Northeast, organized by the Jadavpur Association of International Relations, ICSSR-NERC and NEHU, Shillong during February 14 - 15, 2020.

**Prof. A. N. Passah**

Delivered a key note address on “History and Intellectual Property Rights” in one day National Workshop on Intellectual Property Rights, held at Pragjyotish College, Guwahati on June 19, 2019.

**Dr. B. Dutta**

Delivered an invited lecture on Partition and the History of cross border migration in South Asia at the South Asian University, New Delhi on January 23, 2020.

**Dr. M. S. N. Rahman**

Published an online article on ‘Remembering Banglar Rumi Syed Ahmadul Haque’ in [www.thedailystar.net](http://www.thedailystar.net), Bangladesh on September 05, 2019.

## DEPARTMENT OF HISTORY AND ARCHAEOLOGY (TURA CAMPUS)

**Head** : Dr. Tilok Thakuria (Teacher-in-Charge)  
**Telephone** : +91 9127422780 (M)  
**E-mail** : hodhash@nehu.ac.in

### Faculty: 02

Designation	Name and Qualification	Specialization
<b>Assistant Professor</b>	Dr. Tilok Thakuria, M.A. & Ph.D. (DCPRI)	Proto-History, Ethno-Archaeology, Archaeology of Paleo- adornment, Archaeology and Culture of Northeast India
	Dr. Doneti Sivaji, M.Phil. & Ph.D. (HCU)	Business History, Studies on Entrepreneurship, Studies on Caste

### 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 Southeast Asia. The Department gives particular interest to encourage research in history, archaeology,

ethno-archaeology and culture studies of Northeast 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 Northeast India in particular.

### Brief Statement of Academic Activities

### Students' Profile

**Enrolment Capacity: M.A. - 25**

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.A.	10	14	-	23	-	01	22	02	24
M.Phil.	02	02	-	03	-	01	02	02	04

### Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.A.	10	11	-	21	-	-	21	-	21
M.Phil.	01	01	-	01	01	-	01	01	02

## **Courses Conducted**

### **Postgraduate: M.A.**

#### ***Semester I***

Historical Methods I, Prehistoric Archaeology, Social and Polity formation in Ancient India I, Introduction to Archaeology, Social and Polity Formation in North-East India.

#### ***Semester II***

Historical Methods II, Social and Polity formation in Ancient India II, Pre-Industrial Society, Archaeology of Northeast India, The Neolithic cultures in India.

#### ***Semester III***

Capitalism and Colonialism I, Practical in Archaeology, State and Society in Medieval India, Society and Religion in Northeast India, Art and Architecture of India, Christianity in Northeast India (Optional).

#### ***Semester IV***

Capitalism and Colonialism II, Making of Modern India, The Chalcolithic Cultures in India, Environmental History of India, Perspectives in History and Culture of North-East India, Business History of India (Optional), Dissertation (Optional).

### **M.Phil./Ph.D. Courses**

Research Methodology, Oral Traditions, Readings on History and Archaeology (Seminar Course)

#### ***Organized***

National Seminar on Archaeology of Northeast India: retrospect and prospect in the Department. History and Archaeology, NEHU Tura campus in collaboration with IGRMS, Govt. of India during August 26 – 28, 2019. (Organizer: Dr. Tilok Thakuria)

Ethnica: Cultural Workshop cum event in

the Department. History and Archaeology, NEHU Tura Campus during November 13 – 14, 2019. (Organizer: Dr. Tilok Thakuria).

#### ***Attended***

#### **Dr. Tilok Thakuria**

Presented papers on (i) “Prehistoric Archaeology of Northeast India: Excavations at Misimagre” in the International Workshop on “Rice”, organized by M. S. University, Gujarat and UCL, London during March 20 – 21, 2019, (ii) “Colonial Archaeology of Northeast India as ‘Colonial Discourse’” in the National Seminar on “Converging Spectrum of Anthropology with Special Emphasis of Assam and Adjoining Areas”, organized by Anthropology Department, Gauhati University during March 14– 15, 2019, (iii) “Stone jars of South Asia and Southeast Asia: Problem and Prospects” in the International meeting on “Megaliths of World”, organized by Historical De Vandee, France during September 08-14, 2019.

### **Publications**

#### **Research papers**

##### ***Published Abroad***

Thakuria, T. (2019). Stone Jars of Assam, Northeast India: A Comprehensive Overview. *Journal of Neolithic Archaeology*, 5: 151-161.

#### **Books/Book Chapters/Proceedings**

Thakuria, T. (2020). Indian Beads History and Technology. Lecture Series Publication, Lecture-XLI, Indian Council for Historical Research, North-Eastern Regional Centre, Guwahati.

Malla, B. L., Thakuria, T. editors (2020). *Rock Art Heritage of Northeast India*, IGNC, New Delhi, ISBN 978-81-9438-033-7

Thakuria, T. editor (2019). Perspectives on Material Culture in Northeast India, Lakshmi Publisher, New Delhi, ISBN 978-93-8212-056-8

Thakuria, T. (2020). Typology and commonality: a survey on megaliths of Vidarbha megalithic culture, Maharashtra. In: The Archaeology of Burials: Examples from Indian Subcontinent. Rajesh S. V. Abhayan G. S. Ajit Kumar, Ehsan Rahmathilahi (Eds.). New Bharatiya Book Corporation, New Delhi, Chapter 3, Vol-1, p. 71-85.

Thakuria, T., Kalita, M. (2019). The beginning of Pre-historic research in Northeast India and a gazetteer of Pre-historic sites in Garo Hills. In: Atulartham Bridging The Past: Essays in Honour of Professor Atul Kumar Sinha. A. R. Shukla and Anup Mishra

(Eds.). Anamika Publisher, New Delhi, p. 455-661,

**Funds Received from Agencies including NEHU/UGC**

Rs. 40,000.00 from NEHU to organize Ethnica: Cultural Workshop cum event, organized by Dr. Tilok Thakuria in the Department of History and Archaeology, NEHU Tura Campus during November 13 – 14, 2019.

***Other Activities***

**Dr. Tilok Thakuria**

Member of the Executive body of Man and Environment (UGC- CARE listed journal)

Chaired a session in a National Seminar organized by History Department of Cotton University in February 2020.

***Reviewer*** : ICHR, New Delhi

## DEPARTMENT OF LAW

**Head** : Prof. Chintamani Rout  
**Telephone** : 0364-2723801 (O) / +91 9436336103 (M)  
**E-mail** : hodlaw@nehu.ac.in/drchintamanirout@gmail.com

**Faculty: 08**

Designation	Name and Qualification	Specialization
<b>Professor</b>	Prof. J. J. Mozika, LL.M. & Ph.D. (NBU)	Administrative Law, Jurisprudence, Women & Law
	Prof. Chintamani Rout, LL.M. & Ph.D. (Utkal Univ.)	Commercial Law & Constitutional Law
<b>Assistant Professor</b>	Dr. R. K. Mishra, LL.M. & Ph.D. (BHU)	Intellectual Property Right & Criminal Law
	Dr. A. K. Singh, LL.M. & Ph.D. (BHU)	Criminal Law, Human Rights & Private International Law
	Dr. N. Kumar, LL.M. & Ph.D. (Jamia Milia Islamia Univ.)	Public Health Law, Corporate Laws, Human Rights, Constitutional Law, Environmental Laws and Cyber Crimes
	Dr. R. Sil, LL.M. & Ph.D. (Univ. of Burdwan)	Public Laws
	Shri S. Tiwari, LL.M. (BHU), M.Phil. (JNU)	International Law, International Environmental Law and International Humanitarian Law
	Dr. P. Gupta, LL.M. & Ph.D. (ILI, New Delhi)	Health Law and Environmental Law

### Thrust Areas of Research

Constitutional Law, Environmental Law,  
 Cyber Law, Patent Law, Industrial Law,

Family Law, Commercial Law, Criminal Law



## Students' Profile

**Enrolment Capacity: B.A. LL.B. (Hons) – 72, LL.M. – 12, Ph.D. - 06**

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
B.A.LL.B. (Hons)	31	41	-	59	-	13	67	05	72
LL.M.	02	10	-	10	-	02	07	05	12
Ph.D.	05	01	-	03	01	02	03	03	06

## Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
B.A.LL.B. (Hons)	19	27	01	40	-	05	41	05	46
LL.M.	05	04	-	08	-	01	07	02	09
Ph.D.	-	02	01	01	-	-	01	01	02

## Students Awarded PhD Degree

Name of Student	Title of Thesis	Name(s) of Supervisor(s)/ Joint Supervisor
Umeshwari Dkhar	"Dispensation of Justice Under Khasi Hills Autonomous District Council"	Dr. A. K. Singh
Mayurakhi Sonowal	"Victim Compensation Under Indian Criminal Justice System"	Prof. J. J. Mozika

## Placement of Students

The students completed B.A. LL.B. (Hons) Course in July, 2019, enrolled themselves under the Bar Council of India and are practicing as advocates in Subordinate Courts in the State of Meghalaya and some are also practicing in the High Court of Meghalaya. A few numbers of students have been admitted to LL.M Course for their Master Degree in the Department of Law and other National Law Universities.

## Research Fellowship

CSIR-UGC-NET	UGC Non-Net	Rajiv Gandhi SC/ST	ICPR Fellowship	Meritorious Fellowship	Maulana Azad Minority Fellowship	Others ICHR
-	06	-	-	-	-	-

**Fieldwork/Educational Tour of Students**

**Teacher-in-Charge** : Dr. Ranjit Sil

**Places/Institutions Visited** : New Delhi & Manali V.V. Giri National Labour Institute, New Delhi

**Duration of Tour** : 18 days  
(December 28 - January 14, 2020)

**Purpose of Tour** : Study Tour

**Courses Conducted****Five Year Integrated B.A. LL.B. (Hons)****Semester I**

English I, Political Science I, Sociology I, Micro Economics, Law of Torts

**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 (Cr.P.C), 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, Honours

I Copyright, Interpretation of Statutes & Principles of Legislation, Drafting, Pleading & Conveyance

**Semester VIII**

Civil Procedure Code & Limitation Act, Law of Evidence, Honours II Patent Law, International Environmental Law, Professional Ethics and Professional Accounting System

**Semester IX**

Honours III Women & Criminal Law, Honours IV Trademark & 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 & Juvenile offences, Legislative Drafting, Banking Law, Moot Court, Exercise and Internship

**Two Year LL.M. programme****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 course to be offered

at any given time from one group 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 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 second semester.

Human Rights: Human Rights and the Refugees, Human Rights in India

Corporate Law: Business Management (Company Management & Administration), Law Relating to Multi-National 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.

### **Ph.D. Courses**

Legal Research Methodology, Judicial Process, Comparative Constitutional Law

### **Seminars/Conferences/Workshops/ Symposia/Extension Programmes (National/International)**

#### ***Organized***

One-day state level debate competition on "India Still Needs Continuation of Reservation Policy" jointly organized by the Meghalaya State Legal Services Authority (MSLSA), Shillong and the Legal Care and Support Centre, Department of Law, NEHU, Shillong, to observe the Birth Centenary of Mr. Nani Palkhivala, as part of Nani Palkhivala Birth Centenary Celebrations Steering Committee, the Supreme Court of India through the High Court of Meghalaya held at the Department of Law, NEHU, Shillong on November 28, 2019.

#### ***Attended***

#### **Prof. Chintamani Rout**

Presented papers on (i) "Reforms in Legal Education and Research: Challenges and Remedies" in the National Workshop on Importance of Legal Education and Research Methodology organized by National Law University, New Delhi during April 13 - 14, 2019, (ii) "Global Refugee Crisis: A Multidisciplinary Humanitarian Approach" in the International Seminar on The Rights of Refugee and Humanitarian Obligation organized by Utkal University, Odisha during April 27-28, 2019, (iii) "Water Laws and Water Rights in India" in the International Seminar on Understanding Water Crisis: The Way Forward organized by Synod College, Shillong during June 06-07, 2019, (iv) "Intellectual Property Law" in the National Workshop on Concept and Development

of Intellectual Property Law organized by DKS Commerce College, Dibrugarh on June 22, 2019, (v) “International Law and Development-Addressing Poverty in Asia” in a two-day International conference on Realizing Asian Century: Understanding International Law and Governance organized by the Asian Association of Law Professors, Kathmandu, Nepal during July 09- 10, 2019, (vi) “Constitution and Social Change: Issues and Challenges” in the two-day National conclave on Law as an Instrument of Social Transformation: Issues, Challenges & Emergent Trends organized by the Department of Law, University of North Bengal during November 30 - December 01, 2019, (vii) “Independence of Judiciary: Vacancies in Subordinate Courts and its Impact” in the National Seminar on Judicial Delays: Maladies and Remedies organized by the University School of Law & Legal Studies, Guru Gobind Singh, Indraprastha University, New Delhi during January 10 - 11, 2020, (ix) “Role of Law in Social Transformation” in the National Seminar on Social Transformation organized by the Department of Law ICSS College Bhadrak, Odisha on January 13, 2020, (x) “Sustainable Development for Earth Ethics: Re-thinking of consumption and Sustenance” in the International Seminar on Earth Ethics: Re-thinking of Consumption and Sustenance Cultivating a New Ecology of Faith and Hope organized jointly Mahatma Gandhi Centre for Conflict Resolution and Peace Studies and Institutional Institution Committee of Lady Keane College, Shillong during February 14 - 15, 2020.

### **Dr. A. K. Singh**

Delivered lectures on (i) “Is Nation Moving on Right Track in Curbing Corruption” on the occasion of ‘Vigilance Awareness Week’ organized by Power Grid Corporation of

India Limited, Shillong during October 28 – November 02, 2019, (ii) Human Rights, in two-day state level Training Programme organized by Police Training School Meghalaya during July 12 -13, 2019, (iii) ‘Social Defence Issues’ organized by Police Training School Meghalaya in collaboration with National Institute of Social Defence, Ministry of Social Justice and Empowerment’ during February 10-12, 2020.

Presented papers on (i) “Poorvattar KISAN SKRITIY ON KAVIDHIKSANRAKSHAN” in a one day National Seminar on Poorvottar Ki Vividh Lok Kalayen, organized by Poorvangan in collaboration with ICSSR on June 01, 2019, (ii) “Purvottar ke Bhashayen: Ek Samajik Evan Vidhik Adhyayan” in a three-day National Seminar on Purvottar Parisnavad, 2 (Chankyavarta) Jointly organized by Central Hindi Directorate, Ministry of Human Resource Development (Department of Higher Education) and NBT during July 04-06, 2019, (iii) “Empowerment of Women with Disabilities: The Ignited Glow of Hope in the Evil of Darkness” in two days National Seminar on ‘Human Rights and Gender Justice: Issues, Perspective and Challenges’ organized by Department of Bengali, Digboi Mahila Mahavidyalaya, Assam and sponsored by Indian Council of Social Science Research during August 31 – September 01, 2019, (iv) “Rabhasha Adhinyam, Niyam And Neetiyan” in a one day Workshop as a Resource Person, conducted by NCC Dte, NER, Shillong on September 27, 2019, (v) “Dr. B. R . Ambedkar in the Right of Minorities and Social Justice: Contemporary Challenges”, organized by Shillong Law college, Dhankheti, Shillong on November 26, 2019.

Participated in (i) two-day' Workshop on Massive Open Online January, the theme Adoption, Promotion and Development of MOOCs through SWAYAM platform organized by NEHU, Shillong during May 28-29, 2019, (ii) one-week (5 days) National Workshop on Energy Management and Audit sponsored by ATAL (AICTE Training and Learning) Academy during October 14 -18, 2019. The Workshop was conducted by the Department of Energy Engineering School of Technology, NEHU, Shillong, Meghalaya, (iii) the Judicial Colloquium "Role of Law in Combating Human Trafficking" organized by Meghalaya Judicial Academy in Collaboration with International Justice Mission and supported by Ministry of Home Affairs on November 30, 2019, (iv) one-day North-East Regional Training Programme for Administration of Plagiarism Detection Software(PDS) URKUND Jointly organized by Central Library, NEHU, Shillong and INFLIBNET Centre Gandhinagar, on August 23, 2019, (v) Panel Discussion on Bharat Me Samajikaur Arthik Nyayat All India Radio Station Shillong on November 14, 2019, (vi) as a resource person in a Television Programme on 'Domestic Violence' organized by Doordarshan, Shillong on February 17, 2020.

#### **Dr. N. Kumar**

Delivered lectures on (i) 'corporate offences and penalty provisions under Companies Act, 2013' on June 24, 2019, (ii) "Investigation of Financial Fraud & Corporate Offences" organized by North Eastern Police Academy for the Police officers in the rank of SI – SP from across the country during June 24 - 28, 2019.

#### **Mr. S. Tiwari**

Delivered lectures as a resource person on (i) "Freedom of Speech and Expression

with reference to Social Media", at the one-day Workshop on 'Freedom of Speech and Expression with reference to Social Media", organized by the Human Rights Cell, Shillong Commerce College, Shillong, December 07, 2019, (ii) "Standard Operating Guidelines-Enabling PCPNDT Act Implementation", at the one-day Orientation Workshop on 'Pre-Conception & Pre-Natal Diagnostic Technique (Prohibition of Sex Selection) Act, 1994', organized by the Directorate of Health Services (MCH & FW), Department of Health & Family Welfare, Government of Meghalaya, Shillong on November 28, 2019.

#### **Publications**

##### **Research Papers**

##### ***Published in India***

Rout, C. (2019). "International Law and Development: Addressing Poverty in India". Orient Journal of Law & Social Sciences, XII, (12): 24-31. ISSN 0973-7480.

##### **Books/Book Chapters/Proceedings**

Rout, C. (2019). "Poverty, Inequality and Right to Food: A Note". In: Development and Deprivation in the Indian Sub-Continent. U.K. De & M. Pal (Eds.). Levant Books, Kolkata, Part-4, p. 396-410. ISBN:978-93-88069-19-9.

Rout, C. (2019). "Domestic Violence Law: A Critical Examination". In: Gender and Democracy in North East India: Politics of Inclusion and Empowerment. J.K. Sharma (Ed.). Purbanchal Prakash, Guwahati, Chapter-26, p. 485-496. ISBN:978-81-7213-9.

Singh, A. K. (2019). Demonetization in India: An Analysis. in: Legal Education

in India: A New Horizon. Vijay Pratap Singh et al. (Eds.). ABS Books Publisher, Delhi, p. 110-118. ISBN:978-93-87229-01-3.

### ***Other Activities***

#### **Prof. J. J. Mozika**

Participated in the (i) Two-day Workshop on Massive Open Courses (MOOCs) on the Theme “Adoption, Promotion and Development of MOOCs through SWAYAM platform” organized by NEHU, Shillong during May 28-29, 2019, (ii) one-day Workshop on Plagiarism Detection Software (PDS) - URKUND jointly organized by the Central Library, NEHU, Shillong & INFLIBNET Centre, Gandhi Nagar under the aegis of MHRD, GOI on August 23, 2019.

#### **Prof. Chintamani Rout**

Participated in the (i) Faculty Development Programmeme to Design, Develop and Deliver MOOC Courses through SWAYAM platform in the National Workshop organized by the National Institute of Educational Planning and Administration (NIEPA), New Delhi during August 05-10, 2019, (ii) One-day Workshop on Plagiarism Detection Software (PDS) - URKUND jointly organized by the Central Library, NEHU, Shillong & INFLIBNET Centre, Gandhi Nagar under the aegis of MHRD, GOI on August 23, 2019, (iii) Workshop on IPR, Patent and Trademark organized by School of Technology, NEHU, Shillong on May 04, 2019.

#### **Dr. R. K. Mishra**

Delivered a lecture as a resource person at State Level Orientation Workshop organized by State PNDT Cell, National Health Mission, Meghalaya on PNDT Act, 1994 and its implications in November,

2019.

#### **Dr. R. Sil**

Delivered lectures (i) on “Women’s Right with Special Reference to Right to Workplace”, as a Resource Person, at Regional Training Division, GSI, Shillong, for a Training Programme entitled “2nd Workshop on Self-defence for Lady Officers of GSI,NER” held on May 08, 2019, (ii) on “Investigation of Cases under Section 498 A IPC, Female Foeticide and Dowry Death Cases”, for a five-day training of investigators on Women’s Safety Programme as a resource person sponsored by the Bureau of Police Research and Development (BPR&D), New Delhi, held at Police Training School, Shillong during May 13-17, 2019, (iii) on “Workplace Rights of Women”, in International Women’s Day Celebration held at RTD, NER, Shillong, organized by Geological Survey of India, NER, Shillong during March 06-08, 2020, (iv) as Resource Person in Meghalaya Police Academy, Umran, Ri-Bhoi for the programme, “Training of Investigators on Women’s Safety” organized by Police Training School in collaboration with Bureau of Police Research and Development (BPR&D), Ministry of Home Affairs, New Delhi, held during February 17 - 21, 2020.

Attended (i) a Course on ‘Research Methods in Labour Studies’ held during April 08-19, 2019, organized by the V. V. Giri National Labour Institute, Noida, (ii) a Programme of BSF, Shillong in Dawki Border to observe Constitutional Day with a team of 8 students of Department of Law and conducted an awareness programme for School children and local bordering people, on “Constitutional Rights and Duties of the Citizens of India” in collaboration with BSF Jawans and Officers of 30 COY Battalions,



held on February 19, 2020, (iii) one-day North East Regional Training Programme for Administrators of Plagiarism Detection Software (PDS) URKUND jointly organized by the Central Library, NEHU, Shillong and INFLIBNET Centre, Gandhinagar, under the aegis of the Ministry of Human Resource Development, Government of India, held at NEHU Campus, Shillong on August 23, 2019.

In-charge of the Legal Care and Support Centre, Department of Law, NEHU, Shillong, Meghalaya for the Session 2019-20.

Conducted (i) one-day state level debate competition on “India Still Needs Continuation of Reservation Policy” held on November 28, 2019 at Department of Law, jointly organized by the Meghalaya State Legal Services Authority (MSLSA), Shillong and the Legal Care and Support Centre, Department of Law, NEHU, Shillong, to observe the Birth Centenary of Mr. Nani Palkhivala, as part of Nani Palkhivala Birth Centenary Celebrations Steering Committee, the Supreme Court of India through the High Court of Meghalaya, (ii) Study Tour with the Students of BA LLB(Hons), X<sup>th</sup> Semester Students of Department of Law during December 28, 2019 – January 14, 2020 from Shillong to

Manali via Delhi.

### **Mr. S. Tiwari**

Delivered lectures on (i) “Concept of Hindu Undivided Family” to newly recruited trainee Judges at the Meghalaya State Judicial Academy, Shillong on December 09, 2019, (ii) “Personal Law” to newly recruited trainee Judges at the Meghalaya State Judicial Academy, Shillong on October 21, 2019, (iii) “Judicial Review and Judicial Activism in India”, at St. Anthony’s College, Shillong on October 18, 2019, (iv) “Personal Law” to newly recruited trainee Judges (joined in the year 2019), at the Meghalaya State Judicial Academy, Shillong on October 11 & 14, 2019, (v) “Information Technology Act” to newly recruited trainee Judges of 2019), at the Meghalaya State Judicial Academy, Shillong on September 24 & 27, 2019.

Acted as Jury Member for the Surana & Surana International Essay Writing Competition on Corporate Laws, 2019, jointly organized by University Institute of Legal Studies, Punjab University, Chandigarh and Surana & Surana International Attorneys, Chennai.



## DEPARTMENT OF POLITICAL SCIENCE

**Head** : Prof. H. Srikanth  
**Telephone** : 0364 2723036 (O) / +91 9436163164 (M)  
**E-mail** : hodpolsc@nehu.ac.in; tthaokip@yahoo.co.uk

### Faculty: 08

Designation	Name and Qualification	Specialization
<b>Professor</b>	Prof. K. Debbarma, M.Phil. & Ph.D. (NEHU)	Human Rights, Development Administration and Politics of Migration in North East India
	Prof. H. Srikanth, M.Phil. & Ph.D. (Univ. of Hyderabad)	Political Theory, Political Economy, Social Movements
	Prof. R. K. Satapathy, M.Phil. (Sambalpur Univ.), Ph.D. (NEHU)	International Politics, Political Theory and Electoral Politics
	Prof. T. T. Haokip, M.Phil. & Ph.D. NEHU)	Foreign Policy, Public Administration, Government and Politics in North East India
	Prof. Susmita Sen Gupta, M.Phil. & Ph.D. (NEHU)	Indian Government and Politics, Politics of North East India
	Prof. Munmun Majumdar, M.Phil. & Ph.D. (JNU)	South East Asian Studies and International Politics
<b>Associate Professor</b>	Dr. Biswajit K. Mohapatra, M.Phil. & Ph.D. (JNU)	India South and South East Asia, Look/Act East Policy, North East Politics
<b>Assistant Professor</b>	Dr. Suparna Bhattacharjee, M.Phil. & Ph.D. (JNU)	International Politics and Trade

### 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 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 eight faculty members, the Department has 104 students on its roll at the MA level. The Department admits M.Phil. and Ph.D. 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 47 research scholars who are engaged in the Ph.D.

programmes of the Department and 1 Post-Doctoral Fellow.

The Department is in SAP-DRS-II. And the thrust area of SAP is “Political Processes and Economic Changes in Northeast India.” As a part of SAP programme, Prof. Arun Patnaik from the University of Hyderabad delivered

a public talk on “Ambedkar and Democracy” on March 13, 2020. Another public talk on “Understanding Citizenship” was delivered by Prof. Anupama Roy from JNU on March 16, 2020. The Department also revised the MA Political Science syllabus in 2019.

### Students' Profile

**Enrolment Capacity:** M.A. – 57, Ph.D. –51

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.A.	47	63	-	104		06	67	43	110
Ph.D.	29	22	01	39	02	09	14	37	51

### Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.A.	22	25	-	47	-	-	23	24	47
M.Phil.	-	02	-	-	-	02	-	02	02
Ph.D.	01	03	-	04	-	-	01	03	04

### Students Awarded PhD Degree

Name of Student	Title of Thesis	Name(s) of Supervisor(s)/ Joint Supervisor
ZhotoTunyi	Identity, Extremist Politics and Civil Society Interventions in Nagaland	Prof. Susmita Sen Gupta
Plieladdalin Nongsiej	Women and Human Rights Violations in Khasi Hills of Meghalaya.	Prof. K. Debbarma
Sentinario Longchar	Constitutional Rights of Ao Naga Women	Prof. K. Debbarma
Imnazenla Longkumer	Political Obligation and Traditional Institutions: A Study of the Putu Menden of the AoNagas	Prof. K. Debbarma

### Research Fellowship

CSIR-UGC-NET	UGC Non-Net	Rajiv Gandhi SC/ST	ICPR Fellowship	Meritorious Fellowship	Maulana Azad Minority Fellowship	Others ICHR
JRF 4	17	-	-	-	01	04

### **Fieldwork/Educational Tour of Students**

**Teacher-in-Charge** : Dr. Biswajit Mohapatra

**Places/Institutions Visited** : Mumbai - Goa

**Duration of Tour** : 15 days (January 10 – 24, 2020)

**Purpose of Tour** : Study Tour

### **Courses Conducted**

#### **Postgraduate: M.A.**

##### ***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 Systems, South Asian Political Systems, African Political Systems.

Open Courses (Any two): Globalization, 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.

##### **Ph.D. Courses**

Compulsory Courses: Research Methodology, Seminar Paper on Frontier of Knowledge in the relevant 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/Workshops/Symposia/Extension Programmes (National):**

###### ***Organized***

##### **The Department organized the following programmemes:**

- A Distinguished Lecture Programme in NEHU on Environment Policy and Paris Agreement by Ajai Malhotra, Ex-Ambassador of India on May 2, 2019 (Convener: Prof. R. K. Satapathy).
- A Panel Discussion on Remembering Gandhi through his Contribution in ICSSR-NERC on October 25, 2019 (Convenor: Prof. R. K. Satapathy).
- The Constitution Day Programme

at NEHU on November 26, 2019 (Convener: Prof. R. K. Satapathy).

- A ten-day Research Methodology Workshop in the ICSSR-NERC, Shillong on December 04, 2019 (Convener: Prof. R. K. Satapathy).
- A National conference on Fifty Years of India Bangladesh Relations: Regionalism, Connectivity and North East in ICSSR-NERC during February 14 – 15, 2020 (Convener: Prof. R. K. Satapathy).
- Annual Social Science Congress on Youth, Development and Public Policy in North East India held at Tripura University during March 11 – 13, 2020 (Convener: Prof. R. K. Satapathy).
- Election Survey in the Lok Sabha Elections 2019 (Conducted by Prof. R. K. Satapathy)

### ***Attended***

#### **Prof. K. Debbarma**

Chaired academic sessions in the (i) International conference on “Understanding Water Crisis: The Way Forward” organized by Synod College, Shillong during June 06 – 07, 2019, (ii) International Seminar on “50th Years of Bangladesh War” organized by Jadavpur University and ICSSR-NERC, Shillong during February 14-15, 2020, (iii) UGC SAP Seminar on “Electoral Politics in North East India” at NEHU on March 19, 2020.

Presented papers on (i) “Contextualizing Development Administration in Tribal Areas of North-East India” in the National Seminar on Development Administration and Tribes of North East India, organized by MBB University, Agartala during March 17-18, 2020, (ii) “Electoral Politics

of the Indigenous People of Tripura” in the National Seminar organized by the Department of Political Science, NEHU, Shillong during March 19-20, 2020.

#### **Prof. H. Srikanth**

Delivered lectures on (i) “Borrowing Political Concepts and Theories from the West”, in Department of Political Science, Assam University, Silchar on November 15, 2019, (ii) “Gramsci’s Hegemony” and “Mao’s Cultural Revolution” in Department of Political Science, Assam University, Silchar on November 16, 2019.

Delivered key note address in a National Seminar on “Issue Centric Politics in India”, organized by Modern College, Kohima on November 27, 2019.

Chaired a thematic session in “Fifty Years of India-Bangladesh Relations: Regionalism, Connectivity and the North-East”, organized by ICSSR NERC, in collaboration with JAIR during February 14-15, 2020.

#### **Prof. R. K. Satapathy**

Delivered lectures on (i) “Governance and Democracy in Northeast India”, National Seminar, Sikkim University, Gangtok on April 04, 2019, (ii) “The Meaning of Leadership Today” in the Academic Staff College Workshop of the Punjab University, Chandigarh on May 28, 2019, (iii) the Awareness Programme about ICSSR in the Department of Library Science and Political Science, Manipur University on November 15, 2019, (iv) “State of Civil Society in India” organized by the Public Library, Sambalpur on January 16, 2020.

Delivered the key note address in the (i) Workshop on “Human Rights Education in Northeast India” organized by the R.G.

Baruah College, Guwahati on April 29, 2019, (ii) National Seminar on “Engaging Asia: India’s Foreign Policy in the 21st Century” organized by the Jadavpur University on September 20, 2019.

Delivered the Valedictory Address at the NEISSA in NEHU on May 22, 2019.

Delivered a talk on “Unique Potentials of North-East to Attract Foreign Tourists in the North East Travel Conclave” organized by the Indian Chamber of Commerce on August 23, 2019.

Chief Guest in the (i) National Seminar at Govt. Aizawl College organized by the Mizoram Political Science Association on October 17, 2019, (ii) Valedictory programme in the five-day “Research Methodology Workshop” organized by the Education Department, Tura Campus, NEHU on October 19, 2019, (iii) Inaugural Programme of the Refresher Course in Social Science, Manipur University on November 14, 2019.

Guest of Honour in the (i) National Seminar on “Status of Tribal Education in Degree and Above Degree Level Problems and Solutions with Special Reference to Tripura” organized by Women’s Polytechnic, Hapania and TR&CI, Government of Tripura, Agartala on January 10, 2020, (ii) EFLU Seminar on “Contesting the Site of Sights: The Discourse of Visual Media Cultures with special reference to Northeast India”, Shillong on June 10, 2019

### **Prof. T. T. Haokip**

Presented papers on (i) “India-Myanmar Border Fencing and its consequences on the Border Communities” at the National Seminar on ‘Enhancing India-Myanmar Ties: Roads Ahead’ organized by Indian Council of World Affairs at New Delhi

on May 15, 2019, (ii) “Electoral Politics in clan-based societies: The Kukis of Manipur” at UGC SAP International Seminar on ‘Electoral Politics in North-East India’, NEHU Shillong during March 19 – 20, 2020.

Delivered the keynote addresses on (i) “Introduction to Anglo-Kuki War at Manipur State Level Centenary Celebration of the Anglo-Kuki War” organized by the Anglo-Kuki War Centenary Celebration Committee at C. Aisan Village, Manipur on October 17, 2019, (ii) “The Significance of Anglo-Kuki War at the Centenary Celebration of Anglo-Kuki War cum Chavangkut”, organized by Kuki Inpi, Meghalaya at NEHU, Shillong on October 26, 2019.

Chaired sessions at the (i) National conference on “50th Year of India-Bangladesh Relations: Regionalism, Connectivity and Northeast” at ICSSR-NERC, NEHU, Shillong on February 15, 2020, (ii) UGC SAP Seminar on “Electoral Politics in North-East India” at NEHU on February 15, 2020.

### **Prof. Susmita Sen Gupta**

Delivered the keynote address and chaired the 1st technical session in the ICSSR- ERC sponsored National Seminar on “Opportunities and Challenges of Governance and Development in North-East India with Special Reference to Assam” organized by Dr. Kshirod Saikia, Department of Political Science, Kakojan College, Jorhat, Assam during October 21-22, 2019.

Chaired an academic session in the ICSSR sponsored National conference on “Fifty Years of India- Bangladesh Relations: Regionalism, Connectivity and the North-

East” organized by Prof. R. K. Satapathy, Honorary Director, ICSSR-NERC, Shillong, during February 14 - 15, 2020.

### **Prof. Munmun Majumdar**

Delivered a key note address at the ICSSR sponsored National Seminar on “Ethnic Diversity of Northeast India and Indian Democracy” on November 08, 2019.

Presented a paper on “Significance of India’s Andaman and Nicobar Islands in India’s Act east Policy” Indian Social Science Congress during January 17-20, 2020.

### **Dr. Biswajit K. Mohapatra**

Convener of academic session on (i) “How to enhance the visibility and participation of women in the peace process in South / South East Asia?” in Uppsala University, Sweden DPCR-ITP Alumni Event Colombo, Sri Lanka during February 05 - 07, 2020, (ii) Border Trade and India Bangladesh Relations - Assessing the Strategies for Economic Development in the North East India and Bangladesh, National Conference on “Fifty Years of India-Bangladesh Relations: Regionalism, Connectivity and the North-East” during February 14– 15, 2020, (iii) India - Thailand Development Cooperation for Institution Building and Good Governance, 14th ICSSR-NRCT joint Seminar on the theme “India-Thailand Moving Forward” held at Hotel Clarks, Varanasi (UP) during February 25 – 26, 2020, (iv) “Endemic Crimes against Women in North East India- Perspectives & Dynamics” National Seminar-on “Crimes against Women in

NE India” held at Kakojan College, Jorhat, Assam during March 05 - 06, 2020

### **Dr. Suparna Bhattacharjee**

Presented papers on (i) “Water Commons In India” in the International Seminar on “Understanding The Water Crisis: The way forward” organized by Synod College, Shillong, during 06-07 June, 2019, (ii) “Connecting Communities through Cross – Border haats(market) for Peace, Prosperity and Empowerment” in the National Seminar on “50 Years of Indo –Bangla Relations: Regionalism, Connectivity and The North-East” organized by Jadavpur Association of International Relations(JAIR) Kolkata and ICSSR, Shillong during February 14-15, Shillong.

### **Publications**

#### **Research Papers**

##### ***Published in India***

Srikanth, H. (2020). “Three Streams in the Anti-CAA Movement”. The India Forum <https://www.theindiaforum.in/article/three-streams-anti-caa-movement>.

Zamir, A., Satapathy, R. K., Singh, S. Mangi, Desai, S. (2019). Electoral Response to the Citizenship (Amendment) Bill. North East Economic & Political Weekly, LIV34.

Majumdar, M. (2020). India–Myanmar Border Fencing and India’s Act East Policy, *India Quarterly* (Sage), 76 (1): 58-72.

Mohapatra, B. K. (2019). Subhash Bose and The Battle of Kohima:



Mainstreaming the North East into India's Freedom Struggle, Jamshedpur Research Review, IV, (XXXV)07-09.

Mohapatra, B. K. (2019). Ethnic Communities and Conflicts in North East India: Building up a Framework for Conflict resolution, Liberal Studies Journal, 4 (1): 81-86.

Bhattacharjee, S. (2019). Fencing the Commons: Battle For the 'Right to Water' Revisited through the Lens of Water Commons and Water Justice. The Heritage, X (2): 49-62.

### **Books/Book Chapters/Proceedings**

Sen Gupta, S. (2019). Economic reform policy and tribal economy: exploring the paradoxes in the context of Meghalaya. In: 25 Years of Economic Reforms and North East India. B. Dhar, S. Sen Gupta and Siddheswar Sarma (Eds). EBH Publishers, Guwahati, Chapter 3, p. 24-30.

Majumdar, M. (2019). Northeast India's Critical role in harnessing the three C's: Commerce, Connectivity and Culture in India's Act East policy" In: Northeast India and India's Act East Policy Identifying Priorities. M. Amarjeet Singh (Eds.), Routledge Studies on Think Asia, p. 31-43

Majumdar, M. (2019). Conflict Management Process between ASEAN and China in the South China Sea: Is it Relevant? In: South China Sea: Territorial Claims and Disputes. G Jayachandra Reddy (Ed.). Pentagon

Press, New Delhi, p.79-89.

Mohapatra, B. K. (2019). India's Look East Policy, ASEAN and the Challenges of Strengthening BIMSTEC. In: India's Engagement with Global Powers: Issues and Challenges. Narottam Gaan (Ed), Writers Choice, New Delhi, p.176-188. ISBN: 978 93 84081 31 7.

Mohapatra, B. K. (2019). Promotion of Rural and Women Entrepreneurship - The Ecosystem and Policy Options for North East India. In: Entrepreneurship and Innovation of Micro and SMEs in India, Kailash Biswal (Ed.), ISBN 9788193749326, Research Forum, New Delhi, p. 43-47.

### **Honours/Awards/Recognitions**

#### **Prof. R. K. Satapathy**

Expert in IMPRESS Interview at ICSSR, New Delhi during December 09 – 11, 2019  
Editor, Man and Society.

#### **Other Activities**

#### **Prof. K. Debbarma**

Revised the following MA courses in 2019:  
Development Administration, Human Rights

#### **Prof. R. K. Satapathy**

Delivered lectures (i) in Social Science (Four lectures) in the refresher course at the Manipur University during November 14-15, 2019, (ii) on Multiculturalism in the refresher course on Tribal Studies in ASC, NEHU on November 21, 2019, (iii) in the Orientation Course (Four lectures) in Sambalpur University during January 15 -16, 2020.



**Prof. T. T. Haokip**

Revised the following MA Courses in 2019:  
Foreign Policy of Major Powers, Issues  
and Governance in Public Administration,  
Administrative Theory, State Politics in  
North-East India.

**Prof. Munmun Majumdar**

Delivered a key note address at the ICSSR

sponsored National Seminar on “Ethnic  
Diversity of Northeast India and Indian  
Democracy” on November 08, 2019.

Presented a paper “Significance of India’s  
Andaman and Nicobar Islands in India’s  
Act east Policy” Indian Social Science  
Congress during January 17-21, 2020.

## DEPARTMENT OF SOCIOLOGY

**Head** : Prof. A. K. Nongkynrih (up to May 30, 2019)

Prof. D.V. Kumar (w.e.f. May 31, 2019)

**Telephone** : 0364 - 2723040

**E-mail** : hodsoc@nehu.ac.in

**Faculty: 06**

Designation	Name and Qualification	Specialization
<b>Professor</b>	Prof. A. L. Imchen, M.Phil. & Ph.D. (JNU)	Political Sociology, Polity Formation and Indigenous Peoples
	Prof. A. K. Nongkynrih, M.Phil. & Ph.D. (NEHU)	Sociology of Family & Kinship, Sociology of Organisations, Sociology of Rural Development
	Prof. D. V. Kumar, M.Phil. & Ph.D. (JNU)	Modernization, Ethnicity and Social Change
	Prof. B. Panda, M.Phil. (Univ. of Hyderabad), Ph.D. (IIT Kanpur)	Sociology of Third Sector, Sociology of Development
<b>Associate Professor</b>	Dr. Rekha M. Shangpliang, M.Phil. & Ph.D. (NEHU)	Sociology of Environment, Sociology of Gender
<b>Assistant Professor</b>	Shri Md Yusuf Khan, M.A. (AMU), M.Phil. (DU)	Ethnicity, Urban Sociology, Migration

### Thrust Areas of Research

Social Change is the main thrust area of the Department. It is concentrating in understanding the changes taking place in the societies of the region.

### Brief Statement of Academic Activities

The Department is concentrating on understanding changes taking place in the societies of the region. The Department of Sociology began instructions at MA, M.Phil., and Ph.D. 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, Globalisation 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.

## Students' Profile

Enrolment Capacity: M.A. – 50, Ph.D. – 04

Degree	Male	Female	SC	ST	GEN	Meghalaya	Non-Meghalaya	Total
M.A.	1	47	2	5	45	34	16	50
Ph.D.	-	03	01	01	03	01	03	04

## Degrees Awarded

Degree	Male	Female	SC	ST	GEN	Meghalaya	Non-Meghalaya	Total
M.A.	-	46	01	10	37	21	26	47
Ph.D.	-	03	-	-	03	01	02	03

## Students Awarded PhD Degree

Name of Student	Title of Thesis	Name(s) of Supervisor(s) / Joint Supervisor
Ms. Sanbanielyne Ryndem	"A Sociological Study of the Authority Structure in Khasi Family".	Prof. B. Panda
Ms. Jumgam Kamduk	"Chakma Ethnicity in Arunachal Pradesh: A Sociological Study".	Prof. D.V. Kumar
Ms. Chamgailiu Gonmei	"Traditional Village Council: A Comparative Study of Zeme, Liangmai and Rongmei Naga Tribes in Manipur."	Prof. I. L. Aier

## Research Fellowship

UGC Non-NET: 04

## Courses Conducted

### Postgraduate

#### *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 I, Methodology of Social Research II, Sociology of Religion, Indian Society III

Open Course: Ethnic Relations

#### *Semester III*

Economy and Society, Political Sociology,

Sociology of Development

Open Course: Sociology of Gender, Urban Sociology

#### *Semester IV*

Social Change, Sociology of Environment, Tribal Movements in India, Sociology of Organisations, Sociology of Development II

#### **Ph.D. Courses**

Designing Sociological Research, Sociological Concepts, Advanced Sociological Theory

Seminars/Conferences/Symposia/Extension Programmes etc.

## ***Attended***

### **Prof. A. K. Nongkynrih**

Participated as a resource person on (i) Concepts and research proposal in the Workshop on academic writing and publication held at Synod College on April 30, 2019, (ii) Writing research paper in the Research methodology in social sciences organized by UGC – HRDC, NEHU on May 30, 2019, (iii) Tribal Identity: Issues and Concerns in the Changing dynamics of tribal societies of India with special reference to north east India organized by the Department of Sociology, Shillong College, Shillong on November 06, 2019, (iv) Data and Data Interpretation in Research Methodology organized by ICSSR, NEHU, Shillong on December 06, 2019, (v) Language and Autonomous District Councils in Language, literature and culture organized by Khasi Department, NEHU at UGC – HRDC, NEHU on November 22, 2019, (vi) Instructional strategies in the Participatory Workshop on Strategies for Sociology Teachers organized by the Department of Sociology, Sankardev College on March 13, 2020.

Presented a paper on Conflict of Race and Identity in Conflict in South East Asia organized by the Department of English, Synod College, Shillong on November 07, 2019.

### **Publications**

#### **Research papers**

##### **Published in India**

Kumar, D. V. (2019). The Developmental Process in the North-East India: A

Critical Interrogation. *The Eastern Anthropologist*, 72 (3 & 4): 289-300

Kipgen, T., Panda, B. (2019). Migrants and Their Social Networks: A Study of Kuki Migrants in Delhi. *Sociological Bulletin.*, 68 (3):342-356.

Shangpliang, R. M. (2019). Gender studies and research: Some reflections on its relevance in higher education. *Echoes from The Hills*, III (1);44-53

### **Books/Book Chapters/Proceedings**

Nongkynrih, A. K. (2020). Sacred Sites and Society: A Preliminary Inquiry. In: *The Cultural Heritage of Meghalaya*. Q. Marak and S. K. Chaudhuri (Eds). Monohar, New Delhi, Chapter 21, p. 425-442.

Panda, B. (2020). Environmental Movements in North-East India. In: *Environment and Society: The Context of North East India*. Rekha M. Shangpliang (Ed.). Concept Publishing Company Pvt.Ltd., New Delhi. Chapter 1, p. 3-15.

Panda, B. (2020). Tribal Youths in Tripura: Issues, Problems and Prospects. In: *Tribal Youth Issues, Challenges and Perspective*. Remruatpuii Tochhawng(Ed.). Tribal Research and Cultural Institute, Government of Tripura, Agartala. Chapter 1, p. 1-18.

Shangpliang, R. M. (2019). Tribal women and Natural Resource Management: The Khasi Women of Meghalaya in India. In: *Women and Development*. B. Lyngdoh Mawlong, C. R. Lyngdoh and J. L Nonglait (Eds.). Synergy Books India, New Delhi,

Chapter 16, p. 141-152, ISBN: 978-93-82059-87-5.

Shangpliang, R. M. (2020). Forest and Tribal Life with special reference to the Khasis. In: The Cultural Heritage

of Meghalaya.Q. Marak and S.K. Chaudhury (Eds.) IGRMS, Bhopal and Manohar, New Delhi, Chapter 28, p.537-554.

### **Funds Received from Agencies including NEHU/UGC**

**UGC: Rs.17.40 lakhs (under the SAP-DSA I of the Department)**

### **Research Projects**

#### ***Ongoing***

<b>Title of Project</b>	<b>PI/Co-PI</b>	<b>Funding Agency</b>	<b>Amount (Rs.)</b>
“A Study of Association and Matrilineal Clans in Khasi Society”	Prof. A. K. Nongkynrih	UGC, SAP-DSA-I	90,000.00
“Objectivity in Social Sciences: Negotiating the Question of Identity”	Prof. D. V. Kumar	UGC, SAP-DSA-I	1,10,000.00
“Perceiving Rural- Urban Interface: Cultural Amalgamation and Spatial Interdependence”	Prof. B. Panda	UGC, SAP	1,10,000.00
“Forest Livelihood Strategies Among Khasi Rural Women: A Study in Lawbah Village”	Dr. Rekha M. Shangpliang	UGC, SAP	70,000.00
“Pangal Women and Street Vending in Imphal: A Sociological Study”	Shri Md. Yusuf Khan	UGC, SAP	1,06,000.00

### **Honours/Awards/Recognitions**

#### **Prof. D. V. Kumar**

Member of the Editorial Advisory Committee of the Journal Explorations (E-Journal of the Indian Sociological Society).

#### ***Other Activities***

#### **Prof. B. Panda**

Delivered lectures on (i) ‘Sociology: Theoretical Perspectives and

Methodological Approaches’ in the Orientation Programme organized by the Department of Sociology, University of Science and Technology, Meghalaya on October 17, 2019, (ii) ‘Formulating Research Problem’ on December 05, 2019 and ‘Conceptualising Research Design and Research Proposal’ on December 07, 2019 at the National Workshop on “Research Methodology in Social Sciences” organized by ICSSR-NERC during December 04-13, 2019, (iii) ‘Methodological Issues in

Social Science Research’ as a key note speaker at Research Scholars’ Day (RSD) 2020 at IIT, Kanpur during January 18-19, 2020, (iv) ‘Violence against Women’ in the National Seminar as guest of honour organized by Department of Sociology, Ekamra College, Bhubaneswar on January 25, 2020.

Chaired a session at the conference on “Fifty Years of India-Bangladesh Relations: Regionalism, Connectivity and the Northeast” organized by the Jadavpur Association of International Relations (JAIR) and ICSSR-NERC in collaboration with NEHU, Shillong during February 14-15, 2020.

#### **Dr. Rekha M. Shangpliang**

Guest Panellist at a programme on Gender organized by William Carey University, Shillong on the occasion of International Women’s Day on March 08, 2020.

Delivered invited lecture on (i) “Academic writing and Paper Presentation Skills” at Synod College, Shillong on August

30, 2019, (ii) “Women as the subject of Feminism” at William Carey University, Shillong on March 08, 2020.

#### **Prof. A. K. Nongkynrih**

Attended programmes on (i) Promoting Tourism organized by Dorbar Shnong Nohwet held at Nohwet Village on June 04, 2019, (ii) Leadership training and self-management organized by Sacred Heart Theological College held at Umshing on July 27, 2019, (iii) Ka Lawei ka ktien baiar u Hynniewtrep hynniewskum (Panel discussion) organized by Grassroots held at Pastoral Centre on August 08, 2019, (iv) Career Guidance, organized by Good Shepherd Higher Secondary School held at Jongksha village on November 04, 2019, (v) Youth and issues related with drugs, alcohol, etc, organized by Dorbar Shnong and Seng Longkmie, Umran Niangbyrnai held at RRTC Umran on March 08, 2020.

Member & Organiser of the International Sociological Association.

## VIII

### SCHOOL OF TECHNOLOGY

**Dean** : Prof. Goutam Saha (up to November 24, 2019)  
Prof. Lairenlakpam Joyprakash Singh (w.e.f. November 25, 2019)  
**Telephone** : 0364 - 2723601/2723602  
**Fax** : 0364 - 2723603  
**E-mail** : deanst@nehu.ac.in / jplairen@ieee.org

The School of Technology has eight Departments, namely Architecture, Basic Sciences & Social Sciences (BSSS), Biomedical Engineering (BME), Electronics and Communication Engineering (ECE), Energy Engineering (EE), Information Technology (IT) and Nanotechnology in Shillong and the Department of Computer Applications (CA) in Tura. These Departments offer various regular programmes – B.Arch., B.Tech., M.C.A., M.Tech. and Ph.D. At present, the School runs a total of 5 UG and 4 PG programmes. 7 Departments offer Ph.D. programmes.

The School has total of 55 faculties and 264 students (176 male and 88 female). In the last Convocation, a total of 16 research scholars (9 male and 7 female), 46 PG students (33 male and 13 female), and 138 UG students (98 male and 40 female) received their degrees. At present, 30 research scholars are getting fellowship. 13

B.Tech.. students got placed in Capgemini, Cognizant/Cognizant Technology Solutions Corporation, and Infosys and 5 students got placed as design engineer, site engineer, and drilling assistant.

The faculties of the School have published 112 papers in reputed journals in India and abroad besides 59 books/book chapters/conference proceedings. 6 patents were filed during the year by 4 Departments in the School. In addition, a prototype IR based thermometer, developed by one of the Departments, was used in NEHU Shillong Campus, during the initial phase of the Covid-19 pandemic. 4 Departments organized Faculty Development Programmes (FDP) sponsored by AICTE under AICTE Training and Learning Academic (ATAL) programmes in the areas of 3D Printing and Design, Robotics, Energy Management and Audit, and Artificial Intelligence besides three Workshops and one outreach programme.



## DEPARTMENT OF ARCHITECTURE

**Head** : Shri Banbhalang Swer (Teacher-in-Charge)  
**Telephone** : 0364 – 2724103 (O) / +91 8794741771 (M)  
**E-mail** : banbha13@gmail.com/bswer@nehu.ac.in

### Faculty: 03

Designation	Name and Qualification	Specialization
<b>Assistant Professor</b>	Shri Banbhalang Swer, M.Arch. (SPA, Delhi)	Urban Design Urban Planning Post Graduate Diploma in Urban Planning and Development (IGNOU)
	Ms. Ibynta B. Tiewsoh, M. Des. (IIT Bombay)	Product Design
	Shri Rameez Gazi, M. Arch.La (SPA, Delhi)	Landscape Design

### Students' Profile

#### Enrolment Capacity: B.Arch.–30

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
B.Arch.	16	14	06	08	-	16	06	24	30

### Courses Conducted

#### Undergraduate: B.Arch.

##### *Semester I*

Structural Design I (Applied Mechanics), Building Materials I, Introduction to Architecture, Communication Skills I, Architectural Design I, Building Construction and Technology I, Architectural Graphics I, Workshop I.

##### *Semester II*

Structural Design II, Building Materials II, History of Architecture I, 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 III, Building Construction and Technology III, Architectural Graphics III (Computer Applications).

##### *Semester IV*

Structural Design IV, Building Materials IV, Modern Architecture, Climatology II, Building Services I, Architectural Design IV, Building Construction and Technology IV, Architectural Graphics IV (Computer Applications).

### ***Semester V***

Structural Design V, Theory of Design I, Environmental Studies, Elective I: (i) Interior Design, (ii) Art in Architecture and History of Meghalaya's Art and Culture, Building Services II (Electrical, Fire Fighting & HVAC), Architectural Design V, Building Construction and Technology V, Architectural Graphics V (Computer Application).

### ***Semester VI***

Structural Design VI, Theory of Design II, Estimation, Costing and Specifications, Elective II: (i) Design for Differently-abled, (ii) Sustainable Architecture, Building Services III (Architectural Acoustics), Architectural Design VI, Building Construction and Technology VI, Working Drawing I.

### ***Semester VII***

Advanced Structural Design, Landscape and Site Planning, Town Planning, Elective III: (i) Industrial Design, (ii) Intelligent Buildings, Landscape and Site Planning (Studio), Architectural Design VII, Building Construction & Technology VII, CAD II.

### ***Semester VIII***

Urban Design, Elective IV: (i) Urban Conservation, (ii) Housing, Urban Design (Studio), Architectural Design VIII, Advanced Building Construction & Technology, Project Introduction and Dissertation, CAD III.

### ***Semester IX***

Professional Practice and Management; Elective-V: (i) Construction Management and Real Estate, (ii) Disaster Resistant structures; Thesis Project; Architectural Seminar.

### ***Semester X***

Professional Training & Viva Voce.

### **Seminars/Conferences/Workshops/ Symposia/Extension Programmes**

#### ***Attended***

#### **Shri Banbhalang Swer**

Presented a paper on "Understanding and Analysing the existing status of river systems in Greater Shillong Planning Area (G.S.P.A)" at an International Seminar on "Understanding Water Crisis: The Way Forward" organized by Synod College in collaboration with the "P. A. Sangma Foundation" and "Meghalaya Basin Development Authority" during June 06 –07, 2019.

#### **Shri Rameez Raja Gazi**

Presented a paper on "Water Budgeting and Management for Sustainable Landscape", at an International Seminar on "Understanding Water Crisis: The Way Forward", organized by Synod College in collaboration with the P. A. Sangma Foundation and Meghalaya Basin Development Authority during June 06 - 07, 2019.

Delivered talks on (i) "Hands on training with instruments to the participants" as a resource person at a 5-day National Workshop on "Energy Management and Audit", sponsored by ATAL Academy held at the Department of Energy Engineering, NEHU, Shillong during October 14 – 18, 2019, (ii) Energy Conservation Building Code at a five days National Workshop under ATAL FDP of AICTE on Energy Management and Audit held at the Department of Energy Engineering, NEHU, Shillong during October 14 – 18, 2019.

### **Honours/Awards/Recognitions**

The Department of Architecture, represented by Banbhalang Swer, Ibynta B. Tiewsoh, Rameez Raja Gazi was awarded IInd position in the Design Competition of a World Class Iconic Structure at Barik Point (PWD Complex) Shillong, Meghalaya, organized by the Directorate of Urban Affairs, Shillong, Government of Meghalaya on October 05, 2019.

Ibynta B. Tiewsoh - a representative for NEHU at the All India Design Innovation Center Exhibition 2019 of Hubs and Spokes at IIT Delhi during November 25–27, 2019.

### **Other Activities**

#### **Shri Banbhalang Swer**

Participated in the (i) four-day Workshop and Symposium on Bamboo Technology organized by The Association of Architects, Assam held at CBTC (Cane and Bamboo Technology Centre, 13th Mile Byrnihat, G S Road during November 13 – 16, 2019, (ii) one-week ATAL FDP National Workshops of AICTE on (a) 3D Printing and Design and (b) Robotics for Healthcare, organized by the Department of Biomedical Engineering, NEHU, Shillong during March 02 - 06, 2020 and November 04 - 08, 2019, respectively, (iii) Workshop on The Art of Thesis Writing organized by the Department of Bio Engineering and Technology, Guwahati University and Rehoboth Academic Services at Guwahati University, Guwahati on February 01, 2020.

Member of the (i) Building Committee, NEHU, Shillong on July 11, 2019, (ii) Master Plan Committee for Bijni Complex NEHU, Shillong on November 21, 2019.

#### **Mrs. Ibynta B. Tiewsoh**

Life member of the (a) Indian National Trust for Indian and National Heritage (INTACH) on March 03, 2020, (b) International council on Monuments and Sites (ICOMOS) on January 01, 2020.

Participated in the one-week ATAL FDP National Workshops of AICTE on (a) 3D Printing and Design and (b) Robotics for Healthcare, organized by the Department of Biomedical Engineering, NEHU, Shillong during March 02 - 06, 2020 and November 04 - 08, 2019, respectively.

Attended the ‘Art of Thesis Writing’ Workshop conducted jointly by Department of Bioengineering & Technology, Gauhati University & Reho both Academic Services on February 01, 2020.

#### **Shri Rameez Raja Gazi**

Participated in the (i) one-week ATAL FDP National Workshops of AICTE on (a) 3D Printing and Design and (b) Robotics for Healthcare, organized by the Department of Biomedical Engineering, NEHU, Shillong during March 02 - 06, 2020 and November 04 - 08, 2019, respectively, (ii) one-week ATAL FDP National Workshops of AICTE on Artificial Intelligence, organized by the Department of Electronics & Communication Engineering, NEHU during October 21-25, 2019.

## Projects (Consultancy)

### Ongoing

Title of Project	PI/Co-PI	Funding Agency	Amount (Rs. in lakhs)
Preparation of the Detailed Project report for Designing the Proposed Residential School at Pdengsakhap, under Amlarem Sub Division for the Directorate of Education, Government of Meghalaya, Shillong on 27th January 2020. Work at Site started and is ongoing.	B. Swer	Education Department Government of Meghalaya.	45.00
Preparation of Detailed Project Report: Farmers Hostel cum Training Centre at the office of the District Training Officer, Upper Shillong, East Khasi Hills District, Meghalaya. Area=1500sq m	B. Swer	Department of Agriculture, Government of Meghalaya, Shillong.	100.00
Preparation of Master Plan: Jowai Annex Campus. NEHU, Wah-e-jer. West Jaintia Hills	B. Swer	NEHU, Shillong.	60.00
Preparation of Detailed Project Report: Construction of Boys & Girls Hostel for Junior & Senior Boys & Girls Separately in Government Co-ed Residential School, Shillong, Meghalaya on 27th February 2020.	B. Swer	Directorate of School Education & Literacy, Meghalaya, Shillong.	50.00
Preparation of Detailed Project Report: Construction of Nongtalang Government Higher Secondary School Building including water supply, sanitation and internal electrification at Nongtalang, West Jaintia Hills District on 27th February 2020.	B. Swer	Directorate of School Education & Literacy, Meghalaya, Shillong.	50.00
Preparation of Detailed Project Report: Construction of Proposed Guest House and Re- Work on the Master Plan of National Institute of Electronics and Information Technology, Under Ministry of Electronics and Information Technology, Govt of India.	B. Swer	National Institute of Electronics and Information Technology, Under Ministry of Electronics and Information Technology, Govt of India.	25.00
Preparation of Detailed Project Report: Preparation of Master Plan of Housing Development for Shine Realtors Pvt. Ltd. Guwahati	B. Swer	Shine Realtors Pvt. Ltd Guwahati	5% of the Project Cost

## DEPARTMENT OF BASIC SCIENCES AND SOCIAL SCIENCES

**Head** : Dr. A. Sinha (up to November 27, 2019)  
Dr. M. M. Singh (w.e.f. November 28, 2019)

**Telephone** : 0364 - 2723641, 2723642 (O) / +91 9436307663 (M)

**E-mail** : hodbsss@nehu.ac.in

**Faculty: 14**

Designation	Name and Qualification	Specialization
<b>Professor</b>	Prof. P. V. Koparkar, M.Sc. & Ph.D. (NU)	Physics (Instrumentation/ Atmospheric Sciences/Nanomaterials)
<b>Associate Professor</b>	Dr. M. M. Singh, M.Sc. (BHU), Ph.D. (PU)	Mathematics (Number Theory, Algebraic Number Theory, Graph Theory, Cryptography, Numerical Analysis, Discrete Mathematics)
	Dr. A. Sinha, M.Sc. (LU), Ph.D. (NEHU)	Chemistry (Physical & Environmental)
<b>Assistant Professor</b>	Dr. Phrangstone Khongji, M.Sc. & Ph.D. (NEHU)	Statistics (Sampling Theory and Demography)
	Dr. Hiranjit Choudhury, M.Sc. & Ph.D. (NEHU)	Botany (Plant Biotechnology)
	Dr. Krishna Upadhaya, M.Sc. & Ph.D. (NEHU)	Botany (Plant Ecology)
	Dr. Jibitesh Dutta, M.Sc. & Ph.D. (NEHU)	Mathematics (Dynamical Systems)
	Dr. (Mrs.) Jyoti Narayan, M.Phil. & Ph.D. (KU)	Chemistry (Physical Analytical / Nanoscience and Nanomaterials)
	Dr. Regenel S. Kharwanlang, M.Sc. & Ph.D. (NEHU)	Physics (Theoretical Physics)
	Dr. Sainkumar M. Mawiong, M.Phil. & Ph.D. (NEHU)	Mathematics
	Dr. R. S. Singh, M.Sc. (Jadavpur Univ.), Ph.D. (CSIR-IICT, Osmania Univ.)	Chemistry (Organic/Bio-organic/ Soft materials)
	Dr. M. Mahato, M.Sc. (Univ. of Burdwan), Ph.D. (IACS, Calcutta Univ.)	Physics (Nanocomposite, LB Film, Sensor, Energy Storage, Plastic/Bio-mass Waste)

<b>Assistant Professor</b>	Dr. Munshi Ram, M.Com. (VBSPU), Ph.D. (BHU)	Commerce- HRM (Human Resource Management)
	Smt. Evapynhun Giri, M.A. & M.Phil. (NEHU)	English

### Thrust Areas of Research

Basic & Applied Mathematics, Basic & Applied Physics, Atmospheric Sciences, Chemical Sciences, Nanoscience and Nanotechnology, Basic Environmental Sciences, Biotechnology, Basic & Applied Economics, Applied Statistics, and Communicative English, with emphasis on interdisciplinary and multidisciplinary studies.

### 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 are engaged in the research activity in their respective areas of interest as well as in the interdisciplinary and multidisciplinary areas

### Students' Profile

#### Enrolment Capacity: Ph.D. - 07

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
Ph.D.	03	04	-	01	-	06	01	06	07

#### Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
Ph.D.	03	01	0	02	01	01	0	04	04

#### Students Awarded PhD Degree

Name of Student	Title of Thesis	Name of Supervisor
Ms. Viheno Iralu	Distribution and regeneration ecology of <i>Elaeocarpus prunifolius</i> (C. Muell.) Mast. and <i>Micheliapunduana</i> Hk.f. & Th. in Meghalaya	Dr. K. Upadhaya
Mr. Jejiron Maheswari Baruah	Studies on synthesis, characterization and application of semiconducting nanoparticles of group IIB and VIA compound	Dr. Jyoti Narayan
Mr. Rajib Borah	Development of protocol for in vitro culture and micropropagation of <i>Magnolia punduana</i> (Hook. F. & Thomson) Figlar: A threatened plant of Meghalaya	Dr. Hiranjit Choudhury

Mr. VisuzotoValeo	A multiple probe study of the global atmospheric electric circuit with special reference to weather and climate in Meghalaya	Prof. P.V. Koparkar
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#### Research Fellowship

CSIR-UGC-NET	UGC Non-NET	National Fellowship for Higher Education of ST Students (Rajiv Gandhi SC/ST)	Meritorious Maulana Azad Minority Fellowship	Any other		Total
				DBT-JRF (Non-NET)	SERB-JRF/ CSIR JRF	
-	07	-	-	-	-	07

#### Courses conducted

##### *Undergraduate: B. Tech..*

The core courses pertaining to Sciences, Humanities and Commerce are taught for the B. Tech. Departments/disciplines of Electronics & Communication Engineering, Information Technology, Bio-medical Engineering, and Energy Engineering, in the School of Technology. The details of the courses conducted 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, Electronics Laboratory, Elements of Environmental Sciences, Engineering Mathematics II, Engineering Chemistry, Engineering Chemistry Laboratory, Computer Systems and Programming, Computer Programming Laboratory, Basic Electronics, Basic Electronics Laboratory and Engineering Graphics 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 & IT.

##### *Semester V*

Industrial Economics and Management, (for ECE only) and Management Information System (for IT only).

Seminars/ Conferences/ Symposia/ Extension Programmes etc.

##### *Organized*

##### **Dr. A. Sinha**

Organized (i) one-day sensitisation Workshop on Intellectual Property Right, Patent & Trade-Mark at the School of Technology, NEHU, Shillong, Meghalaya on May 04, 2019, (ii) one-day sensitisation Workshop cum Hands on Practice Session on Cloud Programming at the School of Technology, NEHU, Shillong in collaboration with Google Cloud Platform, India and I & We, Kolkata on September 07, 2019.



### ***Attended***

#### **Prof. P. V. Koparkar**

Delivered an invited talk on “Lightning, Thunder and Associated Atmospheric Electric-field Hazards” in the National Seminar on Electronic and Allied Sciences and Technologies (NaSAEAST-2019, organized by the Department of Physics and Radar facility, Guwahati University, Assam during October 25 – 26, 2019.

#### **Dr. J. Dutta**

Delivered invited talks on (i) Dynamics of Brane Gravity-Based Cosmological models: A Global Dynamical System Perspective in the International Conference on Differential Geometry and Relativity (ICDGR-2019) , in the Department of Mathematics and Statistics, DDU Gorakhpur University during November 08 – 10, 2019, (ii) Analysis of Cosmological models in the National Seminar on Mathematical Sciences (NSMS-2020) , in the Department of Mathematics, University of Burdwan, Burdwan, West Bengal during January 09 -11, 2020.

#### **Dr. Sainkumar M. Mawiong**

Presented a paper on Minimal Finite Model of a Topological Spaces- A survey, in the National Seminar on Recent Advancements in Science and Technology, organized by Union Christian College, through the Science Society, in collaboration with NESAC, Umiam, P. A. Sangma Foundation and College of Post Graduate Studies in Agricultural Sciences (CAU-1), Umiam, Ri Bhoi, Meghalaya during June 14 – 17, 2019.

#### **Dr. R. S. Singh**

Presented a paper on “Triphenylmethyl and Triphenylsilyl Derivatives of Simple

Primary Alcohols: From Molecular Gels to Visual Fluoride Sensor” in the 19th National conference on Surfactants, Emulsions and Biocolloids (NATCOSEB-XIX), jointly organized by Amity University, Kolkata and Indian Society for Surface Science & Technology, Jadavpur University, Kolkata, West Bengal during October 18 – 20, 2019.

#### **Dr. M. Mahato**

Presented a paper on “Carbon Nanotube (CNT) Preparation from Waste Plastic: A Review on Yield and Environmental Impact” and “Preparation of Fuel Chemicals from Plastic and Biomass Waste through Pyrolysis: A Review on Yield and Feasibility” at Recycle-2020, the 3rd International conference on Waste Management held at IIT, Guwahati, Assam during February 13 – 14, 2020.

### **Publications**

#### **Research Papers**

##### ***Published in India***

Singh, M. M., Asthana, S. (2019). On the Diophantine equation  $53^x + 143^y = z^2$ . Annals of Pure and Applied Mathematics, 19 (2): 193-196.

Singh, M. M., Asthana, S. (2019). On the Diophantine equation  $x^2 + 37^l = y^n$ . J P Journal of Algebra, Number Theory and Applications, 44 (1): 15- 30.

Singh, M. M., Asthana, S. (2019). On the Diophantine equation  $2x + 7y = z^2$ . International Journal of Research in Advent Technology, 7 (5): 13- 14.

Singh, M. M., Kharbuki, A. (2019). Hurwitz complex continued fraction and complex theory of Pell’s equation  $x^2 - Dy^2 = 1$  for some specific values of D. Indian Journal of Mathematics,

61(3): 381-394.

Khongji, P. (2019). To study behavioural and socio-economic factors of non-communicable diseases in Northeast India using NFHS-4. *Indian Journal of Public Health Research and Development*, 10 (7): 224-229.

Mir, A. H., Upadhaya, K., Roy, D. K., Deori, C., Singh, B. (2019). A comprehensive checklist of endemic flora of Meghalaya, India. *Journal of Threatened Taxa*, 11(12):14527-14561. DOI: 10.11609/jott.4605.11.12.14527-14561.

Thapa, N., Barik, S. K., Upadhaya, K., Lakadong, N. J. (2020). Local edaphic factors influence leaf nutrient resorption efficiency of evergreen and deciduous trees: a case study from montane subtropical old-growth and regenerating forests of Meghalaya. *Tropical Ecology*, 61: 21-31.

Gogoi, R. R., Adhikari, D., Upadhaya, K., Barik, S. K. (2020). Tree diversity and carbon stock in a subtropical broadleaved forest are greater than a subtropical pine forest occurring in similar elevation of Meghalaya, north-eastern India. *Tropical Ecology*, 61: 142-149.

Nonghuloo, I. M., Kharbhih, S., Suchiang, B. R., Adhikari, D., Upadhaya, K., Barik, S. K. (2020). Production, decomposition and nutrient contents of litter in subtropical broadleaved forest surpass those in coniferous forest, Meghalaya. *Tropical Ecology*, 61: 5-12.

### ***Published Abroad***

Singh, M. M., Sawkmie, A. (2019). Digraphs associated with the Kth power map on the quotient ring of polynomials over finite fields. *Journal of Algebra and*

*its Applications*, 18 (11): 1950218.

Majhi, V., Saikia, A., Datta, A., Sinha, A., Paul, S. (2020). Comprehensive review on deep learning for neuronal disorders: Applications of deep learning. *International Journal of Natural Computing Research*, 9(1): 27-44.

Khongji, P. (2019). Implications of population projection on some social and economic indicators for states in North East India till 2031. *International Journal of Social Science and Economic Research*, 4(5): 3503 -3550.

Khongji, P., Lalremruata, R. (2019). A study on the level of tobacco smoking among women in the state of Mizoram. *International Journal of Research and Analytical Reviews*, 6(2): 453-464.

Khongji, P., Lalvenmawii, A. (2019). Study of ideal family size among women in the state of Mizoram. *International Journal of Research and Analytical Reviews*, 6(2): 469-480.

Sangi, M. L., Khongji, P. (2019). Studying the coverage of health insurance among women in Mizoram. *International Journal of Research and Analytical Reviews*, 6(2): 790-800.

Khongji, P. (2019). Implications of population projection on some health indicators for states in North East India till 2031. *International Journal of Research and Analytical Reviews*, 6(2): 556-565.

Pao, N. T., Upadhaya, K. (2019). Seasonal dynamics of soil microbial biomass in fragmented patches of subtropical humid forest of Jaintia hills in Meghalaya, Northeast India. *Forest Systems*, 28 (1), e002. <https://doi.org/10.1016/j.fscs.2019.01.002>

org/10.5424/fs/2019281-1397.

Iralu, V., Barbhuyan, H. S. A., Upadhaya, K. (2019). Ecology of seed germination in threatened trees: a review. *Energy, Ecology and Environment*, 4: 189-210. <https://doi.org/10.1007/s40974-019-00121-w>.

Iralu, V., Pao, N. T., Upadhaya, K. (2020). An assessment of population structure and regeneration status of *Magnolia punduana* Hk. f. & Th. (Magnoliaceae) in fragmented forests of northeast India. *Journal of Forestry Research*, 31(3):937-943. <https://doi.org/10.1007/s11676-019-00930-z>.

Upadhaya, K., Barik, S. K., Kharbhih, V. M., Nongbri, G., Debnath, G., Gupta, A., Ojha, A. (2020). Traditional bun shifting cultivation practice in Meghalaya, Northeast India. *Energy, Ecology and Environment*, 5: 34-46. <https://doi.org/10.1007/s40974-019-00144-3>.

Dutta, J., Khyllep, W., Zonunmawia, H (2019). Cosmological dynamics of the general non-canonical scalar field models. *Eur. Phys. J. C.*, 79(4): 359. doi:10.1140/epjc/s10052-019-6885-2.

Khyllep, W., Dutta, J. (2019). Linear growth index of matter perturbations in Rastall gravity. *Phys. Lett. B.*, 797, 134796. doi: 10.1016/j.physletb.2019.134796.

Chetry, B., Dutta, J., Khyllep, W. (2019). Thermodynamics of scalar field models with kinetic corrections. *Int. J. Mod. Phys. D.*, 28(15), 1950163. doi:10.1142/S0218271819501633.

Chetry, B., Dutta, J., Debnath, U., Khyllep, W. (2019). Thermodynamic and observational constraints of DGP

braneworld in the light of nonlinear electrodynamics. *Int. J. Geom. Meth. Mod. Phys.* 16(11), 1950173. doi:10.1142/S0219887819501731.

Warjri, M., Narayan, J. (2019). Synthesis, Characterization and physico-chemical properties of cupric oxide nanoparticles and their nanofluids. *Materialstoday Proceedings*, 18: 1176-1184.

Baruah, J. M., Narayan, J. (2019). Surface passivated aqueous mediated synthesis of CdTe QDs: Potential nano thin films. *Materials Research Express*, 6 (9): 095082.

Baruah, J. M., Narayan, J. (2019). Quantum dot sensitized solar cell: Introduction. *Carbon- Science and Technology*, 11(2): 94-100.

Baruah, J. M., Narayan, J. (2019). Semiconductor quantum dots as smart biocompatible imaging agents. *AIP Conference Proceedings*, 2162: 02004. doi.org/10.631/1.5130214.

Singh, W. P., Singh, R. S. (2020). A new triphenylsilyl-containing gelator for visual sensing of fluoride ion. *Materials Chemistry and Physics*, 241, 122351.

Singh, W. P., Koch, U., Singh, R. S. (2019). Gelation of ionic liquids by small-molecule gelators and their applications. *Soft Materials*, DOI:10.1080/1539445X.2019.1697706.

### **Book/Book Chapters/ Proceedings**

Singh, M. M., Goswami, P. (2019). Integer factorization problem. In: *Emerging Security Algorithms and Techniques*. K. Ahmad, et al. (Eds.). CRC Press, Taylor & Francis Group, New York, p. 59-78.

Mir, A. H., Chaudhury, K. L., Upadhaya, K. (2019). Sacred groves of Meghalaya- an overview. In: Ecological Traditions of India. Volume- XV, Meghalaya. P. Sudhakar (Ed.). CPR Environmental Education Centre, Chennai, India, p. 7-54.

Baruah, J. M., Narayan, J. (2019). Development of aqueous synthesis pathway for CdSe quantum dots: a greener method. In: 5th International Conference on Nanotechnology for Better Living, Proceedings. Applied Science Innovation. p. 100-101. (ISBN: 978-81-939516-0-6).

Dhungel, K., Narayan, J. (2019). Nanoparticle: Significance as Smart Material in therapeutic strategies in drug delivery in biological systems. In: Application of Biomedical Engineering in Neuroscience. S. Paul (Ed.). Springer Nature Singapore Pte Ltd., Singapore, Chapter 16, p. 327-339. [https://doi.org/10.1007/978-981-13-7142-4\\_16](https://doi.org/10.1007/978-981-13-7142-4_16).

Baruah, J. M., Narayan, J.

(2020). Aqueous synthesis of II-VI semiconductor quantum dots: challenges and developments. In: Solar Cells. M. Nayeripour (Ed.). Intech Open Publishing House, London, UK, doi: 10.5772/Intech open.82891. (ISBN: 978-1-78984-125-1, e ISBN: 798-1-78984-126-8).

Shergujri, M. A., Jaman, R., Baruah, A. J., Mahato, M., Pyngrope, D., Singh, L. R., Gogoi, M. (2019) Paper-based sensors for biomedical applications. In: Biomedical Engineering and its Applications in Healthcare. S. Paul (Ed.). Springer Nature, Singapore, Chapter 6, p. 355-376.

Nath, A., Shah, A., Bhandari, S., Gogoi, M., Mahato, M. (2019). Recent advances on polymer nano composite-based radiation shielding materials for medical science. In: Biomedical Engineering and its Applications in Healthcare. S. Paul (Ed.). Springer Nature, Singapore, Chapter 11, p. 639-655.

## Research Projects

### Ongoing

Title of Project	PI/Co-PI	Funding Agency	Amount ( Rs.)
Traditional Knowledge System-Network Programme on Convergence of Traditional Knowledge Systems for Integration to Sustainable Development in the Indian Himalayan Region	Dr. K. Upadhaya	Department of Science and Technology, Govt. of India (GoI), New Delhi Duration 5 yrs (w. e. f. July 01, 2015)	99,77,000.00
Phytochemical Examination, Molecular Characterization and Propagation of <i>Illicium griffithii</i> Hook. F. & Thoms.: A Medicinally Important RET Plant of North-east India for Improving Economic- and Conservation- Status	Dr. H. Choudhury (PI) Prof. S. R. Rao (Co-PI) and Dr. A. Bhattacharjee	Department of Biotechnology, (DBT), Govt. of India (GoI), New Delhi Duration 4 yrs (w. e. f. January 17, 2017)	39,28,000.00

Some Problem in Computational Algebraic Topology with a Special Emphasis on Conley Index Theory	Dr. Sainkumar M. Mawiong	SERB, DST, Govt. of India (under MATRIC Scheme). Duration 3 yrs (w. e. f. June 08, 2018)	6,60,000.00
Quantum Dot Based Biosensor for Early Detection of Prostate Cancer Using Multiple Biomarkers in Biological Samples	Dr. M. Gogoi, Dr. M Mahato (Co-PI)	Department of Biotechnology (DBT), Govt of India, Duration: 3 yrs (w. e. f. September 21, 2018)	56,99,000.00
Challenging General Relativity at the Largest Scales: A Systematic Investigation of Cosmological Perturbations in Modified Gravity	Dr. J. Dutta	Science and Engineering Research Board (SERB), Department of Science and Technology (DST), Govt. of India. Duration 3 yrs (w. e. f. March 18, 2019)	22,37,442.00

#### *Completed*

Title of Project	PI/Co-PI	Funding Agency	Amount ( Rs.)
Orchid Bioresources of the North-east India-Conservation, Database Development and Information Networking	Dr. H. Choudhury (PI) Dr. K. Upadhaya (Co-PI) and Dr. A. Bhat-tacharjee (Co-PI)	Department of Biotechnology, (DBT), Govt. of India (GoI), New Delhi Duration 3 yrs (w. e. f. March 28, 2016)	29,38,000.00

Title of Project	PI/Co-PI	Funding Agency	Amount ( Rs.)
Orchid Bioresources of the North-east India-Conservation, Database Development and Information Networking	Dr. H. Choudhury (PI) Dr. K. Upadhaya (Co-PI) and Dr. A. Bhattacharjee (Co-PI)	Department of Biotechnology, (DBT), Govt. of India (GoI), New Delhi Duration 3 yrs (w. e. f. March 28, 2016)	29,38,000.00
Conversion of Waste Plastic into Value Added Products	Dr. M Mahato (PI) Dr M. Gogoi (Co-PI)	SERB, DST, Govt of India (Completed June 12, 2019)	7,24,000.00
Bottom-Up Nanobiocomposite Film of Protein, Polymer and Nanoparticles by Langmuir Bldgett/Layer by Layer Technique for Pesticide Sensing Application	Dr. M. Mahato (PI) Dr. M. Gogoi (Co-PI)	SERB, DST, Govt of India (Completed March 23, 2020)	29,00,000.00

## Academic Collaborations

### Dr. M. M. Singh

Collaborated with (i) Dr. Jituparna Goswami, Assistant Professor, Department of Mathematics, Gauhati University, Guwahati, Assam, on A Study of Some Graph Structures Associated with Semiring, (ii) Dr. Pinkimani Goswami, Assistant Professor, Department of Mathematics, University of Science & Technology Meghalaya, Kiling Road, 9th Mile, Ri-Bhoi, Meghalaya on A Study of Applications of Number Theory in Cryptography.

### Dr. H. Choudhury

Collaborated with Dr. V. Kumar, Scientist-G, Forest Research Institute, Dehra Dun, Uttarakhand, Prof. S. R. Rao and Dr. A. Bhattacharjee, Assistant Professor, Department of Biotechnology and Bioinformatics, NEHU, Shillong on Phytochemical examination, molecular characterization and propagation of

*Illiciumgriffithii* Hook. F. & Thoms.: a medicinally important RET plant of Northeast India for improving economic- and conservation- status.

### Dr. K. Upadhaya

Collaborated with Prof. S.C. Garkoti, JNU, New Delhi (Prof. S. K. Barik, Department of Botany, NEHU, Shillong, as one of the PI/CI) on Traditional knowledge system-network programme on convergence of traditional knowledge systems for integration to sustainable development in the Indian Himalayan region.

### Dr. J. Dutta

Collaborated with (i) Dr. Ujjal Deb Nath, Associate Professor, Department of Mathematics, Indian Institute of Engineering Science and Technology, Shibpur, West Bengal on Gravitational Thermodynamics, (ii) LaurJärv, Senior Research Fellow, Head of the Laboratory, Laboratory of Theoretical Physics, Institute



of Physics, University of Tartu, Estonia on Dynamical Systems in Cosmology.

#### **Dr. M. Mahato**

Collaborated with (i) Dr. M. Gogoi, Assistant Professor, Department of Biomedical Engineering, NEHU, Shillong on Quantum dot based biosensor for early detection of prostate cancer using multiple biomarkers in biological samples, (ii) Dr. Basudev Pradhan, Central University of Jharkhand on Polymer nano-composite work (iii) Dr. Devkumar Mahato, NIT, Patna on Magnetic study, (iv) Dr. A. K. Pal, Department of Chemistry, NEHU, Shillong on Nanomaterial synthesis, characterization and their novel applications.

#### **Honours/Awards/Recognitions**

##### **Dr. K. Upadhaya**

Member of the (i) expert committee of Meghalaya Biodiversity Board, Government of Meghalaya (October 2018 for three years), (ii) Monitoring Committee of Eco-sensitive Zone Nongkhylliem Wild Life Sanctuary and Eco-sensitive Zone, Naphu Wild Life Sanctuary Govt. of Meghalaya (November 2018 for three years).

##### **Dr. J. Dutta**

Selected as 'Associate of Inter University Centre for Astronomy and Astrophysics (IUCAA)', Pune, India, w.e.f. August 01, 2018 - July 31, 2021.

#### **Other Activities**

##### **Dr. M. M. Singh**

Editorial manager of Discrete Mathematics, Algorithms and Applications, World Scientific Publication.

Member of the Editorial Board of the in-house magazine 'NEHU JYOTI'

Delivered invited lectures in the UGC-Sponsored Special Summer School in Basic Sciences & Technology organized by UGC- Human Resource Development Centre, NEHU, Shillong, for College and University Teachers during July 08 - 21, 2019.

Reviewer: Mathematical Review (MR), American Mathematical Society (AMS), USA; IEEE Access, USA, Mathematical Methods in the Applied Sciences, Wiley International, USA.

##### **Dr. A. Sinha**

Representative of ISCA of Shillong Chapter (2019-20).

Expert Member of the Advisory Panel of the STAR Departments under STAR STATUS SCHEME of the DBT, GoI, granted to St. Edmund's College, Shillong, Meghalaya, for the academic year of 2019-20.

Life Member of Indian Society for Training and Development (ISTD), New Delhi.

Organized the event of 'Run for Unity' at NEHU, Shillong on October 31, 2019 to mark National Unity Day.

Participated in three one-week National Workshop under the ATAL FDP of AICTE, New Delhi, on (a) Energy Management and Audit, during October 14 – 18, 2019, held at the Department. of Energy Engineering, NEHU, (b) Robotics for Healthcare during November 04 – 08, 2019 and 3D Printing & Design, during March 02 – 06, 2020 held at the Department. of Biomedical Engineering, NEHU.

Attended (i) Practical Entrepreneurship



Session under Entrepreneurship Tinkering Programme, at NEHU, Shillong on November 16, 2019, (ii) the Outreach Programme, organized by Bio-NEST NIPER-Guwahati Incubation Centre on February 24, 2020.

Filed a Patent (May 2019). Automated Vehicle Accident and Theft Prevention Device (IPO Application No. 201931019856).

#### **Dr. H. Choudhury**

Participated in one-day Workshop on “IPR, Patent and Trade Mark”, organized by School of Technology at NEHU, Shillong on May 04, 2019.

#### **Dr. K. Upadhaya**

Delivered a lecture in the UGC-sponsored Special Summer School Programmes in Basic Sciences and Technology, organized by the UGC-Human Resource Development Centre, NEHU, Shillong for College and University teachers on the topic “Plant diversity inventory and use of modelling technique for conservation” during July 08-21, 2019.

#### **Dr. J. Dutta**

Reviewer: Classical and Quantum Gravity, General Relativity and Gravitation, Canadian Journal of Physics, Modern Physics Letters A, European Physical Journal.

#### **Dr. Jyoti Narayan**

Attended (i) a short-term course in “Research Methodology for Basic Sciences” organized by UGC, HRDC, NEHU Shillong. Meghalaya during May 27-June 01, 2019, (ii) two one-week National Workshop under the ATAL FDP

of AICTE, New Delhi, on Robotics for Healthcare during November 04 – 08, 2019 and 3D Printing & Design, during March 02–06, 2020 held at the Department of Biomedical Engineering, NEHU.

Reviewer: Journal of Material Sciences: Materials in Electronics. Springer, Applied physics A: Materials Science and Processing, Springer Nature.

#### **Dr. Sainkumar M. Mawiong**

Guided a summer internship project for Inashua Kharjana from IISER Kolkata on the topic “Topology, Graph theory and Topological Graph Theory” during May 28-July 25, 2019.

Delivered an invited talk on “Group Theory and Symmetry” in Lady Keane College Shillong on November 02, 2019.

#### **Dr. M. Mahato**

Attended (i) a two-day Workshop on Catalyzing and Translating Innovation to Market at NIPER, Guwahati during February 27 – 28, 2020, (ii) a one-week ATAL National Workshop of AICTE, New Delhi, on (a) “3D Printing & Design”, organized by the Department of Biomedical Engineering, NEHU, Shillong during March 02-06, 2020, and (b) “Energy Management and Auditing”, organized by the Department of Energy Engineering, NEHU, Shillong during October 14 - 18, 2019, (iii) a one-week Short Term Course on “Waste to Wealth-The Current Scenario and Sustainable Technology (WTW-2020)”, organized by Department of Metallurgical and Materials Engineering, NIT, Durgapur, West Bengal during January 20 - 24, 2020.

**Dr. M. Ram**

Attended (i) a one-day Workshop on “IPR, Patent and Trade Mark”, organized by School of Technology at NEHU, Shillong, Meghalaya on May 4, 2019, (ii) four one-week National Workshop under the ATAL FDP of AICTE, New Delhi, on (a) Energy Management and Audit, at the Department. of Energy Engineering,

NEHU during October 14 - 18, 2019, (b) Robotics, during November 04 - 08, 2019 and 3D- Printing & Design, during March 02 - 06, 2020, held at the Department. of Biomedical Engineering, NEHU, (d) Artificial Intelligence at the Department of Electronics and Communication Engineering, NEHU, Shillong during October 21 - 25, 2019.

## DEPARTMENT OF BIOMEDICAL ENGINEERING

**Head** : Dr. Manashjit Gogoi (Teacher- in-Charge)  
**Telephone** : 0364 2723 852 / 56 (O) / +91 9485043446 (M)  
**E-mail** : hodbme@nehu.ac.in

### Faculty: 06

Designation	Name and Qualification	Specialization
<b>Associate Professor</b>	Dr. Dinesh Bhatia, M.Tech. & Ph.D. (MNNIT, Allahabad)	Biomedical Engineering; Medical Informatics, Biomechanics and Rehabilitation Engineering; Signal and Image Processing, Marketing, International Business and Environment Sustainability
<b>Assistant Professor</b>	Shri Nitin Sahai, B.Tech.. (College of Engineering Technology, Moradabad), M.Tech. (MNNIT, Allahabad)	Computer Aided Tissue Engineering, Biomechanics and Biomaterials
	Dr. Sudip Paul, M.Tech. & Ph.D. (IITBHU, Varanasi)	Electrophysiology, Biomedical Instrumentation, Artificial Organ and Rehabilitation System, Biomedical Signal Processing
	Dr. Manashjit Gogoi, M.Tech. (TU), Ph.D. (IIT Bombay)	Bio nanotechnology, Nanomedicine, Biosensor
	Shri Gajendra Kumar Mourya, B.Tech.. (Samrat Ashok Technological Institute, Vidisha), M.Tech. (IIT, BHU)	Medical Image Processing, Signal Processing and Biomedical Instrumentation
	Shri Shyamal Mandal, B.TECH.. (JIS College of Engineering, WB), M.Tech. (IIT Kharagpur)	Medical Image Processing, Nanotechnology, Biomaterials

### Thrust Areas of Research

Biomedical devices and signal processing, Electrophysiology and medical Instrumentation, Medical Informatics and Telemedicine, Biomedical Instrumentation, Biomedical Signal Processing, Artificial Organ and Rehabilitation Engineering, Medical Image analysis and processing, Medical Image

Processing, Medical Imaging System, Biomedical Instrumentation, Biomedical Signal Processing, Biomaterials, Medical Imaging, Nanotechnology, Biomechanics and Rehabilitation Engineering, Bio-nanotechnology, Nano medicine and Cancer drug delivery, Tissue Engineering, Biomaterials, Biomechanics, Computer Aided Tissue Engineering.

### 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 specific 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 young minds for the achievement of better health care solutions with emphasis on learning new techniques, develop innovative ideas through learning, skill development, Research and Development

(R&D) and Industry-Institution interaction in the field. The Department is one of the few institutes in the North Eastern region offering UG and PG programmes in Biomedical Engineering. The Department aims to focus on strengthening R&D activities for development of products and services which can be transferred to the society for the benefit of mankind. The students are being prepared to face the emerging challenges in the field of Biomedical Engineering by faculty members having rich expertise, diversity and experience in this field.

### Students' Profile

**Enrolment Capacity: B.Tech.. – 60, Ph.D. – 01**

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
B.Tech..	09	07	03	05	-	08	02	14	16*
Ph.D.	01	-	01	-	-	-	-	01	01

\*EWS = 1 (Male)

### Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
B.Tech..	09	14	03	04	01	15	03	20	23
Ph.D.	-	01	-	-	-	01	-	01	01

### Students Awarded PhD Degree

Name of Student	Title of Thesis	Name(s) of Supervisor(s)/ Joint Supervisor
Mrs. Meena Gupta	Analysis of Cognitive Studies on Cerebral Palsy employing Repetitive Transcranial-Magnetic Stimulation, Neurofeedback and Cognitive Exercises	Dr. Dinesh Bhatia

## Research Fellowship

CSIR-UGC-NET	UGC Non-Net	Rajiv Gandhi SC/ST	ICPR Fellowship	Meritorious Fellowship	Malana Azad Minority Fellowship	Others
01	02	-	-	-	-	-

### Fieldwork/Educational Tour of Students

**Teachers-in-Charge** : Mr. Nitin Sahai & Mr. Shyamal Mandal

**Places/Institutions Visited** : Indian Institute for Medical Technology, Kolkata

**Duration of Tour** : 20 days (October 19 – November 7, 2019)

**Purpose of Tour** : Part of the Curriculum (VII Semester)

### Courses Conducted

#### Undergraduate: B.Tech..

##### *Semester I*

Engineering Mathematics I, Engineering Chemistry, Engineering Mechanics, Engineering Physics, Introduction to Biomedical Engineering, Engineering Chemistry Laboratory, Engineering Physics Laboratory.

##### *Semester II*

Engineering Mathematics II, Computer Systems and Programming, Elements of Environmental Sciences, Basic Electrical Engineering, Professional Communication Skills, Computer Programming Laboratory, Basic Electrical Engineering Laboratory.

##### *Semester III*

Bioelectronics, Biomaterials, Human Anatomy and Physiology, Medical

Microbiology and Biochemistry, Bioelectronics Laboratory, Human Anatomy and Physiology Laboratory, Medical Microbiology and Biochemistry Laboratory.

##### *Semester IV*

Statistics and Random Processes, Biomedical Instrumentation I, Tissue Engineering and Artificial Organs, Biomedical Signals and Systems, Biomedical Instrumentation Laboratory I, Biomedical Signals and Systems Laboratory, General Proficiency I.

##### *Semester V*

Bio-Transport Process, Microprocessor and Microcontroller, Biomedical Signal Processing, Biomedical Instrumentation II, Microprocessor and Microcontroller Laboratory, Biomedical Signal Processing Laboratory, Biomedical Instrumentation II Laboratory.

##### *Semester VI*

Medical Imaging Techniques, Modelling of Physiological Systems, Artificial Organ and Rehabilitation Engineering, Professional Ethics and IPR, Elective I, Modelling of Physiological Systems Laboratory, Hardware Design Project Laboratory, Seminar & Group Discussion, General Proficiency III.

##### *Semester VII*

Bio-Nanotechnology, Hospital Management, Medical Image Processing, Industrial Economics and Management,

Elective II (open), Bio-Nanotechnology Laboratory, Medical Image Processing Laboratory, Industrial Tour, General Proficiency IV.

Semester VIII

Major Project, General Proficiency V.

### **Ph.D. Courses**

Research Methodology, Advance in Biomedical Instrumentation and Elective I (Advance Biomaterial / Advance Biomechanics & Robotics / Advances in Nanomedicine)

### **Seminars/Conferences/Workshops/Symposia/Extension Programmes (National/International)**

#### ***Organized***

#### **Mr. Nitin Sahai**

Organized a National Workshop on ATAL 3D Printing & Design during March 02 – 06, 2020.

#### **Dr. Sudip Paul**

Organized (i) an outreach programme by Bio-NEST NIPER-Guwahati Incubation Center in collaboration with NEHU, Shillong at Science Seminar Hall, NEHU on February 24, 2020, (ii) AICTE-ATAL Workshop on Robotics for Healthcare during November 04 – 08, 2019.

#### **Mr. Gajendra Kumar Mourya**

Organized a winter internship programme for the BTech Students on Scientific and Computational Tools for Engineers during January 02 – 17, 2020.

#### ***Attended***

#### **Dr. D. Bhatia**

Delivered invited talks on (i) Frontiers of Neuroscience and Neurochemistry: Dynamic Challenges and Approaches at the 33rd Annual meeting of Society for

Neurochemistry India (SNCI) held at Jamia Hamdard during October 10 - 12, 2019, (ii) Recent Advancements in Agriculture, Food Tech and Human Health (BIOMILAAP 2019) at the National conference organized by Sam Higginbottom University of Agriculture, Technology and Sciences, Prayagraj during November 05 – 06, 2019, (iii) Neuron to Behaviour at the 37th Annual meeting of Indian Academy of Neurosciences organized by the All India Institute of Medical Sciences (AIIMS), Delhi during November 18 - 21, 2019.

#### **Dr. Sudip Paul**

Delivered invited talks on (i) Detection of neuronal impairment in Parkinson's disease and Neuronal Oscillations: A nearly signature of Parkinson's Disease, organized by IBRO-APRC Bangladesh Associate School of Neuroscience (2019): Fundamental of Neuroscience, Neural Disorders and Neural Engineering during December 06 - 08, 2019, (ii) Electrophysiology and Brain Signal Analysis, Department of Biomedical Physics & Technology, University of Dhaka on December 05, 2019, (iii) Development of Artificial Neural Network to Improve the Cognitive Disorder, in the XXXVII Annual Meet of Indian Academy of Neurosciences, AIIMS, New Delhi on November 19, 2019, (iv) Importance of Tremor Identification for Parkinson's disease, at the International Conference on Neurological Disorders and Therapeutics 2019 (ICNDT-2019), NIPER-Ahmedabad on October 26, 2019, (v) Intervention of Early Signature of Neurodegenerative disorders at the International conference on Frontiers in Neuroscience and Neurochemistry: Dynamic Challenges and Approaches, with SNCI meeting Jamia Hamdard, Delhi on October 11, 2019, (vi) Aspects of Science, Engineering and Technology at the Induction Programme

2019, Techno International Batanagar, India on August 01, 2019, (vii) Advancements in Biomedical Instrumentation and its application in Healthcare for Benefit of Mankind at the JIS College of Engineering, India on July 26, 2019.

### **Dr. Manashjit Gogoi**

Delivered invited talks on (i) Energy and Environment at AICTE Training and Learning Academy (ATAL) Workshop on Energy Management and Audit, organized by Energy Department, NEHU, Shillong during October 14-18, 2019, (ii) 3D Printed Microfluidic devices for Biomedical Applications at AICTE Training and Learning Academy (ATAL) Workshop on 3D printing and Design, organized by BME Department, NEHU, Shillong during March 02 – 06, 2020.

### **Shri Gajendra Kumar Mourya**

Delivered invited talks on (i) (a) Medical Imaging and Robotics, (b) Computer-aided diagnosis and Treatment Planning, (c) Evolution of Robotic Surgery and a Glimpse on state of the art Research in One week AICTE Training and Learning Academy (ATAL) Workshop on “Robotics for Healthcare” at NEHU, Shillong during November 04 – 08, 2020, (ii) Biomedical Engineering and Recent Trends in five-day Short-Term Course on “Advancement in Instrumentation and Signal Processing” at CIT Kokrajhar during November 15-19, 2019, (iii) (a) Medical Imaging in 3D Printing (b) 3D Printing for Computer-Guided Liver Interventions in one-week AICTE Training and Learning Academy (ATAL) Workshop on “3D Printing and Design” at NEHU Shillong during March 02 –06, 2020.

### **Shri Shyamal Mandal**

Delivered invited lectures on (i) (a)

Cardiovascular system, Application and working principle of Pacemaker at the Design Innovation Centre, Department of Biomedical Engineering, NEHU, Shillong September 28, 2019, (b) Synthesis of Nano material for Biosensor Application at the Design Innovation Centre, Department of Biomedical Engineering, NEHU, Shillong on December 14, 2019, (c) Nervous System at the Design Innovation Centre, Department of Biomedical Engineering, NEHU, Shillong on February 15, 2020, (ii) 3D Printing and its applications at the ATAL Workshop on 3D Printing and Design, organized by Department of Biomedical Engineering, NEHU, Shillong during March 02 – 06, 2020.

### **Publications**

#### **Research Papers**

##### ***Published in India***

Bhatia, D., Bagyaraj, S., Karthick, A. (2019). Role of 24 Hr blood pressure variability as a target therapeutic risk factor for poor functional outcome of acute ischemic stroke. *Annals of Indian Academy Neurology*, 23(1):9

Ete, T., Fanai, V., Bamon, A., Khan, S. A., Kumar, U., Kumar, A., Bhatia, D., Mishra, A. (2020). Disease, Drugs and Dilemma: A review of cardiovascular implications of novel COVID-19. *Clin Infect Immun.*, Elmer Press, 5 (2): 25-30.

Rajak, B. L., Gupta, M., Bhatia, D., Mukherjee, A. (2019) Increasing number of therapy sessions of repetitive transcranial magnetic stimulation improves motor development by reducing muscle spasticity in cerebral palsy children. *Annals of Indian Academy Neurology*. 22(3): 302-307.

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Saikia, A., Mazumdar, S., Sahai, N., Paul, S., Bhatia, D. (2019). Performance analysis of artificial neural network for hand movement detection from EMG signals. IETE Journal of Research 1(1):1-10.

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Sahai, N., Saxena, K. K., Gogoi, M. (2020). Modeling and simulation for fabrication of 3D printed polymeric porous tissue scaffolds, Advanced material Processing and Technologies.6(3):530-539.<https://doi.org/10.1080/2374068X.2020.1728643>.

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Avutu, S. R., Paul, S., Bhatia, D. (2019). Design and feasibility test of an indigenous motorized wheel for manual wheelchair. Int. J. Manuf. Mater. Mech. Eng. 9(3):42–55.

Saikia, A., Majumder, S., Sahai, N.,

Paul, S., Bhatia, D. (2019). Performance Analysis of Artificial Neural Network for Hand Movement Detection from EMG Signals. IETE Journal of Research. DOI: 10.1080/03772063.2019.1638316.

Saikia, A., Hussain, M., Barua, A. R., Paul, S. (2019). Significance of Lyapunov Exponent in Parkinson's Disease Using Electroencephalography. 6th IEEE International Conference on Signal Processing and Integrated Networks (SPIN), Amity University, India. (ORAL) DOI:10.1109/SPIN.2019.8711669.

Pandey, V. K., Tamang, D., Saikia, A., Paul, S. (2019). Sub-threshold: A Design Technique for Ultra-Low Power Operation. Journal of Advanced Database Management & Systems. 6(1): 62–68.

Majhi, V., Saikia, A., Datta, A., Sinha, A., Paul, S. (2019). Comprehensive Review on Deep Learning for Neuronal disorders: Applications of deep learning. International Journal of Natural Computing Research (IJNCR). 9(1).

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### ***Published Abroad***

Sahai, N., Saxena, K. K., Gogoi, M. (2020). Modeling and simulation for fabrication of 3D printed polymeric porous tissue scaffolds. Adv. Mater. Proc. Technol. 6(3): 530-539.

Deka, B., Bhatia, D., Kalita, R., Mishra, A. (2020). Applications of paper as a support material in biomedical sciences: a decadal review. Sensors International,

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Saikia, A., Majhi, V., Hussain, M., Paul, S. (2019). A systematic review on application-based Parkinson's disease detection systems. *International Journal on Emerging Technologies*. 10(3): 166-173.

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disorders: Applications of deep learning. *International Journal of Natural Computing Research (IJNCR)*. 9(1).

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Paul, S., Bhatia, D. (2020). Smart healthcare for disease diagnosis and prevention. Elsevier Publisher, ISBN: 978-012-817-913-0.

Paul, S., Bhatia, D., editors. (2020). Smart Healthcare for Disease Diagnosis and Prevention. Elsevier, USA. ISBN: 9780128179130.

Paul, S., Kulshreshtha, S. K., editors. (2019). Global Developments in Healthcare and Medical Tourism. IGI Global, Pennsylvania, USA. ISBN: 9781522597872.

Paul, S., editor. (2019). Application of Biomedical Engineering in Neuroscience. Springer Nature, Singapore. ISBN: 978-981-13-7141-7.

Paul, S., Bhattacharya, P., Bit, A., editors. (2019). Early Detection of Neurological Disorders Using Machine Learning systems. IGI Global, Pennsylvania, USA. ISBN: 978-1-5225-8567-1.

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Bhatia, D., Paul, S. (2019). Sensor fusion and control techniques for bio rehabilitation Bioelectronics and Medical Devices, Elsevier, 1, p. 615-632, ISBN: 978-008-102-421-8.

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Gupta, M., Bhatia, D. (2019) Retrain the Brain through Noninvasive Medically Acclaimed Instruments. In: Application of Biomedical Engineering in Neuroscience. Paul, S. (Eds.) Springer, Singapore, p. 51-60, ISBN: 978-981-13-7141-7.

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Saikia, A., Paul, S. (2020). Application of Deep Learning for EEG. *Handbook of Research on Advancements of Artificial Intelligence in Healthcare Engineering*. Sisodia, D. S., Pachori, R. B., Garg, L. (Eds.) IGI Global, Pennsylvania, USA, Chapter 7, p. 106-123.

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Saikia, A., Hussain, M., Barua, A. R., Paul, S. (2020). An insight into Parkinson's disease: researches and its complexities. *An insight into Parkinson's disease: researches and its complexities. Smart Healthcare for Disease Diagnosis and Prevention*. Paul, S., Bhatia, D. (Eds.) Elsevier Inc., USA. Chapter 9, p. 59-80.

Saxena, S., Paul, S., Garg, A., Saikia, A., Datta, A. (2019). Deep Learning in Computational Neuroscience. *Challenges and Applications for Implementing Machine Learning in Computer Vision*. Kashyap, R., Senthil Kumar, A. V. (Eds.) IGI Global, Pennsylvania, USA. Chapter 2, p. 43-63.

Majhi, V., Paul, S. (2019). Application of Content-Based Image Retrieval in Medical Image Acquisition. *Challenges and Applications for Implementing*

*Machine Learning in Computer Vision*. Kashyap R., Senthil Kumar A. V. (Eds.) IGI Global, Pennsylvania, USA. Chapter 9, p. 220-240.

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Paul, S., Datta, A. (2019). Application of machine learning for early diagnosis of Parkinson's disease. *Smart Healthcare for Disease Diagnosis and Prevention*. Paul S., Bhatia, D. (Eds.) Elsevier Inc., USA. Chapter 6, p. 33-40.

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Pandey, V., Paul, S. (2019). Overview of Medical Electronics for Physically Disabled. *Biomedical Engineering and its Applications in Healthcare*. Paul S. (Ed.) Springer Nature, Singapore, Chapter 4, p. 89-104.

Saikia, A., Hussain, M., Barua, A. R., Paul, S. (2019). Rehabilitation device control using electroencephalography: a review. *Application of Biomedical Engineering in Neuroscience*. Paul, S. (Ed.) Springer Nature. Singapore. Chapter 9, p. 173-196.

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Nath, A., Shah, A., Bhandari, S., Gogoi, M., Mahato, M. (2019). Recent advances on polymer Nanocomposite based radiation shielding materials for Medical science. In: Biomedical Engineering and its Applications in Healthcare. Paul, S. (Ed.). Springer Nature, Singapore,

Chapter 26, p. 639-656.

Ahmed, S., Rajak, B. L., Gogoi, M., Sarma, H. D. (2020). Magnetic nanoparticles mediated cancer hyperthermia. In: Smart Healthcare for Disease Diagnosis and Prevention. Paul, S., Bhatia, D. (Eds). Elsevier, London, Chapter 16, p. 153-173.

Mandal, S., Chandran, A. B. (2019). Ceramics for Biomedical application. In: Biomedical Engineering and its Application in Healthcare, Dr. Sudip Paul (Ed.). Springer Publication, Singapore, ISBN No: 9789811337048. Chapter 10, p. 229 – 247.

Mandal, S. (2019). Low Cost Ultrasonic Based Shoe for Visually Impaired Peoples. In: Smart Healthcare for Disease Diagnosis and Prevention, Dr. Sudip Paul, Dr. Dinesh Bhatia (Eds.). Elsevier Publication, ISBN No: 9780128179130. Chapter 12, p. 103 – 114.

## Research Projects

### Ongoing

Title of Project	PI/Co-PI	Funding Agency	Amount (Rs.)
Development of cost-effective web and mobile application for detection of Parkinson's Disease	Dr. Sudip Paul (PI); Dr. Dinesh Bhatia (Co-PI)	SERB, DST, Delhi under IMPRINT-2 2019-2022	61,42,000.00
Quantum Dot Based Biosensor for Early Detection of Prostate Cancer Using multiple biomarkers in Biological samples	Dr. Manashjit Gogoi (PI), Dr. Abhijeet Balwantrao Joshi (PI); Dr. Mrityunjoy Mahato (Co-PI), Dr. Prashant Kodgire (Co-PI), Dr. Arup J Boruah (Co-PI), Dr. Chandan K. Nath (Co-PI)	DBT, GOI 2019-2022	56,99,996.00
Screening of human Brucellosis in Northeast region using point of care immunological and molecular tools	Dr. Surya Bhan (PI), Dr. Rajpal Singh Kashyap (PI); Mr. Nitin Sahai (Co-PI), Dr. Manashjit Gogoi (Co-PI), Dr. Aliabbas Husian (Co-PI)	DBT, GOI 2018-2021	61,32,992.00
Bottom-Up Nanobiocomposite Film of Protein, Polymer and Nano particles by Langmuir Bldgett/Layer by Layer Technique for Pesticide Sensing Application	Dr. Mrityunjoy Mahato (PI); Dr. Manashjit Gogoi (Co-PI)	SERB, DST, GOI 2017-2020	32,15,000.00

## Academic Collaborations

### Dr. Dinesh Bhatia

Collaborated with (i) Dr. Moumita Mukherjee, Adamas University, Kolkatta on "Terahertz imaging", (ii) Prof. Animesh Mishra, NEIGHRIMS, Shillong on "Cardiac Health monitoring", (iii) Dr. Prabhat Chaudhary, AIIMS, Delhi on "Dental implants", (iv) Mr. Hirak Ranjan

Das, Royal Global University, Guwahati on "Biomechanics and 3D Printing", (v) Dr. Sanjeev Kubakaddi, ITIE, Knowledge Solutions, Bangalore on "Biomedical Engineering devices".

### Dr. Sudip Paul

Collaborated with (i) Dr. Massaraf Hussain, NEIGRIHMS, Shillong as Research collaborator for Ph.D. students and Co -



PI for the project titled: Development of cost effective web and mobile application for detection of Parkinson's disease, (ii) Mr. Nachiketa Rout, NIEPMD, Chennai as Research collaborator for Ph.D. students, (iii) Dr. Pallab Bhattacharya, NIPER, Ahmedabad as Research Collaborator, (iv) Dr. Pallab Bhattacharya, NIPER, Ahmedabad as Research Collaborator, (iv) Dr. Amit Ranjan Barua, GNRC, Guwahati as Research collaborator for Ph.D. students.

### **Dr. Manashjit Gogoi**

Collaborated with (i) Dr. Abhijeet Balwantrao Joshi, IIT Indore on "Quantum Dot Based Biosensor for Early Detection of Prostate Cancer Using multiple biomarkers in Biological samples", (ii) Dr. Prashant Kodgire, IIT Indore on "Quantum Dot Based Biosensor for Early Detection of Prostate Cancer Using multiple biomarkers in Biological samples", (iii) Dr. Arup J Boruah, NEIGRIHMS Shillong on "Quantum Dot Based Biosensor for Early Detection of Prostate Cancer Using multiple biomarkers in Biological samples", (iv) Dr. Chandan K. Nath, NEIGRIHMS, Shillong on "Quantum Dot Based Biosensor for Early Detection of Prostate Cancer Using multiple biomarkers in Biological samples", (v) Dr. Rajpal Singh Kashyap and Dr. Aliabbas Husian, CIIMS, Nagpur on "Screening of human Brucellosis in Northeast region using point of care immunological and molecular tools", (vi) Prof. Sanjukta Patra, IIT Guwahati for editing books.

### **Shri Gajendra Kr. Mourya**

Collaborated with Dr. Akash Handique, NEIGRIHMS, Shillong for Assisting in the research work in the field of Medical Image Processing to developed Computer-Aided

Diagnosis Tools.

### **Honours/Awards/Recognitions**

#### **Dr. Dinesh Bhatia**

Editorial Board Member of the (i) Clinical Research & Case Reports International Journal, South Carolina, USA, (ii) Biomedical Research Journal, USA, (iii) International journal of Psychiatric and Mental Health, Japan, (iv) Archives of Chemistry and Chemical Engineering Journal, USA, (v) Journal of Psychiatric Studies, Boffin Access Limited. London, UK, (vi) Journal of Physical Medicine Rehabilitation Studies & Report(JPMR), Scientific Research and Community, UK, (vii) Journal of Infectious Diseases & Travel Medicine (JIDTM), USA, (viii) Infotext Journal of Forensic Sciences, (ix) Clinical studies of Neurology and Neurosurgery (CNSS), (x) SCIREA Journal of Clinical Medicine, Scientific Research Association, (xi) SCIREA Journal of Physics (<http://www.scirea.org/journal/Physics>), Scientific Research Association (xii) Journal of Environmental Science and Technology (JEST), Sci Alert Journal, (xiii) Insight - Engineering and Technology, Journal PiscoMed Publishing Pte Ltd., Singapore, (xiv) Acta Neurophysiologica Journal, Chembio Publishers, Troy, MI, USA, (xv) Bio Engineering & Bio Medical Science International Journal, OMSP International, (xvi) Journal of Transdisciplinary Biomedicine, EnPress Publisher LLC, USA. (xvii) Neuropharmacology Journal,

Member of the Shastri Indo Canadian Institute for evaluation of applications for various programmemes/fellowships/scholarships and grants for the year 2019-20,

Expert for evaluation of the National



Meritorious Invention Awards 2019 by the National Research Development Corporation (NRDC)

### **Dr. Sudip Paul**

Awarded with (i) IBRO Global Engagement Seed Grant 2020, (ii) ISN Young Scientist Steering Committee (YSSC) Ambassadorship 2019-2021.

### **Dr. Manashjit Gogoi**

Member of the Editorial Board: (i) International Journal of Bio-Materials and Biomedical Engineering (Journals Pub), (ii) International Journal of Bionics and Bio-Materials (Journals Pub).

### ***Other Activities***

### **Dr. Dinesh Bhatia**

Led the team that stood in Top 50 Category for eChamp 2019 Prime Startup Hub organized by the Government of Meghalaya.

Elected Executive Committee member of the Society for Neurochemistry India, Hyderabad for two years w.e.f. September 27, 2019.

Member of the Institutional Biosafety Committee (IBSC), NEHU, Shillong from August, 2018 onwards.

Completed e-certificate course on (i) “Learning Online: Searching and Researching” (2 weeks) offered by the University of LEEDS, U. K. on December 02, 2019, (ii) “Understanding Open Educational Resources” offered by Commonwealth of Learning, Canada on December 06, 2019, (iii) “Digital Skills: Grow your Career” (2 weeks) offered by the Accenture on December 06, 2019, (iv) “Developing your Research Project” (8 weeks) offered by the University of

Southampton, U.K. on December 07, 2019, (v) “Constitution Quiz” online course offered by the Department of Justice, Govt. of India on December 07, 2019.

Attended (i) one-week AICTE Training and Learning Academy (ATAL) Workshop on “Energy Management and Audit” organized by the Department of Energy, NEHU, Shillong during October 14 – 18, 2019, (ii) one week AICTE Training and Learning Academy (ATAL) Workshop on “Artificial Intelligence” organized by the Department of Energy, NEHU, Shillong during October 21 – 25, 2019, (iii) one week training Workshop on “Massive Open Online Course (MOOCs)” organized by UGC, HRDC, NEHU, Shillong during December 02 - 07, 2019, (iv) AICTE and Panasonic Event on “Empowering Students to be Industry Ready & How to select right Career Path” at Vigyan Bhawan, Delhi, organized by the CMAI & National Technical Education Empowerment Committee, AICTE, Delhi on January 28, 2020.

Reviewer: (A) Journal (i) Biomedical Engineering-Applications, Basis and Communications Journal (BME), USA, Springer Nature, Advances in Autism Spectrum Disorder and Alzheimer’s Disease Research, Bulletin of Electrical Engineering and Informatics (BEEI) (<http://beei.org>),

(B) Conference and technical programme committee (a) 6th International Workshop on Mobile Applications 2019 (MobiApps 2019), Istanbul, Turkey during August 26 - 28, 2019, (b) 4th IEEE Conference on Energy Conversion (CENCON 2019), Yogyakarta, Indonesia during October 16 - 17, 2019, (c) 8th International

Conference on Pattern Recognition and Machine Intelligence (PReMI 2019) organized by Tezpur University, Assam, India during December 17 - 20, 2019, (d) 8th International Conference on Advances in Computing, Communications and Informatics (ICACCI'19), Trivandrum, Kerala, India during December 18 - 21, 2019, (e) IEEE Middle East and North Africa Communications Conference (MENACOMM 2019), Manama, Bahrain during November 19 - 21, 2019, (f) 7th International Conference on Neurotechnology and Physiological Computing Systems (NEUROPhyCS 2019), Vienna, Austria during September 20 - 21, 2019, (g) International Conference on Innovation and Intelligence for Informatics, Computing, and Technologies (3ICT'19), University of Bahrain, Bahrain during September 22 - 23, 2019, (h) Ist International Biomedical Instrumentation and Technology Conference (IBITeC 2019) at Yogyakarta, Indonesia during October 23 -24, 2019, (i) IEEE 11th International Conference on Engineering Education (ICEED), Kanazawa, Japan during November 06 - 07, 2019, (j) 13th International Conference on Biomedical Electronics and Devices (BIODEVICES), Valletta, Malta during February 24 - 26, 2020, (k) International Conference on Smart Education and Applied Social Sciences, SEAS Conference, Wolfs on College, Oxford University, United Kingdom during March 25 - 26, 2020, (l) Third International Conference on Computing and Network Communications (CoCoNet'19), Trivandrum, Kerala during December 18 - 21, 2019, (m) 4th International Conference on Biomedical Imaging, Signal Processing (ICBSP 2019), Nagoya City University, Nagoya,

Japan during October 17 – 19, 2019, (n) 2nd International Conference on Digital Medicine and Image Processing (DMIP 2019), Shanghai, China during November 13- 15, 2019, (o) Shastri Indo Canadian Institute for evaluation of applications for various programmes/fellowships/ scholarships and grants for the year 2019-20, (p) 2nd International Conference and Workshop on Telecommunication, Computing, Electrical, Electronics and Control (ICW-TELKOMNIKA 2019), Yogyakarta, Indonesia, during September 26 -28, 2019, (q) Sixth International Symposium on Computer Vision and the Internet (VisionNet'19) co-located with the 3rd International conference on Computing and Network Communications (CoCoNet'19)during December 18 - 21, 2019, Trivandrum, Kerala, India, (r) International Biomedical Instrumentation and Technology Conference (IBITeC 2019) organized by the Electrical Engineering Department, Faculty of Industrial Technology, Universitas Islam Indonesia and co-organized with Kumamoto University, Japan, Centre for Biomechanics, Biomaterial, Biomechatronics, and Biosignal Processing, Diponegoro University, Universiti Teknologi Malaysia (UTM), (s) conference on Water in the MENA Region: Preparing for a Changing World (FEMRC-UOB'20), February 02 -04, 2020 organized by the University of Bahrain, Bahrain, (t) Fifth International Conference on Image Information Processing (ICIIP) organized by the Jaypee University of Information Technology, Wagnaghat, Solan, India during November 15 - 17, 2019, (u) IEEE Asia-Pacific Conference on Applied Electromagnetics (APACE 2019) during November 25 -

27, 2019 at Malacca, Malaysia, (v) 5th International Symposium on Intelligent Systems Technologies and Applications (ISTA'19) held at Trivandrum, Kerala, India during December 18 -21, 2019.

Expert for evaluation of the National Meritorious Invention Awards 2019 by the National Research Development Corporation (NRDC).

### **Shri Nitin Sahai**

Attended a Refresher Course on Machine Learning (IDC) held at UGC-HRDC, Guwahati University during January 29 - February 11, 2020.

### **Dr. Sudip Paul**

Attended (i) AICTE Training And Learning (ATAL) Academy FDP on “3D Printing & Design”, NEHU, Shillong during March 02 – 06, 2020), (ii) AICTE Training And Learning (ATAL) Academy FDP on “Energy Management and Audit”, NEHU, Shillong during October 14 – 18, 2019, (iii) Special Summer School by UGC-Human Resource Development Centre, NEHU, Shillong, India during July 08 – 21, 2019, (iv) Workshop on “Massive Open Online Courses (MOOCs)” on the theme of “Adoption, promotion and Development of MOOCs through SWAYAM platform”, NEHU, Shillong during May 28 - 29, 2019, (e) Workshop on “IPR, Patent & Trade Mark”, NEHU, Shillong on May 04, 2019.

Filed patents: Automated Vehicle Accident and Theft Prevention Device (Application No: 201931019856), Tremor Identification Device for Parkinson's Disease (Application No: 201931035443), Interactive Gaming Device for Cerebral Palsy Intervention, Treatment and Management in Infants and Adults (Application No: 201931038958),

Autonomous Navigation Module for powered Wheelchair (Application No: 201931051951), Automatic interactive device for identification, measurement and correction of speech sound disorder (Application No: 202031009337).

Member of the (i) Indian Academy of Neuroscience (IAN), (ii) International Brain Research Organization (IBRO), (iii) Western Australian Mental Health Research Alliance, (iv) UWA Biomedical Engineering Society, (v) Biomedical Engineering Society of India (BMESI), (vi) Society for Biomaterials and Artificial Organs, India, Society for Neurochemistry, India (SNCI), (vii) Indian Science Congress Association (ISCA), Asian-Pacific Society for Neurochemistry (APSN), (viii) International Society for Neurochemistry (ISN), (ix) The Institute of Electrical and Electronics Engineers (IEEE), (x) IEEE Industrial Applications Society (IEEE-IAS).

Co-ordinator: BTech Admission Committee, NEHU (2019-2020), TPC-NRHM Division- I, Ministry of Health & Family Welfare, Govt. of India since March 2019, SNCI North-East Local chapter since 2015,

Council Member from INDIA- Asian Pacific Society for Neurochemistry (APSN) (2018-2022).

Joint Secretary of the Biomedical Engineering Society of India (BMESI) since April 2019. Laboratory In-charge (Bioinstrumentation and Signal Processing Laboratory) and Robotics Laboratory, Biomedical Engineering, NEHU, Shillong, Chairman of the BTech Admission Committee, NEHU (2020)

Invention / Awareness during nCOVID-19: An IR based temperature measurement device: The crisis of the availability of thermal scanning device in Shillong became the driving force, and thus a prototype of the preliminary diagnostic tool was developed on March 25, 2020, under emergency conditions.

Reviewer: International Journal of Cognitive Informatics and Natural Intelligence, IGI Global, USA, International Journal of Healthcare Information Systems and Informatics, IGI Global, USA, International Journal of Natural Computing Research, IGI Global, USA, Journal of Advanced Emergency Medicine, IEEE Transaction in Biomedical Engineering, Medical Hypothesis, Elsevier, ACS Chemical Neuroscience, International Journal of Biomedical Engineering and Science, International Journal of Bionics and Biomaterial, Journal of Biological Engineering Research and Review, International Journal of Biomedical Engineering, Journal of The Institution of Engineers (India): Series B, Springer, Neural Computing and Applications, Springer.

#### **Dr. Manashjit Gogoi**

Member of the (i) Institution of Engineers, India (M-1561671), (ii) Indian Science Congress Association (L24046), (iii) Society of Biomedical Engineering India (LM-1038), (iv) Biomaterials and Artificial Organs (LM-640), (v) IIT-Bombay Alumni Association (140007).

**Reviewer :** Cellulose (Springer), Bio Nanoscience (Springer), Nanoscience and Nanoengineering Journal (Horizon Research Publishing, USA), Universal Journal of Medical Science (Horizon

Research Publishing, USA), IEEE Biomedical Research Journal, Biomedical Research Journal.

#### **Shri Gajendra Kr. Mourya**

Attended (i) a summer School on Computer Vision and Machine Learning at IIIT Hyderabad during July 01 -13, 2019, (ii) one-week ATAL-Workshop on “Artificial Intelligence” at the Department of Electronics and Telecommunication Engineering, NEHU, Shillong.

Member of the (i) Biomedical Engineering Society of India. (#. LM-1029) since 2013, (ii) Indian Society of Biomechanics (#N-198) since March 2009, (iii) The Institution of Electronics and Telecommunication Engineers (IETE).(# AM-232509) since December 2012, (iv) Instrument Society of India (ISI) (# 2156), (v) The Indian Science Congress Association (ISCA) (#L22324) since 2013.

**Reviewer :** Indonesian Journal of Electrical Engineering and Informatics (IJEEL).

#### **Shri Shyamal Mandal**

Attended the (i) National Workshop on “regulatory compliance for accelerating innovations” at NIPER Guwahati on June 13, 2019, (ii) AICTE Training and Learning (ATAL) Academy programme on “Energy Management and Audit” held at NEHU, Shillong during October 14-18, 2019, (iii) two-day Workshop on massive open online course (MOOCs) on the theme “Adoption, Promotion and development of MOOCs through SWAYAM Platform” organized by NEHU during May 28-29, 2019, (iv) Workshop on “IPR, Patent and Trade Mark, organized by SOT, NEHU, Shillong on May 04, 2019, (v) one-day “North East Regional Training Programme

for Administrators of Plagiarism Detection Software (PDS) URKUND jointly organized by the Central Library, NEHU, Shillong and INFLIBNET Centre, Gandhinagar under the aegis of the MHRD, at NEHU, Shillong on August 23, 2019, (vi) “Outreach Programme” organized by Bio-NEST NIPER – Guwahati Incubation centre at NEHU, Shillong on February 24, 2020, (vii) TEQIP-III sponsored two-week

Faculty Development Programme on the Research Methodology and Pedagogy in Teaching and learning, jointly organized by Assam Science and Technology University, Guwahati, and Department of Chemical Engineering, Assam Engineering College, Guwahati during May 20-31, 2019.

Member of the The Bureau of Indian Standards.

## DEPARTMENT OF COMPUTER APPLICATIONS (TURA CAMPUS)

**Head** : Dr. Anindya Halder (Teacher-in-Charge)

**Telephone** : +91 7980918985 (M)

**E-mail** : hodca@nehu.ac.in

**Faculty:** 03

Designation	Name and Qualification	Specialization
<b>Assistant Professor</b>	Dr. Anindya Halder, M.C.A. (Univ. of Kalyani), Ph.D. (Jadavpur Univ.)	Machine Learning, Soft Computing, Biomedical Imaging, Bioinformatics
	Shri Ansuman Kumar, M.C.A. (IGNOU), M.Tech. (TU)	Computer Networks, Bioinformatics, Theory of Computation.
	Shri Rubul Kumar Bania, M.C.A. & M.Tech. (TU)	Data Mining, Artificial Intelligence, Biomedical Imaging

### 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 Three-Year Master's programme in Computer Applications (MCA) since 2013

and the Ph.D. 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. In this respect the MCA syllabus is also revised in 2019 to accommodate the latest development of the subjects. Twelve students were awarded the MCA degree and one Ph.D. scholar has submitted the Ph.D. thesis in March 2020.

### Students' Profile

**Enrolment Capacity: M.C.A. –22**

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.C.A.	14	08	-	12	-	10	10	12	22

### Degree Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.C.A.	08	04	-	06	-	06	06	06	12

### Courses Conducted



## ***Postgraduate: M.C.A.***

### ***Semester I***

Digital Logic Design, Programming and Problem Solving through C (Theory and Practical), Organizational Behaviour, Discrete Mathematics, Computer Organization and Architecture.

### ***Semester II***

Theory of Computation, Data Structures Using C/C++ (Theory and Practical), Object Oriented Programming and Design using C++ (Theory and Practical), Computer Graphics (Theory and Practical), Accounting Financial Management.

### ***Semester III***

Database Management System-I, Data Communication and Networks-I, Operating System (Theory and Practical), Design and Analysis of Algorithms, GUI Programming Using VB.NET (Theory and Practical).

### ***Semester IV***

Software Engineering; Data Communication and Networks-II and Network Programming using Linux (Theory and Practical), Oracle (Theory and Practical), Database Management System-II, Internet Technology and Applications (Theory and Practical), Artificial Intelligence.

### ***Semester V***

Compiler Design (Theory and Practical), Programming through Java (Theory and Practical), System Programming (Theory and Practical), Data Mining, Minor Project.

### ***Semester VI***

Major Project.

## **Fieldwork/Educational Tour of Students**

***Teacher-in-Charge*** : Mr. Kumar

Deep Barman (Guest Lecturer),

***Places/Institutions Visited*** :NEHU, Shillong

***Duration of Tour*** :4 days (September 16 - 19, 2019)

***Purpose of Tour*** :Interaction Programme with the representatives of the UK Universities.

## **Seminars/Conferences/Symposia/Workshops/Extension programmes**

### ***Attended***

#### **Dr. A. Halder**

Delivered lectures on (i) *Research Paper Writing Using LaTeX* in a five-day Research Methodology Workshop organized by Department. of Management, NEHU, Tura Campus, during May 13 - 17, 2019, (ii) “Computer Applications in Business Management” in the refresher course in Business Studies, organized by UGC – HRDC, NEHU in the Department of Management, Tura on November 29, 2019, (iii) “Soft Computing Techniques and Applications” organized by Department of Physics, Brahmananda Keshab Chandra College, Bon-Hooghly on February 03, 2020.

#### **Shri R. K. Bania**

Presented a paper on *Automatic Removal of Pectoral Muscle from Medio-lateral Oblique View Mammograms*, in 2<sup>nd</sup> National Conference on Recent Advances in Science and Technology (NCRASST) held at Assam Science & Technical University, Guwahati, Assam during May 15-17, 2019.

## **Publications**

### **Research Papers**



### ***Published Abroad***

Kumar,A., Halder, A. (2020). Ensemble based Active Learning using Fuzzy-Rough Approach for Cancer Sample Classification. *Engineering Applications of Artificial Intelligence (Elsevier)*, 91: 10359, ISSN: : 0952-1976,doi.org/10.1016/j.engappai.2020.103591.

Bania, R. K., Halder, A.(2020). R-Ensemble: A greedy rough set-based ensemble attribute selection algorithm with kNN imputation for classification of medical data. *Computer Methods and Programmes in Biomedicine (Elsevier)*, 184, 105122, ISSN: 0169-2607,doi.org/10.1016/j.cmpb.2019.105122.

Halder, A., Talukdar, N. A. (2019). Robust brain magnetic resonance image segmentation using modified rough-fuzzy C-means with spatial constraints. *Applied Soft Computing (Elsevier)*, 8,1057589, doi.org/10.1016/j.asoc.2019.105758.ISSN: 1568-4946.

Halder, A., Talukdar, N. A. (2019). Brain tissue segmentation using improved kernelized rough-fuzzy C-means with spatio-contextual information from MRI. *Magnetic Resonance Imaging (Elsevier)*, 62: 129-151,doi.org/10.1016/j.mri.2019.06.010. ISSN: 0730-725X.

Kumar, A., Halder, A.(2019). Active Learning using Fuzzy-Rough Nearest Neighbour Classifier for Cancer Prediction from Microarray Gene Expression data. *International Journal of Pattern Recognition and Artificial Intelligence (World Scientific)*, 34 (1): 2057001, doi.org/10.1142/S0218001420570013.ISSN: 0218-0014.

Kumar, A., Halder, A.(2019). Ensemble based Fuzzy-Rough Nearest Neighbor Approach for Classification of Cancer from

Microarray Data. *International Journal of Research in Advent Technology*, 7(5): 1287-1294. E-ISSN: 2321-9637.

Khyriem, C.I.,Bania,R. K.(2019).A Customer Opinion Categorization Framework for Indigenous Items of Jaintia and Khasi Hills. *E-Commerce for Future & Trends*, 6(1): 7-15, ISSN: 2454-9347.

Bania,R. K.(2019). State-of-the-art Review: Solid Waste Management with Advanced Computational Technologies”.*International Journal of Scientific Research and Reviews*, 8(2):2512-2525, ISSN: 2279-0543.

Borah, D.,Bania, R. K.,Ngoc, C. (2019). A Local type-2 Fuzzy Set based Technique for HE stains Image Enhancement.*IngenieriaSolidaria*,15 (3): 1-22.

### **Other Activities**

#### **Dr. A. Halder**

Participated in the Faculty Development Programme (FDP) organized by Entrepreneurship Development Institute of India, Ahmedabad held at Department. of Management, NEHU, Tura Campus during March 02-14, 2020.

**Reviewer:** Journal of Biomedical Informatics (Elsevier).

#### **Mr. Rubul Kumar Bania**

Participated in the Refresher Course on *Machine Learning*, held at Gauhati University, Assam during January 29 - February 11, 2020.

**Reviewer:** International Conference on recent Trends in Image Processing and Pattern Recognition, organized by Dr. Babasaheb Ambedkar Marathwada University, Aurangabad, India during January 03-04, 2020.

## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

**Head** : Prof. L. J. Singh (up to November 22, 2019)  
           Dr. Rupaban Subadar (w.e.f. November 23, 2019)  
**Telephone** : 0364-272-3661 (O) / +91 9678007073  
**E-mail** : hodece@nehu.ac.in  
**Faculty:** 10

Designation	Name and Qualification	Specialization
<b>Professor</b>	Prof. Lairenlakpam Joyprakash Singh, M.Tech. (Tezpur Univ.), Ph.D. (Jadavpur Univ.)	Signal Processing
<b>Associate Professor</b>	Dr. Sushanta Kabir Dutta, M.Tech. (Manipal Institute of Technology, Manipal), Ph.D. (NEHU)	Speech Signal Processing, Machine Learning for Speech Processing
	Dr. Subhash C. Arya, B.Tech.. (GGSIU), Ph.D. (ISM)	Silicon Photonics and Optical Communication Systems
	Dr. Rupaban Subadar, M.Tech. (Tezpur Univ.), Ph.D. (IIT, Guwahati)	Theory of wireless communication
<b>Assistant Professor</b>	Dr. Juwesh Binong, M.Sc. (Sikkim Manipal Univ., Sikkim), Ph.D. (Tezpur Univ.)	Machine Learning and AI
	Dr. Rajkishur Mudoi, M.Tech. (Tezpur Univ.), Ph.D. (NEHU)	Wireless Communication, VLSI Design.
	Ms. Fidalizia Pyrtuh, B.Tech.. (SJCE), M.Tech. (IIIT, Allahabad)	Signal & Speech Processing
	Shri Jaydeep Swarnakar, B.Tech.. (Kalyani Univ.), M.Tech. (Jadavpur Univ.)	Fractional order system, Control system
	Shri Asif Ahmed, B.Tech.. (Kalyani Univ.), M.Tech. (NIT, Durgapur)	Mixed Signal CAD tool Development
	Dr. Pankaj Sarkar, M.Tech. (Univ. of Burdwan), Ph.D. (Jadavpur Univ.)	Microwave Passive and Active circuits design
	Shri Nipanka Bora, M.Tech. (Tezpur Univ.).	Nano Scaled 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 Fibre Communication and Opto-Electronics Devices, Theory of Wireless communication, MIMO, 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 Ph.D. in ECE Engineering. As for BTech Electronics and Communication Engineering, the Department admitted 60 students by vertical entry and 6 students by lateral

entry. 11 students were admitted to the M Tech programme. A total of 60 and 06 students have completed their BTech and MTech degrees in Electronics and Communication Engineering, respectively. Faculty and students have published 21 papers in National and International journals and edited books and proceedings.

### Students' Profile

**Enrolment Capacity:** B.Tech.– 60/6 (Vertical / Lateral), M.Tech. – 18/2 (Vertical/EWS)

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
B.Tech.. (Vertical & EWS)	42	17	10	18	-	31	12	47	59
B.Tech..	09	03	-	12	-	-	12	-	12
M.Tech.	08	08	-	12	-	04	10	06	16

### Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
B.Tech..	56	11	02	38	-	27	14	53	67
M.Tech.	09	08	01	10	-	06	08	09	17
Ph.D.	02	02	01		-	03	01	03	04

### Students Awarded Ph.D. Degree

Name of Student	Title of Thesis	Name(s) of Supervisor(s)/ Joint Supervisor
Rajkishur Mudoi	<i>Performance Analysis of Transmit Antenna Selection (TAS) MIMO System with Correlated Diversity Receiver at User End</i>	Dr. Rupaban Subadar
Pampee Das	<i>Performance Analysis of Wireless Receivers over Generalized Fading Channels</i>	Dr. Rupaban Subadar
Tanveera Ismail	<i>Dialect Identification of Assamese Language</i>	Prof. L. J. Singh
Bhargabjyoti Saikia	<i>Analysis of impact of imperfect channel state information on the receiver performance over fading channels</i>	Dr. Rupaban Subadar

## Placement of Students

SI No	Name of the company	Name of students who got selected	Date of interview	Department/ Branch	University/ College
1.	Cognizant	1. Ranjana Das		B Tech ECE	School of Technology, NEHU, Shillong
		2. Archana Tiwari		M Tech ECE	
2.	Capgemini	1. Aniket Kumar Pathak	September 4, 2019	B Tech ECE	School of Technology, NEHU, Shillong
		2. Diptesh Kumar Jha		B Tech ECE	

## Research Fellowship

CSIR-UGC-NET	UGC Non-Net	Rajiv Gandhi SC/ST	ICPR Fellowship	Meritorious Fellowship	Malana Azad Minority Fellowship	Others
-	04	02	-	-	-	-

## Courses Conducted

### Undergraduate: B.Tech.. (ECE)

#### 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, GPIII.

#### 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: M.Tech. (ECE)***

#### ***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

### ***Ph.D. Courses***

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/Workshops/Symposia/Extension Programmes***

#### ***Organized***

##### ***Dr. J. Binong***

Organized (i) a three-day National Workshop on Embedded Systems & Its Applications, Sponsored by NEHU, Shillong during February 20 - 22, 2019, (ii) a one-week ATAL FDP on ARTIFICIAL INTELLIGENCE, Sponsored by ATAL Academy, New Delhi during October 21 - 25, 2019.

#### ***Attended***

##### ***Mr. Jaydeep Swarnakar***

Presented papers on (i) "Rational approximation of fractional-order multivariable system" in the 3<sup>rd</sup> International Conference on Communication, Devices and Networking (ICCDN 2019), organized by Department of Electronics and Communication Engineering, Sikkim Manipal Institute of Technology, Sikkim, India during December 09-10, 2019, (ii) "Approximation of fractional-order integrator in delta domain" in the International Conference on Frontiers in Computing and Systems (COMSYS 2020), organized by the Department of Computer Science & Engineering and Department of Electronics & Communication Engineering, Jalpaiguri Government Engineering College, West Bengal, India during January 13-15, 2020.

## **Publications**

### **Research Papers**

#### ***Published in India***

Kaur, B., Arya, S. C. (2019). "A Comparative Study of Multicore Erbium-Doped Fiber Amplifier: Mode Analysis". *IESC*.doi: 10.1109/IESPC.2019.8902366.

Kakati, D., Arya, S.C. (2019). "A full-duplex pilot-assisted DP-16-QAM CO-OFDM system for high-speed long-haul communication". *IESC*. doi: 10.1109/IESPC.2019.8902380.

Sariang, L., Arya, S. C. (2019). "Mathematical Modeling of Carrier Injection based PIN junction Optical Phase Shifter using Evolutionary Algorithm". *IESC*.doi: 10.1109/IESPC.2019.8902403.

Malngiang, R., Arya, S.C. (2019). "Mathematical Modeling of Carrier Depletion based P-N junction Optical Phase Shifter using Evolutionary Algorithm". *IESC*.doi: 10.1109/IESPC.2019.8902382.

#### ***Published Abroad***

Syiem, B., Singh, L. J. (2019). "Deep neural network-based phoneme classification of standard Khasi dialect in continuous speech". *International Journal of Applied Pattern Recognition (IJAPR)*, 6(1): 43-51.

Patangia, P.M., Subadar, R. (2019). "Pre-detection dual EGC receiver over correlated  $\eta$ - $\mu$  channels with arbitrary fading parameters". *International Journal of Electronics Letters*, 8(3): 1-12.

Das, D., Subadar, R.(2019). "Performance analysis of QAM for L-MRC receiver with estimation error over independent Hoyt fading channels". *AEU - International Journal of Electronics and Communications*, 17: 15-20.

Kakati, D., Arya, S. C. (2020). "A 640-Gbps, 15.2344-b/s/Hz full-duplex optical fiber/wireless single-channel coherent communication system using IQM-based DP-256-QAM and DSP techniques". *Photonic Network Communications*, 39:26–38.

Kaur, B., Arya, S. C. (2019). "A parametric study to create an optimal design of seven-cores hexagonal structured erbium-doped fiber amplifier". *Optical Fiber Technology*, 54: 1-9.

Das, H. R., Arya, S. C. (2020). "Modified sidewall angled silicon waveguide for enhanced performance of ITO-assisted electro-absorption modulator at 1550 nm wavelength". *Optik-International journal for light and electronic optics*, 202:1-7.

Kakati, D. Arya, S. C. (2019). "Performance of Gray-coded IQM-based Optical Modulation Formats on High-speed Long-haul Optical Communication Link". *IET Communications*, 13(18):2904 – 2912.

Mudoi, R., Brahma, C. (2019). "Performance Analysis of Transmit Antenna Selection with Maximal Ratio Combining MIMO System Over Generalized- K Fading Channels". *The IUP Journal of Electrical & Electronics Engineering*, 12,(3): 45-55.

Brahma, C., Mudoi, R.(2019). "Performance Analysis of Multiuser Maximal Ratio Combining Receiver System Over Generalized-k Fading". *International Journal of Modern Electronics and Communication Engineering*, 7(3): 155-159.

Swarnakar, J., Sarkar, P., Singh, L. J. (2019). Direct discretization method for realizing a class of fractional order system in delta domain-a unified approach. *Automatic Control and Computer Sciences*, 53(2): 127-139, 2019.



Swarnakar, J., Sarkar, P., Singh, L. J. (2020). Realization of fractional-order proportional derivative controller for a class of fractional-order system in delta domain. *Advances in Intelligent Systems and Computing*, 989: 303-311.

Swarnakar, J., Adhikary, B. (2020). Band limited realization of fractional-order proportional integral controller for a class of finite dimensional system. *Advances in Intelligent Systems and Computing*, 1039: 70-77.

Swarnakar, J., Sungoh, W. (2020). Rational approximation of fractional-order system with multiple fractional powered terms-a comparative study. *Advances in Intelligent Systems and Computing* 1039: 30-37.

Bandyopadhyay, A., Sarkar, P., Mondal, T., Ghatak, R. (2019). "A high selective tri-band bandpass filter with switchable pass-

band states". *International Journal of Microwave and Wireless Technologies*, 1, 6.

Kumari, P., Sarkar, P., Ghatak, R. (2020). "A multi-stub loaded compact UWB BPF with a broad notch band and extended stopband characteristics". *International Journal of RF and Microwave Computer-Aided Engineering*, 30(4):1-8.

Bora, N., Subadar, R. (2019). "A complete analytical model of surface potential and drain current for an ultra-short channel double gate asymmetric junctionless transistor". *Journal of Nanoelectronics and Optoelectronics*, 14(9): 1283-1289.

Bora, N., Subadar, R. (2019). "Performance Analysis of Ultra-Short Junctionless DG-MOS Nanowire Transistors with High-k Gate Dielectric". *Journal of Communication Engineering & Systems*, 9: 35-42.

## Research Projects

### Completed

Title of Project	PI/Co-PI	Funding Agency	Amount (Rs.)
Modeling and Design of Silicon-Based Optical Modulator for high speed Optical Communication System	Dr. Subhash C. Arya	Science and Engineering Research Board, New Delhi	32, 92,200.00

## Honours/Awards/Recognitions

### Dr. Rupaban Subadar

Chairman of the doctoral committee of Ms. Priyanka Chetri, NIT, Nagaland.

Member of the (i) BOS, Department of IT, Tripura University, (ii) BOS, Department of Electronics and Communication Engineering, NERIST, Nirjuli, Itanagar.

## Other Activities

### Dr. S. K. Dutta

Attended the ATAL FDPs of AICTE on (i) *Energy Management and Audit* organized by the Department of Energy Engineering at NEHU held during October 14 – 18, 2019, (ii) *Artificial Intelligence* organized by the Department of ECE, NEHU during October 21 - 25, 2019 and (iii) *3D Printing and Design* organized by the Department of BME, NEHU during March 02 - 06, 2020.



**Dr. S. C. Arya**

Attended (i) an advanced training programme on “*Nanofabrication and Characterization Techniques*”, organized by INUP, IISc Bangalore during November 04 – 15, 2019, (ii) GIAN course on “*Nanotechnology Advances and Challenges in Engineering Materials and Manufacturing*”, organized by VJTI Mumbai held at Matunga, Mumbai during July 08-13, 2019, (iii) a INDO-USA Workshop at IIT Bombay on, “Frontiers of Excellence in Wide and Ultrawide Bandgap Semiconductors and Electronics Systems” during December 14 – 15, 2019.

**Reviewer:** *Optik: International journal for light and electronic optics*

**Dr. R. Subadar**

Attended the ATAL FDPs of AICTE on (i) *Energy Management and Audit* organized by the Department of Energy Engineering at NEHU held during October 14 – 18, 2019, (ii) *Artificial Intelligence* held in Department of ECE, NEHU during October 21 - 25, 2019.

**Dr. J. Binong**

Attended a one-week FDP on Deep Learning and Machine Learning at NIT Meghalaya during July 22 - 26, 2019.

**Dr. R. Mudoi**

**Reviewer:** *Internet Technology Letters* - Wiley Publication

**Dr. Pankaj Sarkar**

Attended the FDPs on “3D Printing and Design” held in Department of BME, NEHU during March 02- 06, 2020.

Member of the (i) screening committee to scrutinize application and selection of JRF and RA-I, Department of BME, NEHU, Shillong, (ii) evaluation committee for the pre-submission Seminar of Mr. Dhiman Kakuti at ECE Department., NEHU-Shillong on June 04, 2020.

**Reviewer:** *Microwave and Optical Technology letters*, Wiley Periodicals, Inc, International Journal of RF and Microwave Computer-Aided Engineering, Wiley Periodicals, Inc

**Shri Nipanka Bora**

Attended the FDPs on (a) “Energy Management and Audit” organized by AICTE Training And Learning (ATAL) Academy, Guwahati & NEHU in the Department of Energy Engineering at NEHU during October 14 – 18, 2019, (b) “3D Printing and Design” held in the Department of BME, NEHU during March 02 - 06, 2020.

**Reviewer:** *Silicon Journal*, Publisher: Springer Nature, SCIE, (b) *Journal of Nanoelectronics and Optoelectronics*, American Scientific Publisher, SCIE.

## DEPARTMENT OF ENERGY ENGINEERING

**Head** : Dr. Samrat Paul (Teacher-in-Charge)  
**Telephone** : 0364 272 3951 / 272 3952 (O), + 919485043421(M)  
**E-mail** : paulsamrat17@gmail.com

**Faculty:** 04

Designation	Name and Qualification	Specialization
<b>Assistant Professor</b>	Dr. Samrat Paul, M.Tech. & Ph.D. (TU)	Solar Energy, Energy Nanomaterials
	Shri Manmit Saikia, M.Tech. (TU)	Design of Energy Conversion Devices, Bio-Energy
	Shri Sanat Das, M.Tech. (IIT Kanpur)	Propulsion Thermal Energy Storage System, Renewable Energy Utilization
	Shri Samar Jyoti Hazarika, M.Tech. (TU)	Energy Accounting & Management, International Management Standard (ISO 9001, EMS 14000, OHSAS18000 and EnMS 50000 Series) & Renewable energy utilization, Power Plant Technology

### Thrust Areas of Research

Solar Energy Materials, Bio-Energy

### Brief Statement of Academic Activities

The Department offers B.Tech.. and Ph.D. programmes in Energy Engineering.

### Students' Profile

**Enrolment Capacity:** B.Tech.. – 60, Ph.D. - 01

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
<b>B.Tech</b>	12	03	02	03	-	10	03	12	15
<b>Ph.D.</b>	-	01	-	01	-	-	-	01	01

### Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
<b>B.Tech</b>	11	04	01	03	02	09	01	14	15

### Courses Conducted

*Undergraduate: B.Tech..*

### ***Semester I***

Engineering Mathematics I, Engineering Physics I, Elements of Environmental Science, Professional Communication Skills, Solid Mechanics, Digital English Language Laboratory, Engineering Drawing.

### ***Semester II***

Engineering Mathematics II, Engineering Physics II, Engineering Chemistry, Basic Electronic Devices, Engineering Physics Laboratory, Engineering Chemistry Laboratory, Electronic Devices Laboratory.

### ***Semester III***

Basics of Renewable Energy Technology, Electrical Devices and Circuits, Fluid Mechanics, Engineering Thermodynamics, Energy Laboratory I, Studio for Design.

### ***Semester IV***

Heat and Mass Transfer, Nuclear Energy, Solar Thermal Technology, Biomass and Bio-fuel Technology, Energy Laboratory II, Studio for Stimulation.

### ***Semester V***

Photovoltaic Conversion Technology, Energy Accounting and Management, Fuel, Combustion and IC Engine, Nanotechnology and Energy Systems, Energy Laboratory III, Studio for Product Development.

### ***Semester VI***

Fuel Cell and Hydrogen Energy, Energy Economics and Planning, Elective I, Elective II, Energy Laboratory IV, Minor Project.

### ***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.

### ***Ph.D. Courses***

Research Methodology, Energy Recourses and Technology, Advanced Solar Photovoltaic Technology

### **Seminars/Conferences/Workshops/Symposia/Extension Programmes (National/International)**

#### ***Organized***

Mr. Samar Jyoti Hazarika organized a *one-week National ATAL Workshop on Energy Management and Audit* as the Convener, at Department of Energy Engineering, NEHU, Shillong during October 14 - 18, 2019.

#### ***Attended***

#### ***Dr. Samrat Paul***

Presented papers on (i) "Synthesis and characterization of phenethylammonium lead iodide/bromide based perovskite for solar cell application", (with Rajib Saha) in the *Second International Conference on Advances in Electrical, Electronic and System, Engineering (ICAESE-2019)*, Gauhati University during November 02-03, 2019, (ii) "Effect of intra-band tunnelling on the performance of lead-free Sn-based perovskite solar cell using SCAPS-1D simulator", (with Kunal Chakraborty) in the *IEEE ICAESE-2019*, Guwahati University

during November 02- 03 , 2019.

Delivered an invited lecture on “Advanced Materials Synthesis and PV applications”, FDP-TEQIP (III) 2019, Assam Science and Technology University (ASTU), Guwahati during September 23 – 27, 2019.

#### **Mr. Manmit Saikia**

Delivered an invited lecture on *Energy Auditing in HVAC System and Energy Action & Planning* in a one-week National Workshop on “Energy Management and Audit” ATAL Academy, organized at Department of Energy Engineering, School of Technology, NEHU, Shillong during October 15 - 17, 2019.

#### **Mr. Samar Jyoti Hazarika**

Presented a paper on Design and fabrication of a prototype hot water-cooling system, in the International Seminar on Understanding water crisis: Way forward at Synod College, Shillong during June 06-07, 2019.

Delivered invited lectures on (i) Energy Management & Audit: Understanding and the present National scenario on October 14, 2019, (ii) Energy auditing in lighting systems, on October 16, 2019, (iii) Energy policy and formulation for private and government organizations in the one-week National Workshop of ATAL FDP of AICTE on Energy Management and Audit, organized by the Department of Energy Engineering, NEHU, Shillong on October 17, 2019.

#### **Publications**

##### **Research papers**

##### ***Published in India***

Symplic, H. D., Paul, S., Borah, V. V., Choudhury,

M. G. (2019). Phytochemical and Anti-Bacterial activity of an endangered orchid, *Pleione Maculata* (Orchidaceae) of Meghalaya. *International Journal of Research and Analytical Reviews*, 6: 221-232.

Das, A. Paul, S. Choudhury, M. G. (2019). Isolation and molecular characterization of Halophilic bacteria from Taramumbari, coastal region of Maharashtra, India. *International Journal of Research and Analytical Reviews*, 6: 780-792.

##### ***Published Abroad***

Chakraborty, K., Paul, S. (2019). Numerical study of  $\text{Cs}_2\text{TiX}_6$  ( $\text{X} = \text{Br}^-$ ,  $\text{I}^-$ ,  $\text{F}^-$  and  $\text{Cl}^-$ ) based Perovskite solar cell using SCAPS-1D device simulation. *Solar Energy*. 194: 886-892.

Kumari, N., Gaurav, K., Samdarshi, S. K., Bhattacharyya, A., Paul, S., Rajbongshi, B. M., Mohanty, K. (2020). Dependence of photoactivity of niobium pentoxide ( $\text{Nb}_2\text{O}_5$ ) on crystalline phase and electrokinetic potential of the hydrocolloid. *Solar Energy Materials and Solar cells*, 208:110408.

Chakraborty, K., Choudhury, M. G., Das, S., Paul, S. (2020). Development of PLC-SCADA based control strategy for water storage in a tank for a semi-automated plant. *Journal of Instrumentation*. 15: T04007.

##### ***Books/Book Chapters/Proceedings***

Debnath, R. G., Paul, S. (2019). Review of Mismatch Loss in Solar Photovoltaic System under Partial Shaded Conditions. *Proceedings of RETURD*, Chapter 11, p. 109-120. ISBN 978-93-5391-027-3.

Saha, R., Paul, S. (2019). A review on recent research progress of Perovskite solar

cell. *Proceedings of RETURD*, Chapter 12, p. 121-130. ISBN 978-93-5391-027-3.

Kaushik, K., Duarah, P., Mahanta, J., Kumar, A., Paul, S. (2019). Synthesis and Characterization of Titanium Dioxide and Single Layer Graphene for Solar Cell Application. *Proceedings of RETURD*, Chapter 13, p. 131-139. ISBN 978-93-5391-027-3.

Sohtun, P., Bora, S., Das, H. P., Sari, S., Paul, S. (2019). Synthesis and characterization of Zinc Oxide nano particles for Dye Sensitized Solar Cells, *Proceedings of RETURD*, Chapter 14, p. 140-147. ISBN 978-93-5391-027-3.

Choudhury, M. G., Saha, N., Paul, S. (2019).

Biodiesel: A general overview, *Proceedings of RETURD*, Chapter 15, p. 148-161. ISBN 978-93-5391-027-3.

Gohain, P. P., Paul, S., Kataki, R. (2019). Indigenous oil seed bearing tree species of Northeast India: A potential source of bioenergy for rural development, p. 162-172. *Proceedings of RETURD*, Chapter 16. ISBN 978-93-5391-027-3.

Athparia, M., Goswami, K. M., Das, D., Baishya, N. M., Paul, S. (2019). Synthesis of Biodiesel from Pine Oil Using Heterogeneous Nanocatalyst. *Proceedings of RETURD*, Chapter 17, p. 173-177. ISBN 978-93-5391-027-3.

Das, B., Paul, S. (2019). Different Methods

of preparation of TiO<sub>2</sub> and their Photocatalytic potency in degradation of Methylene blue. *Proceedings of RETURD*, Chapter 18, p. 178-186. ISBN 978-93-5391-027-3.

## Research Projects

### Ongoing

Title of Project	PI/Co-PI	Funding Agency	Amount (Rs.)
Synthesis of d-group Metal Perovskite Nanocomposite for Dye Sensitized Solar Cell	Dr. Samrat Paul (PI) Mr. Sanat Das (Co-PI)	Science & Engineering Research Board, DST, New Delhi	46,12,722.00

### Completed

Title of Project	PI/Co-PI	Funding Agency	Amount (Rs.)
Synthesis of Nano-catalyst Decorated Activated Char for Biofuel Production	Dr. R. C. Chutia (PI) Dr. Samrat Paul (Co-PI)	Science & Engineering Research Board, DST, New Delhi	19,20,000.00

### 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*.

### **Mr. Samar Jyoti Hazarika**

Collaborated with (i) Mr. S.V. Malpe, Director & Principal, National Power Training Institute, Ministry of Power, for conducting a 21-day residential training programme to the students of the 7<sup>th</sup> Semester of the Department of ENE, NEHU at NPTI-NER Guwahati for *energy efficiency and utilization of renewable energy*, (ii) Dr. Diganta Bora, Sr. Manager (HR) (Under Ministry of Power, Govt. of India), Shillong, for conducting training programme and consultancy project on *E-learning in the area of energy management and audit in the thermal power plants with importance to train the senior level employees of RHEP, AGTP and AGBP Plants*, (iii) Shri Monojit Saha, Dy. General Manager-HR, Star Cement Limited for Summer Internship Training for the 7<sup>th</sup> semester students for *Energy Efficiency in Cement Power Plant*, (iv)

Mr. Manoj Kumar Verma, Deputy Director, National Productivity Council (Under Ministry of Commerce & Industries, Govt. of India for ongoing consultancy projects of NPC to learn *energy management and industrial engineering management system* by the 5<sup>th</sup>, 7<sup>th</sup> and 8<sup>th</sup> semester students, (v) Mr. Deepjyoti Barman, Managing Director, Sus-Connect Pvt. Ltd for organising training to the 8<sup>th</sup> semester students in the field of renewable energy- installation and maintenance of solar power plant.

### **Honours/Awards/Recognitions**

#### **Dr. Samrat Paul**

Life member of the (i) IET, USA, (ii) ISCA, Kolkata, India, (iii) IEEE, USA, (iv) IFERP, New Delhi, India, (v) SESI, New Delhi, India.

#### **Mr. Manmit Saikia**

Recognized as Professional Engineer (India) in Mechanical Engineering by The Institution of Engineers (India), Kolkata.

#### **Shri Sanat Das**

Life Member of the Indian Society for Technical Education (ISTE).

#### **Shri Samar Jyoti Hazarika**

Senior Advisor / Consultant in National Productivity Council, under the Ministry of Commerce & Industries, Govt. of India.

### **Other Activities**

#### **Dr. Samrat Paul**

Filed a Patent on *System and method for quantum efficiency/Incident photon to current efficiency measurement*, Patent Application No: TEMP/E-1/21261/2020-KOL,

Inventors: Dr. S. Paul, Dr. M. G. Choudhury, Mr. R.Saha.

**Reviewer:** *Solar Energy* journal published by Elsevier, *International Journal of Renewable Energy Development* published by Center of Biomass and Renewable Energy (CBIOR), Diponegoro University, Indonesia.

### **Dr. Sanat Das**

Paper setter and examiner for the “Mechanical Engineering” subject for the Meghalaya Public Service Commission (MPSC), Shillong in the year 2019.

### **Shri Samar Jyoti Hazarika**

Participated in a one-week National ATAL Workshop on (i) *Artificial Intelligence*, organized by the Department of Electronics & Communication Engineering, NEHU during October 21 – 25, 2019, (ii) *Robotics for Healthcare*, organized by the Department of Biomedical Engineering, NEHU, Shillong during November 04-08, 2019, (iii) *3D-Printing & Design* organized by

the Department of Biomedical Engineering, NEHU during March 02-06 2020.

Observer for NLEA (NIFT Lateral Entry Admission) test 2019 for the centre at Shillong, NIFT campus.

### **Consultancy Projects**

#### **Completed**

#### **Shri Samar Jyoti Hazarika**

Conducted consultancy project on (ii) *Integrated Management System (ISO 9001, 14001&18001)* for internal auditors of NEEPCO, MoP, GoI, vide the order no. NEEPCO PERS/26/T-57/2019-2020/155, dated August 2, 2019, (work completed in August, 2019), with the consultancy fees of Rs. 1,65,200.00, (ii) Web learning programmes on Energy Management and Audit at Thermal Power Plants and Hydro-electric Power Plants for NEEPCO Executives, NEEPCO, MoP, GoI, vide the order no. PERS/26/T-57/2105, dated January 24, 2020, (completed in February 2020), with the consultancy fees of Rs. 2, 54,880.00.



## DEPARTMENT OF INFORMATION TECHNOLOGY

**Head** : Dr. D. Kandar (up to November 24, 2019)  
           Prof. Goutam Saha (w.e.f. November 25, 2019)  
**Telephone** : 0364-2723611(O) / +91 9485125327 (M)  
**E-mail** : hodit@nehu.ac.in  
**Faculty:** 12

Designation	Name and Qualification	Specialization
<b>Professor</b>	Prof. Goutam Saha, M.Tech. (Univ. of Calcutta), Ph.D. (IIT Kharagpur)	Computational Biology, Big Data, Internet of Things
<b>Associate Professor</b>	Dr. Md. Iftekhar Hussain, M.Tech. & Ph.D. (TU)	Internet of Things (IoT), Wireless Networks
	Dr. Bubu Bhuyan, M.Tech. (TU), Ph.D. (Jadavpur Univ.)	Cryptography, Information Security
	Dr. Hemanta Kumar Kalita*, M.Tech. (TU), Ph.D. (Jadavpur Univ.)	Big Data Analysis, Network Security
	Dr. Debdattta Kandar, M.Tech. (AAIDU), Ph.D. (Jadavpur Univ.)	Wireless Mobile Communication, Soft Computing, Artificial Intelligence, RADAR Imaging
<b>Assistant Professor</b>	Dr. Swarup Roy**, M.Tech.& Ph.D. (TU)	Data Science, Machine Learning, Computational Biology
	Dr. Arnab Kumar Maji, M.Tech. (IEST, Shibpur), Ph.D. (Assam Univ.)	Image processing, Machine Learning
	Ms. Sangita Neog, M.Tech. (TU)	Coding Theory, Information Theoretic Security
	Dr. Sufal Das, M.Tech. (TU), Ph.D. (NEHU)	Big Data Analysis, Data mining, Soft Computing
	Shri Subhas Chandra Sahana, M.Tech. (TU)	Cryptography and Network Security
	Shri K. Amitab, M.E. (Punjab Engg. College)	Machine Learning and Image processing

\*Resigned on 31.07.2019, \*\* Resigned on 03.10.2019

### Thrust Areas of Research

Internet of Things (IoT), Wireless Networking, Cryptography and Network Security, Artificial Intelligence, Machine Learning, Image Processing, Big Data Analysis

a few focus areas like Computational Intelligence, IoT, Network security, Machine Learning and the Ph.D. programmes pertaining to Block chain, Deep Learning, Applications of IoT, Computer Vision, Game Theory based Network Securities, etc.

### Brief Statement of Academic Activities

The Department is offering the BTech (IT) and MTech (IT) courses with an emphasis on

Faculty members of the Department have published 30 papers in International/National journals and edited volumes and proceedings.

### Students' Profile

**Enrolment Capacity:** B.Tech.. – 60/6/6 (Vertical/Lateral/EWS), M.Tech. – 18+2, Ph.D. - 02

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
B.Tech..	46	13	05	24	-	30	19	40	59
M.Tech.	09	03	-	08	01	03	07	05	12
Ph.D.	01	01	-	02	-	-	02	-	02

### Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
B.Tech..	22	11	05	06	03	19	13	20	33
M.Tech.	16	01	-	12	-	05	08	09	17
Ph.D.	04	02	01	01	01	03	01	05	06

### Students Awarded Ph.D. Degree

Name of Student	Title of Thesis	Name(s) of Supervisor(s)/ Joint Supervisor
Mr. Amitabha Nath	Computational Approach for developing River Model and its Applications	Prof. Goutam Saha (Supervisor) Dr. Diganta Barman (Jt. Supervisor)
Ms. Monica Jha	Functional Module extraction from Gene expression Data using Data Mining Techniques	Dr. Swarup Roy (Supervisor) Dr. A.K. Maji (Jt. Supervisor)
Mr. Syed Sazzad Ahmed	Inference and Analysis of Gene Regulatory Networks using data Mining Techniques	Dr. Swarup Roy (Supervisor) Dr. Md. Iftekar Hussain (Jt. Supervisor)

Ms. PhidahunlangC-hyne	Leveraging the Communication in Intelligent Transportation system by Combined wireless Techniques	Dr. Debdatta Kandar (Supervisor) Dr. A.K. Maji (Jt. Supervisor)
Mr. KeshabNath	Community Mining in Large Social Graphs using Machine Learning Approach	Dr. Swarup Roy(Supervisor) Dr. Md. Iftekar Hussain (Jt. Supervisor)
Mr. KhwairakpamA-mitab	Noise Reduction in Synthetic Aperture Radar Images using Soft Computing Techniques	Dr. Debdatta Kandar (Supervisor) Dr. A.K. Maji (Jt. Supervisor)

### Placement of Students

Sl. No.	Name of the company	Name of students who got selected	Date of interview	Department/ Branch	University/ College
1.	Cognizant( <b>Salary:</b> 3.38L/ p.a. approx + Other Incentives as per Company norms)	1. Abhinav Luitel	April 14, 2019	B.Tech.. (IT)	School of Technology, NEHU, Shillong
		2. Saswata Chakraborty		B.Tech.. (IT)	
2.	Capgemini( <b>Salary:</b> 3.80L/ p.a. approx + Other Incentives as per Company norms)	1.Amrit Kumar Sonowal	May 14, 2019 & May 15, 2019	B.Tech.. (IT)	School of Technology, NEHU, Shillong
3.	Infosys ( <b>Salary:</b> Rs.6 L / p.a. approx + Other Incentives as per Company norms)	1. SonuSaha 2. Deep Upadhyaya 3. Rupam Bhara-dwaj	August 26, 2019	B.Tech.. (IT)	School of Technology, NEHU, Shillong
4.	Cognizant Technology Solutions( <b>Salary:</b> 4L/ p.a. approx + Other Incentives as per Company norms)	1. Mahbubul Haque	November 9, 2019	B.Tech.. (IT)	School of Technology, NEHU, Shillong
		2. Rupam Bhara-dwaj		B.Tech.. (IT)	

## **Courses Conducted**

### ***Undergraduate: B.Tech.. (IT)***

#### ***Semester I***

Engineering Mathematics-I, Engineering Chemistry, Engineering Mechanics, Engineering Physics, Basic Electrical Engineering, Engineering Physics Laboratory, Engineering Graphics.

#### ***Semester II***

Elements of Environmental Science, Engineering Mathematics II, Basic Electronics, Computer System and Programming, Computer Programming Laboratory, Engineering Graphics, Basic Electronics Laboratory. Digital English Language Lab, Professional Communication Skills.

#### ***Semester III***

Digital Electronics, Data Structures and Algorithms, Discrete Mathematics, Computer Graphics and Multimedia, Data Communication, Data Structure Laboratory, Computer Graphics and Multimedia Lab.

#### ***Semester IV***

Statistics and Random Processes, Relational Data Base Management Systems, Formal Language and Automata Theory, Object Oriented Programming & Methodology, Computer Organization and Architecture, Data Base Management Systems Laboratory, Object Oriented

Programming using C++ Laboratory

#### ***Semester V***

Compiler Design, Operating System, Algorithm Analysis and Design, Computer Networks, Operating System Laboratory, Computer Networks Laboratory, Java Programming Laboratory.

#### ***Semester VI***

Engg. Economics & Accountancy, Web Technology, Cryptography & Network Security, Web Technology Laboratory, Cryptography & Network Security Lab, Software System Lab, Elective I (Data Mining), General Proficiency III.

#### ***Semester VII***

Professional Ethics and IPR, Web Technology, System Administration, Elective III (Fuzzy Logic & Neural Networks), Elective IV (Wireless Communication), System Administration Laboratory, Visual Programming Laboratory, Web Technology Laboratory, Minor Project.

#### ***Semester VIII***

Major Project, General Proficiency IV (Grand Viva).

### ***Postgraduate: M.Tech.***

#### ***Semester I***

Mathematical Foundations of Information Science, Theory of Computer Science, Computer Architecture and Operating System, Advanced Database System, Elective (Cryptography), Software System Laboratory.

#### ***Semester II***

Algorithms and Complexity, Advanced Computer Networks, Elective I (Computational Intelligence), Elective II (Image Processing), Elective III (Data mining and Data warehousing), Seminar on Advanced Topics, Internet Technology Lab.

#### ***Semester III***

M.Tech Thesis; Elective IV (Soft Computing).

## ***Semester IV***

MTech Thesis

### **Ph.D. Courses**

Research Methodology, Algorithm Analysis and Design, Computational Intelligence, Image Processing, Data Mining & Data Warehousing.

### **Seminars/Conferences/Workshops/Symposia/Extension Programmes (National/International)**

### **Publications**

### **Research Papers**

#### ***Published in India***

Sahana, S. C., Das, M. L., Bhuyan, B. (2019). “A provable secure key-escrow-free identity-based signature scheme without using secure channel at the phase of private key issuance”. *Sādhana*, 44(6): 132.

Nayak, B., Bhuyan B. (2019). “Using game theory to model DoS attack and defence”. *Sādhana* 44:245 Indian Academy of Sciences <https://doi.org/10.1007/s12046-019-122>.

#### ***Published Abroad***

Nath, A., Mthethwa, F., Saha, G. (2019). “Runoff estimation using modified adaptive neuro-fuzzy inference system”. *Environmental Engineering Research*, 25(4): 545-553.

Nath, A., Lalhmingliana, Saha, G. (2019). “Optimal River Interlinking using Data Driven Machine Learning Techniques”. *International Journal of Recent Technology and Engineering (IJRTE)*, 8(4): 760-765. ISSN: 2277-3878.

Ahmed, N., Das, S.K., Hussain, I. (2019). “Dynamic Bandwidth Allocation Schemes for Multi-hop Wireless Mesh Networks”. *International Journal of Next-Generation Computing*, 10(2).

Chyne, P., Kandar, D.(2019). “LTE-DSRC hybrid vehicular communication system using DFT-spread OFDM in uplink”. *International Journal of Communication Systems*, e4329. [wileyonlinelibrary.com/journal/dachhttps://doi.org/10.1002/dac.4096](http://wileyonlinelibrary.com/journal/dachhttps://doi.org/10.1002/dac.4096).

Chyne, P., Kumar, V. D., Kandar, D. (2019). Network on wheels: Leveraging vehicular communication to newer heights for intelligent transportation system. *International Journal of Electrical Engineering & Education*. DOI: 10.1177/0020720919891071 <https://journals.sagepub.com/doi/abs/10.1177/0020720919891071>.

Daimary, D., Bora, M.B., Amitab, K., Kandar, D., (2020). Brain Tumor Segmentation from MRI Images using Hybrid Convolutional Neural Networks. *Procedia Computer Science*, 167, 2419-2428. DOI: <https://doi.org/10.1016/j.procs.2020.03.295>.

Das, R. K., Ahmed, N., Pohrmen, F. H., Maji, A. K., Saha, G. (2020). 6LE-SDN: An Edge-Based Software-Defined Network for Internet of Things. *IEEE INTERNET OF THINGS JOURNAL*, X(XX): 1-9.

Das, R. K., Pohrmen, F. H., Maji, A. K., Saha, G. (2020). FT-SDN: A Fault-Tolerant Distributed Architecture for Software Defined Network. *Wireless Personal Communications*, <https://doi.org/10.1007/s11277-020-07407-x>

Deb, S., Biswas, B., Bhuyan, B. (2019). Secure image encryption scheme using high efficiency word-oriented feedback shift register over finite field, *Multimedia Tools and Applications*. 78:34901–34925.

Debnath, S., Bhuyan. B. (2019). Large universe attribute-based encryption enabled secured data access control for cloud storage with computation outsourcing. *Multia-gent and Grid Systems*, 15(2): 99-119. DOI: 10.3233/MGS-190304.

Kandar, D., Paul, B. S., Chyne, P.(2019). Vehicular HetNet load distribution using centralized control of software-defined network. *International Journal of Communication Systems*. 2020;e4329. wileyonlinelibrary.com/journal/dac, <https://doi.org/10.1002/dac.4329>

Lalhmingliana., Rao, C. U. B., Saha, G. (2019). Computational water management strategy of Tlawng river basin using geo-informatics. *Environmental Engineering Research*, 25(5): 693-699.

Kumar, N., Das, S.(2019). New Distributed Data Fusion Using Pregel For Large Text Dataset. *International Journal of Scientific & Technology Research*, 8(12): 2090-2098.

Nath, A., Mawlong, P., Saha, G. (2019). River body extraction using convolutional neural network. *Journal of Information and Optimization Sciences*, 40(8): 1741-1751

Nayak, B., Bhuyan, B.(2020), Game Theoretical Defense Mechanism Against Reputation Based Sybil Attacks, *Procedia Computer Science*, 167: 2465–2477.

Pohrmen, F. H., Das, R. K., Saha, G. (2019). Blockchain based security aspects in heterogeneous IoT networks: a survey. *Transactions on Emerging Telecommunications Technologies*, 30(10): <https://doi.org/10.1002/ett.3741>.

Rahman, H., Hussain, I. (2019). Fog-based semantic model for supporting interoperability in IoT, *IET Communications*, 13(11): 1651-1661.

Rahman, H., Hussain, I. (2020). A comprehensive survey on semantic interoperability for Internet of Things: State-of-the-art and research challenges. *Transactions on Emerging Telecommunications Technologies*. <https://doi.org/10.1002/ett.3902>.

Das, S. (2019). e Step: A Novel Method for Semantic Text Summarization with Web-based Big Data. *International Journal of Recent Technology and Engineering*, 8 (3): 5171-5175.

Warjri, S., Pakray, P., Lyngdoh, S., Maji, A.K. (2020). Identification of POS Tag for Khasi Language based on Hidden Markov Model POS Tagger. *Computación y Sistemas*, 23(3): 795-802: 10.13053/CyS-23-3-3248.

### Books/Book Chapters/Proceedings

Amita, K., Hazarika, R.A., Kandar, D., (2019). Image Segmentation by Fuzzy Edge Detection and Region Growing Technique. In: *Proceedings of the Third International Conference on Microelectronics, Computing and Communication Systems*. p. 51-64). Springer, Singapore.

Dey, K. N., Golui, S., Dutta, N., Maji, A. K., Pal, R. K. (2019). Plain Text Encryption Using Sudoku Cipher. In: *Intelligent Computing and Communication. ICICC 2019. Advances in Intelligent Systems and Computing*. Bhateja V., Satapathy S., Zhang YD., Aradhya V. (Eds), vol 1034. Springer, Singapore: [https://doi.org/10.1007/978-981-15-1084-7\\_3](https://doi.org/10.1007/978-981-15-1084-7_3).

Hazarika, R. A., Kharkongor, K., Sanyal, S., Maji, A.K. (2020). A Comparative Study on Different Skull Stripping Techniques from Brain Magnetic Resonance Imaging. In: *International Conference on*

*Innovative Computing and Communications. Advances in Intelligent Systems and Computing.* Khanna A., Gupta D., Bhat-tacharyya S., Snasel V., Platos J., Hassani-en A. (Eds), vol 1087. Springer, Singapore: [https://doi.org/10.1007/978-981-15-1286-5\\_24](https://doi.org/10.1007/978-981-15-1286-5_24).

Sharma, P., Wahlang, I., Sanyal, S., Maji, A.K. (2020). Classification of Brain MRI Using Deep Learning Techniques. In: *Soft Computing: Theories and Applications. Advances in Intelligent Systems and Computing*, Pant M., Sharma T., Verma O., Singla R., Sikander A. (Eds) vol 1053. Springer, Singapore: [https://doi.org/10.1007/978-981-15-0751-9\\_52](https://doi.org/10.1007/978-981-15-0751-9_52).

Shrivastava, D., Sanyal, S., Maji, A.K., Kandar, D. (2020). Bone cancer detection using machine learning techniques. In: *Smart Health Care for Disease Diagnosis and Prevention*. Paul S., and Bhatia D. (Eds.). Elsevier: p. 175-183: <https://doi.org/10.1016/B978-0-12-817913-0.00017-1>.

[org/10.1016/B978-0-12-817913-0.00017-1](https://doi.org/10.1016/B978-0-12-817913-0.00017-1).

Das, R. K., Maji, A. K., Saha, G. (2019). Prospect of improving internet of things by incorporating software-defined network. In: *Advances in Communication, Devices and Networking*. R. Bera, S. Sarkar, O. Singh., H. Saikia (Eds.). Springer, Singapore, vol. 537, p. 537-544.

Khongbuh, W., Saha, G. (2019). 6LoWSD: A protocol platform for interoperability between SDN and IoT. In: *Advances in Computational Intelligence, Security and Internet of Things*. A. Saha, N. Kar, and S. Deb (Eds.) Springer, Singapore, p. 273-287.

Dasgupta, S., Das, A., Khan, A., Pal, R. K., Saha, G. (2020). Biomarker gene identification using a quantum inspired clustering approach. In: *Advanced Computing and Systems for Security*. R. Chaki, A. Cortesi, K. Saeed, N. Chaki (Eds.). Springer, Singapore, p. 43-56.

## Research Projects

### New Projects

Title of Project	PI/Co-PI	Funding Agency	Amount (Rs.)
Net Ecosystem Production and Carbon Dynamics of Forest Ecosystems in North East India in relation to Altitude and Latitude Gradient: Implications for Carbon Sink Management	Dr. Amitabha Nath (Co-PI) Dr. U. K. Sahoo (PI)	Department of Science & Technology - DST	28,00,000.00

### Completed

Title of Project	PI/Co-PI	Funding Agency	Amount (Rs.)
QoS Provisioning in Internet of Things (IoT)	Dr. Md. Iftekhar Hussain (PI) Dr. Hemanta Kumar Kalita (Co-PI) Dr. Debashis De (Co-PI)	Ministry of Electronics & Information Technology (MeitY)	82,40,000.00



## **Academic Collaborations**

### **Prof. G. Saha**

Collaborated with Prof. Rajat Kumar Pal, Department. of Computer Science and Engineering, University of Calcutta, Kolkata (WB) as a Joint Supervisor to guide four Ph.D. scholars on (i) The Role of Microarray Data Analysis in Gene Regulatory Network Design, (ii) Some Computational Approaches for Construction of Biologically Relevant Gene Regulatory Networks, (iii) Studies on Feature Selection from Microarray Dataset for Disease Diagnosis, (iv) Design and Testing in digital microfluidics biochip: Algorithms and Optimizations.

### **Dr. Md. I. Hussain**

Collaborated with Maulana Abul Kalam Azad University of Technology, West Bengal on QoS Provisioning in Internet of Things (IoT).

### **Dr. D. Kandar**

Collaborated with Dr. B. Maji, Department. of Electronics and Communication Engineering, NIT, Durgapur (WB) as a joint supervisor to guide two Ph.D. scholars on (i) RADAR Communication based novel approach for next generation transportation system and (ii) An integrated system for converging communication and RADAR for Intelligent Transportation System.

## **Other Activities**

### **Prof. Goutam Saha**

Filed a Patent (May 2019) on Automated Vehicle Accident and Theft Prevention Device (IPO Application No.201931019856).

### **Dr. Md. I. Hussain**

Attended the Faculty Development Programmes (FDP) on (i) “Energy Management and Audit” organized by AICTE Training and Learning (ATAL) Academy, Guwahati & NEHU in the Department of Energy Engineering at NEHU during October 14 – 18, 2019, (ii) “Robotics” organized by AICTE Training And Learning (ATAL) Academy, Guwahati & NEHU in the Department of Energy Engineering at NEHU during November 04 – 08, 2019.

### **Dr. D. Kandar**

Attended a Faculty Development Programme (FDP) on “3D Printing & Design” organized by AICTE Training and Learning (ATAL) Academy, Guwahati & NEHU in the Department of Energy Engineering, NEHU during March 02 – 06, 2020.

**Reviewer:** International Journal of Communication Systems, John Wiley & Sons Ltd., International Journal SN Applied Science Springer.

### **Dr. A. K. Maji**

Attended (i) 3<sup>rd</sup> International conference on Intelligent Computing and Communication, Bangalore during June 07 - 08, 2019, (ii) 1<sup>st</sup> International Conference on Advances in Electrical and Computer Technologies (ICAECT-2019), Coimbatore during April 26 - 27, 2019.

**Reviewer:** Multimedia Tools and Application, Springer

### **Dr. S. C. Sahana**

Attended the FDPs on (i) “Energy Management and Audit” organized by AICTE Training And Learning (ATAL) Academy, Guwahati & NEHU in the Department of

Energy Engineering at NEHU during October 14 – 18, 2019, (ii) “Robotics” organized by AICTE Training And Learning (ATAL) Academy, Guwahati & NEHU in the Department of Energy Engineering at NEHU during November 04 - 08, 2019, (iii) “Artificial Intelligence” organized by AICTE Training And Learning (ATAL) Academy,

Guwahati & NEHU in the Department of Energy Engineering at NEHU during October 21 – 25, 2019, (iv) “3D Printing & Design” organized by AICTE Training And Learning (ATAL) Academy, Guwahati & NEHU in the Department of Energy Engineering at NEHU during March 02 – 06, 2020.

## DEPARTMENT OF NANOTECHNOLOGY

**Head** : Dr. L. Robindro Singh (Teacher-in-Charge)  
**Telephone** : 0364 2723901/ +91 9863331127  
**E-mail** : lrsingh@nehu.ac.in  
**Faculty:** 02

Designation	Name and Qualification	Specialization
<b>Assistant Professor</b>	Dr. L. Robindro Singh, M.Sc. & Ph.D. (Manipur Univ.)	Nanophotonics, CNT, graphene, sensor, LED
	Shri Davidson Pyngrope, M.Tech. (Sikkim Manipal Univ.)	Nanoelectronics, nanoparticles

### Thrust Areas of Research

Nanomaterials for functional materials, nanotechnology for biological sensor, LED, nanomaterials for antimicrobial activities, super-capacitor, CNT for photonic applications, nanophosphor.

training programme undertook research projects and aimed in creating much needed for promoting nano-technology applications. The Department contributed towards the configuring and applications nano-science in antimicrobial activities, wound healing, development of LEDs, rf capacitor and sensors. The Department received grants to support the research and other activities from different National and International funding agencies.

### Brief Statement of Academic Activities

The Department took part in several International and National Workshop/Seminars/

### Students' Profile

**Enrolment Capacity:** M.Tech. – 18, Ph.D. -01

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.Tech.	05	04	01	04	-	04	05	04	9
Ph.D.	-	01	-	01	-	-	-	01	01

### Degrees Awarded

Degree	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
M.Tech.	09	03	01	02	-	09	00	12	12
Ph.D.	-	01	-	-	-	01	00	01	01

### Students Awarded Ph.D. Degree

Name of Student	Title of Thesis	Name(s) of Supervisor(s)/ Joint Supervisor
Ms. Pallabi Gogoi	“Development of $MgTiO_3$ ceramics nanoparticles doped with metal ions for dielectric resonator and integrated electronic application”	Dr. Laishram Robindro Singh

### Research Fellowship

CSIR- UGC- NET	UGC Non- Net	Rajiv Gandhi SC/ST	ICPR Fel- lowship	Meritorious Fellowship	Mala- na Azad Minority Fellowship	Others
--	-	01	-	-	-	-

### Courses Conducted

#### *Postgraduate: M.Tech. (Nanotechnology)*

##### *Semester I*

Introduction Nanomaterials and Nanotechnology, Numerical Methods for Engineers, Quantum Mechanics for Nanostructured systems, Electives in Advance Nanostructured Materials, Lithography and Nanofabrication and Nanophotonics, Laboratory- Nanomaterials synthesis and characterization.

##### *Semester II*

Micro and Nanoelectronics, Polymer and Nanocomposites, Environmental Nanotechnology and Nanobiotechnology, Carbon Nanostructures and Applications, Nanotechnology for Energy Devices, MEMS and NEMS

##### *Semester III*

Project Phase I

##### *Semester IV*

Project Phase II

##### *M.Phil./Ph.D. Courses*

Research Methodology, Mathematical Methods and Simulation, Optical Properties of Nanostructured systems, Nanomedicine and drug delivery, Nanotechnology for Solar Photovoltaic

##### *Attended*

##### **Dr. L. R. Singh**

Presented a paper on *Low temperature synthesis and dielectric study of nanocrystalline  $Mg(Zr_{0.05}Ti_{0.95})O_3$  ceramics for LTCC applications* in the “4th International Symposium on Nanoparticles and Nanomaterials and Applications – ISN2A 2020” Portugal during January 20 - 23, 2020.

## Research Projects

### Ongoing

Title of Project	PI/Co-PI	Funding Agency	Amount (Rs.)
Production of new non-toxic photoluminescent nano-materials and their application in energy and forensic fields	Dr. L.R. Singh	Department of Science and technology, Science and Engineering Research Board, New Delhi	6,30,000.00
Preparation of procesable oxide nanoparticles doped with lanthanide ions and their luminescence study	Dr. L.R. Singh	University Grant Commission-Department of Atomic Energy, Consortium for Scientific Research, Indore	10,08,000.00
Plant encapsulated nanosystem: An alternative to antimicrobial growth promoter in poultry health in North-Eastern India	Dr. L. R. Singh	Department of Biotechnology, North-Eastern Region, New Delhi	76,63,000.00

### Academic Collaborations

#### Dr. L. R. Singh

Collaborated with (i) Dr. R. S. Ningthoujam, Chemistry Division, Nanoscience Section, BARC, Mumbai for “*Preparation of oxide nanoparticles for application of solid state LED*”, (ii) Prof. S.D. Singh, Department of Physics, Manipur University, Canchipur, Imphal for “*Study, analysis and determination of trapping parameters*

*of TLD materials*”, (iii) Dr. Munish Kumar, RPCD, AERB, BARC, Mumbai under BRNS project “*Preparation, characterization and TL studies of Lithium borate doped with metal ions: for dose linearity*”, (iv) Dr. Mona Saif, Faculty of Science, University of Cairo, Egypt for Indo-Egypt Project “*Preparation of processable oxide nanoparticles doped with lanthanide ions and their luminescence study*”.

## IX

### ADMINISTRATIVE DEPARTMENTS

### COLLEGE DEVELOPMENT COUNCIL

**Director** : Dr. C. R. Diengdoh (In-Charge, up to December 31, 2019)

Prof. H. Kayang (w.e.f. January 02, 2020)

**Telephone** : 0364-2721201/1202/1203/1204 (O)

**E-mail** : [dircdc@nehu.ac.in](mailto:dircdc@nehu.ac.in), [cdcnehu@gmail.com](mailto: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/MHRD and affiliated colleges in carrying out all procedural formalities regarding proposals for obtaining funds under the different schemes for the overall development of the Colleges. The University has 72 (seventy-two) affil-

ated colleges, of which 33 are permanently affiliated and 39 are provisionally affiliated.

**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 of Selection/Screening Committees for appointment/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 2019-20 for Renewal of Provisional Affiliation of UG and PG Courses**

Tirot Sing Memorial College, Mairang, West Khasi Hills; Loyola College, Williamnagar, East Garo Hills; Metas Adventist College, Surat, Gujarat; Seng Khasi College, Shillong; Sankardev College, Shillong; NEIGRIHMS, Mawdiangdiang, Shillong; Iaikyntiew College, Shillong; Tura Law College, Tura, West Garo Hills; Ampati Degree College, Ampati, South West Garo Hills; St Anthony's College, Shillong; NEIAH, Mawdiangdiang, Shillong; Goodwill College, Shillong; Union Christian College, Umiam Khwan, Ri Bhoi; St Dominic's College, Shillong; St Anthony's College Extension, Byndihati, East Jaintia Hills; Durama College, Tura, West Garo Hills; Bormanik College, 3<sup>rd</sup> mile, Upper Shillong, Thomas Jones Synod College, Jowai, West Jaintia Hills; Shangpung College, Shangpung, Jowai, West Jaintia Hills;

Shillong College, Shillong.

**List of Colleges Visited by Various Inspection Teams during 2019-20 for Permanent Affiliation of UG and PG Courses**

Shillong College, Shillong, Thomas Jones Synod College, Jowai, West Jaintia Hills; Synod College, Shillong; Tikrikilla College, Tikrikilla, West Garo Hills; Sankardev College, Shillong; Sohra Government College, Sohra, East Khasi Hills.

**List of Colleges Visited by Various Inspection Teams during 2019-20 for permission to start New college**

Riwar College, Pynursla, East Khasi Hills; JJM Nichols-Roy College, Shillong; Tura Christian College, Tura, West Garo Hills; Amwi College, Jowai, West Jaintia Hills.

**List of Colleges Visited by Various Inspection Teams during 2019-20 for Provisional Affiliation of UG Courses**

Tura Christian College, Tura, West Garo Hills; Kiang Nangbah Government College, Jowai, West Jaintia Hills; Shillong College, Shillong; JJM Nichols-Roy College, Shillong.

**List of Colleges Visited by Various Inspection Teams during 2019-20 for permission or Provisional Affiliation of to start PG Department in an existing College/Institution**

St. Anthony's College, Shillong; Synod College, Shillong; Shillong College, Shillong.



## EXAMINATION DEPARTMENT

**Controller of Examinations**

: Dr. Debasish Chowdhury

**Telephone**

: 0364 2721211 / 1212

**E-mail**

: [offcoe@nehu.ac.in](mailto:offcoe@nehu.ac.in)

The Examination Department performs its routine activities that include a host of exercises such as conducting the various end semester examinations twice in the span of a year, arranging evaluation of theses/dissertations submitted by its registered scholars, facilitating holding of Convocation and carrying out other support activities for the benefit of the concerned. The Department ensured that it delivers its mandated services to the various stakeholders of the University in the best feasible fashion.

- During the period under report, the Department conducted the routine end semester examinations both at the University Departments and at the affiliated colleges and ensured, to the extent feasible, fast processing and timely publication of the results to benefit its student community. The Department takes delight in reporting that during the year, PG final semester examination results were declared within about ten days time counting from the day when the last of such an examination was held in a particular PG Department.
- During the Academic Year under review, the Examination Department, by and large, successfully managed to smoothly conduct the UG even semester end term examinations at all its affiliated institutions. The Department was able to declare all its UG end semester exam-

ination results within the stipulated time-frame which, in turn, facilitated aspiring students to join in PG programmes for pursuing their higher studies either at this university or elsewhere in the country/abroad.

- During the year under review, the University could smoothly phase out the Annual Examination System and switched over to the Semester System of Examinations for students enrolled at any of its undergraduate programmes.
- In pursuance of the Government of India's "Digital India" initiative, the Department went ahead and implemented necessary improvisation as was felt required in its ERP system aiming further streamlining of the automation initiatives it has already put in place. The system of online filling of examination application forms, registration forms, payment of various fee payable by a student/institute to the University introduced earlier have accordingly been further rationalized. This has enabled the Department to provide better services by ensuring timely issuance of Registration Cards and examination Hall Tickets. Plan are also afoot to ensure that the system of downloadable auto-generated Hall Tickets is made operative at students end in near future to all active students enrolled in the various affiliated colleges under the jurisdiction of the university.

- The University Management System (UMS) which is the University's exclusive ERP system automation solution was effectively deployed to ensure that processing of all University Departments results is handled smoothly. The process of uploading IA marks/ end semester examination marks of concerned students by the respective faculty in charge could be carried out in an error free and speedy manner thereby facilitating timely declaration of results.
- The examination Department is closely working along with the Computer Centre to ensure that facilities such as online availability of the academic credentials of students through the National Academic Depository (NAD) portal are put in place to enable them use the features available in the portal to the best of their advantage. The nodal officer in charge of NAD monitors the routine activities in this regard.
- During the year under review, the University successfully conducted various examinations of professional degree programmes offered at its own campus as also in the various affiliated institutes and brought out their results in time. Accordingly, the University conducted examinations of various Engineering, Medical and Medico related professional programmes at the North Eastern Institute of Ayurveda & Homeopathy (NEIAH), The North East Indira Gandhi Institute of Medical and Health Sciences (NEI-GRIMHS), the Woodland Nursing Institute, the Regional Institute of Technology (RIST) besides its own Engineering programmes run at its campus under the School of Technology.
- The Department has now fully integrated its receipt payment processes in the Public Finance Management System (PFMS) thereby facilitating cashless transactions towards payment of TA bills/ examination remuneration bills etc., to the concerned teachers. Examination Fee payable by the students are also being collected in online mode either through RTGS / NEFT or through SBI Collect.
- As a part of research activities and in adherence to the UGC guidelines in such matter, the University Departments, in coordination with the Examination Department conducted coursework examinations for the enrolled M. Phil and Ph.D. Scholars. The results of the Course Work examinations have been brought out within the stipulated time frame.
- The Examination Department receives scores of requests from external agencies for verification and authentication of certificates / documents issued by this University for the purpose of employment. The Department has taken all feasible measures to ensure that such requests are responded to and disposed of as expeditiously as possible by according them the priority they demand and deserve.
- The Examination Department as part of its regular workload did engage in preparing various data sheets as and when required for their onward submission to the concerned authorities such as the UGC, the MHRD and such other government or statutory bodies.
- The Department responded to scores of RTI queries by individuals or various government or non-government agencies as the case may be with all the promptness.
- The Department remained engaged round

the year in the preparation, sorting and sending of examination related materials to all concerned and by and large, was able to stick to the relevant schedules for each such job.

- During the year under review, the Examination Department took proactive steps to streamline the academic calendar at the undergraduate level with a view to ensure improved teaching-learning time and ambience at colleges without curtailing the permissible vacation time in any manner.
- During the year under review, the Examination Department played a key role in organizing the XXVI<sup>th</sup> Convocation of the university wherein 2019 batch Graduates and PG students besides hundred plus Ph.D. and M.Phil. Scholars collected their Award certificates in person.
- The Examination Department during the year under report had tried to have, to the

extent feasible, an open door policy to its stakeholders to sort out various issues that arose from time to time and, in its bid to do so, had organized several meetings with various stakeholders that included the students, the teachers and the Principals of various colleges and institutes.

The year under review was hectic as usual for the Examination Department. It, however, makes the people currently deployed here somewhat happy that it could attend to most of its call in a reasonable manner. Scope for improvements in a system that needs to attend to so many diverse and even divergent calls obviously are ample. We, at the Examination Department, sincerely hope that in the coming year the Department, with the cooperation and needful guidance of all, would be able to show further improvements in delivering the good it is mandated to deliver.

# FINANCE DEPARTMENT

**Finance Officer**

: Shri L.M. K. Lyngrah

**Telephone**

: 0364 2721021(O)

**E-mail**

: fo@nehu.ac.in

## CONSOLIDATED RECEIPTS AND PAYMENTS ACCOUNT FOR THE PERIOD ENDED March 31, 2020

Amount (Rs.)					
RECEIPTS	CURRENT YEAR 2019- 20	PREVIOUS YEAR 2018- 19	PAYMENTS	CURRENT YEAR 2019- 20	PREVIOUS YEAR 2018- 19
I. Opening Balances			I. Expenses		
a) Cash balances	31538	121150	a) Establishment Expenses	1898103652	1955669837
b) Bank balances			b) Academic Expenses	129296060	98595251
i) In current accounts	179346701	695679149	c) Administrative Expenses	96668691	125164539
ii) In Deposit accounts (deduct bank balance closed/transferred herein as Receipts & Income)			d) Transportation Expenses	20898714	14066677
iii) Savings accounts	1235524414	1216672729	e) Repairs and Maintenance Expenses	101250524	51786059
c) Investments			f) Prior period expenses	33986775	291400
II. Grants Received			II. Payments against Earmarked/Endowmen t Funds	21783185	27684546
a) From Govt. of India	2197634585	2378438552			
b) From State Government					
c) From other sources	392400	750340			
III. Academic Receipts	70178789	164096644	III. Payments against Sponsored Project/Schemes	59481243	91435239
IV. Receipts against Earmarked, Endowment Funds	53141234	46356084	IV. Payments against Sponsored Fellowships/ Scholarships	14755990	16735610
V. Receipt against Sponsored Projects/Schemes	34211378	93462451	V. Investments made		
			a) Out of Earmarked/Endowmen t funds	183606000	140611000
			b) Out of Own Funds	914252000	527472000

Amount (Rs.)					
RECEIPTS	CURRENT YEAR 2019- 20	PREVIOUS YEAR 2018- 19	PAYMENTS	CURRENT YEAR 2019- 20	PREVIOUS YEAR 2018- 19
			c) Out of Corpus Fund	6686000	
VI.Receipts against sponsored Fellowships and Scholarships	2575450	12744128	VI. Term Deposits with Scheduled Banks		
VII. Income on Investments from			VII.Expenditure on Fixed Assets and Capital Work in Progress		
a) Earmarked/Endowment funds	33463	386777	a) Fixed Assets	110225949	123415876
b) Main account investments		439520	b) Capital Works in Progress	22249980	14609231
			c)Statutory remittances and release of security and caution deposits	381171496	313770255
VIII. Interest received on			VIII. Other Payments including Statutory Payments	842933.08	751875
a) Bank deposits	37915333				
b) Loans & Advances					
c)Savings Bank accounts	26733485	35608042			
d)Corpus, Earmarked & Endowment Funds Account	11602356	9420238			
IX.Investmentencashed	1207747745	115881000	IX. Refund of grants	50895	1220234
X.Term Deposits with Scheduled Banks encashed			X. Deposits & Advances/Interest bearing advances	65928735	55593967
XI.Other income (including Prior Period Income)	41680793	21979703	XI. Other Payments (Interest on Savings Account Refunded to UGC and Design Innovation Centre)	6467673	0
XII. Deposits and Advances/Interest bearing advances	20204073	26175692	XII. Adjustments in Capital Account of Tura Campus		
XIII. Statutory dues including Security, Caution, Earnest Deposits etc	94541575	70108052	XIII. Adjustments in Corpus Account		15177

Amount (Rs.)

RECEIPTS	CURRENT YEAR 2019- 20	PREVIOUS YEAR 2018- 19	PAYMENTS	CURRENT YEAR 2019- 20	PREVIOUS YEAR 2018- 19
XIV. Any other Receipts/Loan recovery	1764902	270000	XIV. Closing balances		
			a) Cash in Hand	35780	31538
			b) Bank balances		
			i) In Current Accounts	19069629	179346701
			ii) In Savings Accounts	1314843534	1235524414
			c) Investments		
XV. Miscellaneous in Corpus Account (Including Institutional Charges)	167660	140351			
XVI. Receipts yet to be Identified	173480728	19296869			
XVII. Cheques to be Reissued	1061071	479038			
XVIII. Adjustment of Stale Cheques and Unidentified Receipts in Capital Account		65215598			
XIX. Income Tax Refund	10242324	69320			
XX. Extra Remittance by Tura Campus	1443441				
<b>Total</b>	<b>5401655438</b>	<b>4973791426</b>	<b>Total</b>	<b>5401655438</b>	<b>4973791426</b>

## PLANNING CELL

**Assistant Registrar** : Georgina Umdor  
**Telephone** : 0364-2721087  
**E.mail** : gumdor@nehu.ac.in

The North-Eastern Hill University, NEHU, established the Planning Department in 1978 with the objective of designing and implementing the vision plan for expansion and development of the University in different fields. It was later renamed as Planning Cell when the XII five year plan was discontinued. Accordingly, its functions and operations have changed to annual planning.

Though it has been changed to annual planning, it is the cell that deals with the plan proposals for the different Schools, Departments, Centers etc, and finalize the same on recommendations made by the Planning Committee of the University.

Report for the Year 2019-2020:

(i) The Plan Proposal during the year 2019-2020 is finalized under Economically Weaker Sections (EWSs) Scheme. Total amount proposed to UGC is Rs. 100.00 crores, out of which Rs. 7.07 crores was released as 1st installment under Salary and Recurring Head of Account.

(ii) New proposals for infrastructure development, etc is being worked out under Higher Education Financial Agency (HEFA) Scheme introduced by Ministry of Education, Government of India and the same will be forwarded to the Ministry for availing fund as loan against the HEFA Scheme.



**X**  
**CENTRAL SERVICES**  
**BIOINFORMATICS CENTRE**  
(DISTRIBUTED INFORMATION CENTRE)

<b>Coordinator</b>	<b>: Dr. Atanu Bhattacharjee</b>
<b>Co - Coordinator</b>	<b>: Dr. Devendra K. Biswal</b>
<b>DBT-E library Consortia</b>	
<b>(DELCON) Nodal Officer</b>	<b>: Dr. Devendra K. Biswal</b>
<b>Telephone</b>	<b>: +91 0364 272 1241 / 1242</b>
<b>Website</b>	<b>: <a href="http://bicnehu.ac.in">http://bicnehu.ac.in</a></b>
<b>E-mail</b>	<b>: <a href="mailto:nehuniv.btisnet@nic.in">nehuniv.btisnet@nic.in</a>, <a href="mailto:bicnehu@gmail.com">bicnehu@gmail.com</a></b>

**Thrust Areas**

Biodiversity Informatics (Parasitology, Biosystematics & Orchid Biology), Evolutionary Genomics & Bioinformatics.

**Brief Statement of Academic Activities**

The Bioinformatics Centre (BIC) at NEHU has been set up and funded by Department of Biotechnology (DBT), Ministry of Science & Technology under the Biotechnology Information System Network (BTIS) programme since November 1999 with a view to cater to the needs of the scientific community in the far-flung north-eastern region of the country and to augmenting their research activities through information inputs. As a part of National Bio informatics Network, the Centre serves as an information base in various areas of Biosciences and conducts various training programmes and Workshops on Biodiversity Informatics. The Centre is part of the National Bio-information Network and functions as an information base in various areas of Biosciences and Biodiversity, being associated with *Information node of BTIS net*, for the entire north-east region. This Centre also serves as a nodal centre for NEBInet,

DBT, GOI, Biology teaching (BIF-BTBI) Centre's since 2008 for all the 8 states of North-East. This Centre has 2 DICs and 26 Bioinformatics Facilities. It is also a *Nodal centre for operating DBT-sponsored Online Access Facility of Library Resources (OA-FLR)* for 36 Secondary and Senior Secondary Schools in North Eastern States of India through 8 BIF-BTBI Coordinators.

- The Centre offers DBT e-Library Consortium (DeLCON) facility comprising of a total of 917 selective Journals and a Database (SCOPUS) for the University as one of the 18 nodal Centres in the North-Eastern Region.
- **Research Database:** The Centre hosts the following databases such as (i) Helminth Parasite Spectrum in Northeast India NE, (ii) Traditional Fermented Foods and Beverages of the Sikkim Himalayas, (iii) Medicinal Plants of Meghalaya, useful to conduct research in the areas of Molecular characterization, functional and comparative genomics, proteomics, metabolomics, and evolutionary bioinformatics of pathogenic worm infections and Orchid Biodiversity of NER.

## Seminars/Conferences / Workshops / Symposia / Extension Programmes

### Attended

#### Dr. D.K. Biswal

Delivered invited lectures on (i) “North-east India Bio-Bank of Codes Network” in *International conference on Digital Landscape* (ICDL 2019) organized by and held at TERI, New Delhi during November 06-08, 2019, (ii) “Jungle Genomics” in ISCB-International Symposium on Bioinformatics (InSYB) 2019 an annual event of APBioNet, held at Hans Raj Mahila Maha Vidyalaya, Jalandhar during December 21-22, 2019 and also chaired a session, (iii) “Ancient internet: Information flow in living systems”(as keynote speaker) in the Workshop “Life Science Research: Data, Tools and Presentation” held at faculty Development Centre, Banasthali Vidyapith, Rajasthan on November 17, 2019, (iv) Ancient internet, bio-barcoding, molecular phylogenetics & biosystematics (4 lectures) in the Refresher Course in Zoology held at UGC-HRDC, NEHU, Shillong

during March 18-April 17, 2019, (v) “Art of learning Bioinformatics” in the National level bioinformatics Workshop at St. Edmunds College, Shillong during June 28-July 05, 2019, (vi) “*The whole genome de novo sequence assembly of Nepenthes khasiana, a rare and endemic tropical pitcher plant of Meghalaya, North-east India*” in ISCB-Advances in Computational Biology Conference 2019 Fostering collaboration among women scientists held at La Pedrera. Barcelona, Spain during November 28 - 29, 2019.

### Publications

#### Research Papers

##### Published Abroad

Konhar, R., Debnath, M., Vishwakarma, S., Bhattacharjee, A., Sundar, D., Tandon, P., Dash, D., Biswal, D. K. (2019). The complete chloroplast genome of *Dendrobium nobile*, an endangered medicinal orchid from north-east India and its comparison with related *Dendrobium* species. *PeerJ*, 7, e7756.

### Research Projects

#### Ongoing

Title of Project	PI/Co-PI	Funding Agency	Amount (Rs. in lakhs)
Understanding the biosystematics and biodiversity of few selected carnivorous plants in Meghalaya: A next generation genomics and proteomics approach	Devendra K. Biswal (PI) Dr. Debasis Dash, Shantanu Sengupta (Co-PI), Prof. S.R. Rao (Co-PI)	DBT, GOI	117.00

## Completed

Title of Project	PI/Co-PI	Funding Agency	Amount (Rs. in lakhs)
Next Generation Sequencing (NGS)-based <i>de novo</i> assembly of expressed transcripts and genome information of Orchids in North-East India	Devendra K. Biswal (PI) Prof. S. Sundar (Co-PI)	DBT, GOI	186.00

## Academic Collaborations

**Programme Coordinator:** Dr. Devendra Kumar Biswal

**Collaborators:** Dr. Debasis Dash, CSIR-IGIB, New Delhi; Dr. Shantanu Sengupta, CSIR-IGIB, New Delhi; Prof. S.R. Rao, NEHU, Shillong; Prof. S. Sundar, IIT Delhi.

## Honours/Awards/Recognitions

### Dr. D. K. Biswal

Member of the DBT Expert Committee for Women Scientist Bio-CARE Scheme.

Secretary of the Bioclues-India's bioinformatics society, bridging mentor-mentee relationships.

BTIS net Biodiversity Informatics nodal officer. Top of Form

Bottom of Form

## Infrastructure facilities

### Computer & Communication facility

**LAN connectivity;** Servers: 3 nos., PCs: 20 nos.; Workstations: 3 nos., Printers: 3 nos., Scanner: 1 no., UPS: 5 nos.; LCD Projector: 2 nos.

**Scientific Software packages:** Accelrys Gene 2.5 (Sequence Analysis Work Bench), Matlab 7.0, Winspirsver 4.1 for Biotechno-

logical Abstracts, Reference Manager, CLC Genomics workbench, PAUP, DNASTAR, BLAST2GO

### Databases & other information resources:

Derwent Biotechnological Abstracts (July 1987 - March 2006), Reference Update Deluxe Edition (July 2002 - June 2004), Parasitology Database (obtained through MOE&F), Application Softwares from Microsoft, RHEL, SQL, Adobe and Apple etc.

### Facility procured under DIT sanctioned NEPIAC project:

Apple Work Group 13 node Cluster (HPCC), Apple iMAC (7 nos.), 40 kVA UPS (1 no.), SPSS, iWork, inquiry softwares

### Facility procured through NER Twinning

**Next-Gen Sequencing Project:** Apple Mac Pro (1 no.), 10 kva UPS (1 no.), Apple iMAC 21" (6 nos.)

### Facility procured through DBT, GOI sanctioned IBIN-BRIC Project:

Backup Device (1 no.), Workstation (1 no.), HP Procurve Switch (1 no.), Cisco 1841 Router (1 no.), Server (2 nos.), Red Hat Enterprise Linux 6 Advance Platform (1 user), Microsoft SQL Server 2008 R2 Enterprise Edition (1 user)

## Research Activities

- *De novo* assembly of the transcripts and Functional genome & transcriptome analysis of the or-

chids and mapping of important metabolic pathways (Biosynthetic pathway of secondary metabolites of medicinal importance widely used as analgesic, anti-inflammatory and anti-cancerous).

- Biodiversity of *Nepenthes khasiana* pitcher fluids
- Ecological Genomics of Orchids (of Medicinal Importance) specific to North-East India
- Biodiversity Informatics: North-east India Bio-Bank of Codes

Network (NIBBCoNet)

- Indian Initiative on Earth Biogenome Project (IIEBP)

### **Other Activities**

#### **Dr. D.K. Biswal**

Member of the (i) NEHU local committee for National Institutional Ranking Framework (NIRF), MHRD, GOI, (ii) management committee, NEHU Incubation Centre.

# BIOINFORMATICS CENTRE (TURA CAMPUS)

**Coordinator** : Dr. B. K. Mishra  
**Co-Coordinator** : Dr. B. Mathew  
**Telephone** : 9436306259 (M)  
**E-mail** : birendramishra14@gmail.com, bif.rdapnehutura@gmail.com

## BACKGROUND

The Bioinformatics Infrastructure Facility (BIF) established in TURA campus has successfully completed a decade long journey since 2008, of providing a solitary bioinformatics platform to all the biological and computational science aspirants in Garo Hills, Meghalaya. The Centre is frequently used by faculty members, scholars, MSc students and project fellows for both research and training purpose. The Centre is dedicated towards generation of skilled human resource and popularization of bioinformatics. The Centre also organizes short term training & outreach programmes as well as long term courses on regular basis. Further, the Centre aids in conducting theory and practical papers of Semester I&III, for MSc in Rural Development and Agricultural Production (RDAP). The Centre is also engaged in research activities in frontier areas of biomedical sciences, structural bioinformatics and genomic characterization of probiotics isolated from the fermented foods of Meghalaya.

## Thrust Areas

*In silico* characterization of probiotic organisms isolated from fermented foods of north-east India, Structural Bioinformatics mainly focusing Macromolecular interaction, Receptor – Ligand interaction studies,

Molecular modelling and Simulation.

## Academic Activities

### *Orientation Programme*

Organized two orientation programmes for secondary and higher secondary students of St. Xavier's School, Tura at BIF, NEHU, Tura Campus during May 16-17, 2019.

### *Teaching Programme*

A full course of 'Computer Applications (RDA-106)' and part of 'Basic Statistics & software Application (RDA-301)' in MSc RDAP was also undertaken by Bio Informatics Centre.

## Seminars/Conferences/Symposia/ Workshops

### *Attended*

- Poster presentation in "Production of B-vitamins and short chain fatty acids from yeasts and lactic strains isolated from fermented foods of Garo Tribes, Meghalaya, India" at 9th International conference on Fermented Foods, Health Status and Social Well-being, organized at AAU, Anand, Gujarat by Swedish South Asian Network on Fermented Foods during December 13-14, 2019.
- Oral and Hands-on presentations

in two Orientation Programmes for secondary and higher secondary students of St. Xavier's School, Tura at BIF, NEHU, Tura Campus during May 16-17, 2019.

### **Infrastructure Facilities**

**Hardware:** HPE DL 380 Gen10 Server with console & Rack, Desktops – 23, IBM Server Medium end, Laptop – 02, UPS – 12, UPS 1kVA APC – 02, Online UPS 3kVA, Internal Hard Disk 500GB, External Hard Disk 1TB, Canon iR 2002 photocopier cum printer, HP Laser jet with networking Print-

er, HP Desk Jet Printer; Canon DRC240 Duplex Scanner, Canon PIXMA G3010, LCD Projector SHARP PG LX-2000, Voltage Stabilizer, Computer table and chair – 12, Digital Podium Strake SRP-60M.

**Software:** Microsoft visual studio Professional 2012, Microsoft SQL Server Std Edition 2012, Microsoft Windows R Sever 2012 Standard, Microsoft Windows Sever 2012 User CAL (5 CAL), Artemis, Discovery Studio Visualiser, VMD, MEGA, Marvin Sketch, SPSS, GROMACS.

## CAMPUS DEVELOPMENT DEPARTMENT

**University Engineer(In-Charge)** : Shri J. Cherian  
**Telephone** : 0364-2722069 (O) / +91 9863027393 (M)  
**E-mail** : jcherian@nehu.ac.in

Detail of Works undertaken by CDD during 2019-20			
Sl. No	Name of Work	Allocated Amount (Rs. in lakhs)	Status
1	2	3	4
	<b>Shillong Campus</b>		<b>Completed Works</b>
<b>(I)</b>	<b>Work taken up from One Time Grant amounting to Rs. 753.00 lakhs.</b>		
	(1) Repair/maintenance of Hostel Sensiar Block-A	41.36	Work completed
	(2) Repair/Maintenance of Hostel Sensiar Block-B	42.28	Work completed
	(3) Repair/Maintenance of Hostel Sensiar Block-C	38.82	Work completed
	(4) Repair/Maintenance of Hostel Sensiar Block-D	41.68	Work completed
	(5) Repair/Maintenance of Hostel Balgito Block-A	39.32	Work completed
	(6) Repair/Maintenance of Hostel Balgito Block-B	41.47	Work completed
	(7) Water tank staging for Balgito&Sensiar hostels including dining halls	14.65	Work completed
	(8) Providing chain link fencing around International Hostel, Hostel No. 2, 8 including extension of barbed wire fencing of hostel No. 10 & 11.	18.27	Work completed
	(9) Internal electrification works of 4 (four) blocks of Sensiar hostel, 2(Two) Blocks of Balgito hostel and 3-(blocks) of dining halls of Balgito and sensiar hostels at NEHU, Shillong.	30.92	Work completed
	(10) Repairing and painting of Department. of Physics and Mathematics	36.87	Work completed



	(11) Repairing and painting of Department. of Chemistry	28.68	Work completed
	(12) Repairing and painting of Lecture Hall of Science Complex	11.41	Work completed
	(13) Repairing and painting of Department. of Bio-Chemistry & Dean's Office of School of Life Sciences	23.44	Work completed
	(14) Repairing and painting of Department. of Zoology	21.14	Work completed
	(15) Repairing and painting of Department. of Botany	21.08	Work completed
	(16) Repairing and painting of SAIF building	27.38	Work completed
	(17) RCC water tank staging for Physics Department.	10.89	Work completed
	(18) Fencing around hostel 12 to 16	8.18, 4.16, 7.28, 3.32	Work completed
	(19) Fencing around hostel 17 to 23	13.45,9.57	Work completed
	(20) Repair and maintenance of hostel No. 19	11.89	Work completed
	(21) Repair of road from junction near Old Guest House towards RUAB	5.57	Work completed
	(22) Resurfacing and repair of internal road at Sensiar and Balgito hostels	4.19	Work completed
	(23) Repair and surfacing of road in front of L23 – L37	4.97	Work completed
	(24) Repair and resurfacing of service road near quarter No. L5 to L22	4.33	Work completed
	(25) Widening of parking space near erstwhileUSIC	13.15	Work completed
	(26) Resurfacing of the road segment opposite Economics Department	4.79	Work completed
	<b>Total amount completed in this head</b>	<b>584.51</b>	<b>Lakhs</b>
<b>(II)</b>	<b>Work taken up from One Time Grant amounting to Rs. 1500.00 lakhs.</b>		
	(1) Providing an additional geyser including allied plumbing works in L-Type quarters at NEHU, Shillong	29.34	work completed
	(2) Repair & Maintenance of Quarter No. L23 to L37 at NEHU, Shillong (Civil& Plumbing works)	41.12	work completed
	(3) Renovation of wash room of Administrative Building at NEHU, Shillong	18.7	work completed

	(4) Covering of remaining portion of gable end wall (near stage) of Convocation shed at NEHU Shillong (Balance Work)	9.13	work completed
	(5) Repair/Maintenance of Lasubon hostel & dining hall block-A&B (civil/plumbing/electrical)	96.94	Work completed
	(6) Up-gradation, modernization, renovation of 11KV ring main system and re-arrangement by providing installation testing, commissioning of 11KV, VCB panel at primary substation, 33/11KV at NEHU permanent campus, Shillong S.H. Providing 7(Seven) section 11KV,630A, Indoor Type VCB panel at sub-station No. 1.	40.59	Work completed
	(7) Up-gradation, modernization, renovation of 11KV ring main system and re-arrangement by providing installation testing, commissioning of 11KV, VCB panel at other distribution substation Nos. 2, and remaining 2(two) section panel of S/S-1 at NEHU permanent campus, Shillong		
	S.H. Providing 11KV,630A, Indoor Type VCB panel at sub-station No. 2 and remaining 2(two) section panel at sub-station No. 1. Also, for providing 11KV Indoor panel and one LT cubical panel at Sub-station No. 16.	42.81	Work completed
	(8) Dismantling, re-arrangement and up-gradation of L.T.panel and replacement with new panel at sub-station No. 3 ,4(Housing & Girls hostel) and sub-station No. 10(social science) at NEHU, Shillong	42.55	Work completed
	(9) Construction of 11/0.433 KV sub-station No. 16 for School of Physical Sciences at NEHU permanent campus, Shillong S.H. Providing service connection, panels and installation of 1x630KVA transformer	46.47 4.31	work completed
	(10) Replacement and renovation of old 33 KV switch gears equipments& transformers, 33/11KV, 2x3 MVA capacity with installation, testing and commissioning complete in all respect for primary sub-station No. 1 at NEHU permanent campus, Shillong		
	(a) S/I/T/C of 33/11KV ,2x3MVA transformer, outdoor type. S/I/T/C of potential transformers, 33KV isolators. S/I/T/C of other accessories. (Bay-1)	45.03	Work completed
	(b) S/I/T/C of 33/11KV, 2x3MVA transformer, outdoor type. S/I/T/C of potential transformer, 33KV isolators. S/I/T/C of other accessories. (Bay-2)	43.02	Work Completed

	(11) Replacement of feeder pillar in hostels & residential buildings	64.86	Work completed
	<b>Total amount completed in this head</b>	<b>524.87</b>	<b>Lakhs</b>
<b>(III)</b>	<b>Work taken up from Capital Assets amounting to Rs. 200.00 lakhs.</b>		
	(1) Facelift of community hall at NEHU, Shillong	72.14	Work completed
	(2) Face lift of Auditorium of old guest house at NEHU, Shillong	46.12	Work completed
	(3) Exhaustive electrical renovation of Academic buildings at NEHU, Shillong	25.18	Work completed
	<b>Total Rs</b>	<b>143.44</b>	<b>Lakhs</b>
<b>(IV)</b>	<b>Works taken up from Non-Plan: Civil &amp; Electrical Maintenance for the year 2019-20</b>	<b>300.00 lakhs</b>	Work completed
	Total amount of work completed in Shillong Campus	1552.82	Lakhs
	<b>Shillong Campus Work in Progress</b>		
<b>(I)</b>	<b>Work taken up from XII Plan Grant for Infrastructure Development</b>		
1	Construction of 100 seated Women's hostel including warden's residence	804.14	Work outsourced to CPWD. Physical progress is 2%
2	Construction of Academic Building for conducting M. Edprogrammeme	409.62	Work outsourced to CPWD. Physical progress is 2%
	<b>TOTAL AMOUNT IN THIS HEAD</b>	<b>1213.76</b>	<b>Lakhs</b>
<b>(II)</b>	<b>Work taken up from One Time Grant amounting to Rs. 1500.00 lakhs.</b>		
	(1) Providing and fixing concertina coil from gate No. 1 to 6	20.45	Work in progress
	(2) Repairing and maintenance of 11KV VCB Panel and re-installation along with testing and commissioning at sub-station No. 2,5,7 & 8 at NEHU permanent campus, Shillong	16.28	Work in progress
	(3) Providing and installation of generator		
	a) 1x500KVA for sub-station No. 10 for other than sciences	54.49	Work relating to installation of generator is pending
	b) 1x125KVA for sub-station No. 5 for old guest house, health center etc.	32.83	Work relating to installation of generator is pending

	c) 1x250KVA for sub-station No. 16 for School of physical sciences	42.46	Work relating to installation of generator is pending
	<b>TOTAL AMOUNT</b>	<b>166.51</b>	<b>Lakhs</b>
<b>(III)</b>	<b>Work taken up from Capital Assets amounting to Rs. 200.00 lakhs.</b>		
	(1) Construction of Main entrance of NEHU near gate No. 1	74.93	Work in Progress
	<b>Total amount in this head</b>	<b>74.93</b>	<b>Lakhs</b>
	<b>Total amount of work in progress in Shillong Campus</b>	<b>1455.20</b>	<b>Lakhs</b>

1	2	3	4
	<b>Tura Campus Completed Works</b>		
<b>(I)</b>	<b>Work taken up from One Time Grant amounting to Rs. 753.00 lakhs.</b>		
1	Repair and Renovation of Academic Buildings at Tura Campus	29.5	Work completed
	<b>Total amount in this head</b>	<b>29.5</b>	
<b>(II)</b>	<b>Work taken up from XII Plan Grant for Infrastructure Development</b>		
1	Providing temporary structure for Academic activity	37.79	work completed
	<b>Total amount in this head</b>	<b>37.79</b>	
	<b>Total amount of work completed in Tura Campus</b>	<b>67.29</b>	<b>Lakhs</b>
	<b>Tura Campus Works In Progress</b>		
<b>(I)</b>	<b>Work taken up from XII Plan Grant for Infrastructure Development</b>		
1	Providing feeder pillar and incoming feeder cable	25.60	Work outsourced to Me.E.C.L. for an amount of Rs. 25.60 lakhs. Work nearing completion
2	Construction of 12 units of L-Type quarters	578.84	Work outsourced to CPWD. 15% of the work is completed
3	Construction of 6 units of P-Type quarters	339.84	Work outsourced to CPWD. 75% of the work is completed

4	Construction of 4 units of Type-II quarters	96.11	Work outsourced to CPWD. 75% of the work is completed
	Total amount of work in progress in Tura Campus	1040.39	Lakhs
	<b>Work taken up from XII Plan Grant for Infrastructure Development at Guwahati</b>		
1	<b>Guest House near Borjhar Airport</b>	900.00 Lakhs	Out of the overall allocation of Rs. 900.00 lakhs, Rs. 379.82 lakhs have been charged to XI plan. The building is completed including lift & occupied

## CAREER AND COUNSELLING CELL

**Coordinator** : Prof. Goutam Saha  
**Telephone** : 0364-272-3604 (O) /272-3607 (C)  
**Fax** : 0364-272-3607  
**Email** : placement.nehu@gmail.com, placement@nehu.ac.in

The Career & Counseling Cell (CCC) was established on April 01, 2008 as per UGC guidelines and started functioning from the School of Technology. The CCC endeavors to provide the very best opportunities to NEHU graduates in terms of counseling and guidance, campus placements, trainings, internship opportunities etc. The Cell regularly publicizes detailed notification on any matter related to counseling, training and career/job opportunities for students and other related activities. The Cell also interacts with reputed industries, organizations, training centres and other entities for meeting the demands of the students.

In order to achieve the aforesaid objectives, this Cell works with the faculty and student representatives from all the Departments of NEHU to provide for better career placement opportunities to the students of this University. The Cell invites experts from corporate organizations for interactive sessions, lectures on soft skills and arranges for placement training to the students. It disseminates information about various job opportunities to students of different Centres / Departments and organizes career related fairs and pool campuses for the students in the University campus. The students also avail the opportunity to undergo training and internship during the semester break in many companies/industries.

### Statement of Campus Placement Performance Undertaken by Career & Counseling Cell, NEHU, Shillong 2019 – 20

Name of the company	Name of students who got selected	Date of interview	Department/ Branch	University/ College
Cognizant (Salary:3.38L/ p.a. approx + Other Incentives as per Company norms)	1. Abhinav Luitel	April 14, 2019	B. Tech. (IT)	School of Technology, NEHU, Shillong
	2. Saswata Chakraborty		B. Tech. (IT)	
	3. Ranjana Das		B. Tech. (ECE)	
	4. Archana Tiwari		M.Tech. (ECE)	
Capgemini (Salary:3.80L/ p.a. approx + Other Incentives as per Company norms)	1.Amrit Kumar Sonowal	May 14-15, 2019	B. Tech. (IT)	School of Technology, NEHU, Shillong
RRC-NE (Regional Resource Centre) for NE States (Branch of NHSRC), Ministry of Health & Family Welfare, Govt.of India (Salary: Rs.35,000/-/ p.m.	1. Ajay Taid	June 07, 2019	B.Tech. (BME)	School of Technology, NEHU, Shillong

approx + Other Incentives as per Company norms)				
Infosys ( <b>Salary:</b> Rs.6 L / p.a. approx + Other Incentives as per Company norms)	1. SonuSaha	August 26, 2019	B. Tech. (IT)	School of Technology, NEHU, Shillong
BYJU'S Bangalore ( <b>Salary:</b> Rs.6 L / p.a. approx + Other Incentives as per Company norms)	1. Hrishikesh Kashyap	August 26, 2019	B. Tech. (EEE)	School of Technology, NEHU, Shillong.
Capgemini ( <b>Salary:</b> 3.80L/ p.a. approx + Other Incentives as per Company norms)	1. Aniket Kumar Pathak	September 04, 2019	B. Tech. (ECE)	School of Technology, NEHU, Shillong
	2. Diptesh Kumar Jha		B. Tech. (ECE)	
	3. Deep Upadhyaya		B. Tech. (IT)	
	4. SonuSaha		B. Tech. (IT)	
	2. Rupam Bharadwaj		B. Tech. (IT)	
Genpact ( <b>Salary:</b> 1.5 to 2L/ p.a. approx + Other Incentives as per Company norms)	1. Priyasha Ahmed	September 30, 2019	Economics	NEHU, Shillong
Infosys Ltd. ( <b>Salary:</b> 3.6 L/ p.a. approx + Other Incentives as per Company norms)	1. Akash Pradhan	October 17-18, 2019	B. Tech. (ECE)	School of Technology, NEHU, Shillong
	2. Aniket Kumar Pathak		B. Tech. (ECE)	
	3. Arun Powdel		B. Tech. (ECE)	
	4. Biplove Basel		B. Tech. (ECE)	
	5. Vivek Kumar Rai		B. Tech. (ECE)	
Cognizant Technology Solutions ( <b>Salary:</b> 4L/ p.a. approx + Other Incentives as per Company norms)	1. Mahbubul Haque	November 09, 2019	B. Tech. (IT)	School of Technology, NEHU, Shillong
	2. Rupam Bharadwaj		B. Tech. (IT)	
Professional Assistance for Development Action (PRADAN) ( <b>Salary:</b> 60,000 L/pm approx + Other Incentives as per Company norms)	1. Mr. Suraj Konwar	March 03-04, 2020	B. Tech. (EEE)	School of Technology, NEHU, Shillong
	2. Mr. Om Prakash Singh		B. Tech. (EEE)	



## CAREER AND COUNSELLING CELL (TURA CAMPUS)

**Officer-in-Charge** : Dr. Abhigyan Bhattacharjee  
**Telephone** : 09435017519/ 08415098100  
**E-mail** : abhigyan09@rediffmail.com

The Career and Counseling Cell (CCC) of Tura Campus provides active guidance and career related information regarding career and placement opportunities to the students of TURA Campus. The Cell interacts with reputed industries, business organizations, companies, training centres, and other entities to explore placement opportunities for students. The Cell also organizes Seminars, Workshops, placement drives, etc.

### Activities

The Cell in association with the Department of Management, NEHU, Tura Campus organized *SYNERGOS*’ 2019, an HR Conclave on the topic “The Rising Social Media Networks and Employment Relationship” on May 11, 2019. CEOs, MDs, Directors, HR Managers and senior Executives from different industries were the resource persons. The Cell facilitated par-

ticipation of students from MBA, ABMFT in a flagship programme in collaboration with All India Management Association (AIMA) and Guwahati Management Association (GMA), the “Shaping Young Minds Programme”, held at NEHU, Shillong on August 30, 2019.

- Three students from Business Management have been placed in Bharti Airtel Ltd.
- Another student from Business Management was also helped to find placement as a Grade H2 Executive in IIFCO-TOKIO General Insurance.
- Organized one FDP on Entrepreneurship sponsored by ED II, Regional Office, Guwahati during March 01-14, 2020.

# CENTRAL LIBRARY

**Librarian (In-Charge)** : Dr. F. R. Sumer  
**Telephone** : 0364-2721251(O)  
**E-mail** : frsumer@nehu.ac.in

## Brief Statement of Activities

The Central Library supports the academic community with various academic resources for their effecting teaching, research and other curricular activities. The Central Library in collaboration with Elsevier, South Asia conducted an “*Author’s Workshop on Scholarly Writing & Intellectual Ethics*” for the research scholars and faculties of the Schools of Life and Physical Sciences, NEHU on August 20, 2019. The Library again in collaboration with Elsevier, South Asia jointly organized a Workshop where Elsevier representatives from India, Bangladesh and South Asian countries, interacted with participants from within the University. The following programmes were also conducted by the Library during this year:

- Regional training programme on Plagiarism Detection Software (PDS);
- “*One-Day North-East Regional Training Programme for Administrators of Plagiarism Detection Software (PDS) URKUND*”, on

August 23, 2019 along with IN-FLIBNET Centre, Gandhinagar;

- “*Training on the Use of URKUND for Admins and Users*” by Mr. Henning Sall, Global Expansion Manager, URKUND (Pro Infocenter AB, Sweden).

The Central Library also observed National Librarian’s Day on August 11 to commemorate the 127<sup>th</sup> Birth Anniversary of Padmashree Dr. S. R. Ranganathan. A documentary film on the life and works of Dr. S. R. Ranganathan was also screened on the occasion. In addition, books authored by Dr. S. R. Ranganathan, were also displayed in the library on that day.

## Books/Book Chapters/Proceedings

Rana, M. (2019). A journey through on-line education with special reference to Massive Open Online Courses (MOOCs). In: *25 years of economic reforms and north-east India*. B Dhar, S Sengupta and S Sharma (Eds.). EBH Publishers, Guwahati, 2019.

## Budget Allocation

Particulars	(Rs. in lakhs)
<b>1. Books</b>	
a) Grants for Creation of Capital Assets: Books	25.00
b) Grant under UGC-SAP for Mathematics Department.	01.50
<b>2. Journals and Periodicals</b>	
a) Grants for Creation of Capital Assets: Scientific journals including subscription to e-resources and online databases.	156.10
b) Grants for Creation of Capital Assets: Journals and Periodicals for other than the sciences viz. Humanities, Social Sciences, etc.	54.10
c) Grants for Creation of Capital Assets: Library & e-journals	250.00
<b>3. Recurring:</b> Grant in aid-Other expenditure: University Library	35.00
<b>Total</b>	<b>521.70</b>

## Library Collection: 298257volumes

Particulars	Volumes
Gifts (Reading materials)	341
Theses	144
Data Bank (Government Publications and Reports received gratis)	257
<b>Total volumes added during the year</b>	<b>742</b>

## Subscription to Scientific Journals and Periodicals

- Journals published abroad : 144
- Journals published in India :120
- Total: 264**
- Newspapers :15
- Magazines :14

## Enrollment of new members

Particulars	Number
Undergraduate Students	273
Postgraduate Students	1249
Research Scholars	212
Non-Teaching Staff	2
Visiting/Guest Faculty	14
Others (Including College Teachers)	9
<b>Total number of new members</b>	<b>1759</b>

#### Usage of books and journals etc.

- Average number of books issued/re-turned/renewed: 287 per day
- Number of users who availed Library consultation services: 258 per year
- Number of users of journals and back volumes: 627 per month
- Number of users of Theses/Dissertations including Data Bank: (i) Students: 225 per month, (ii) Research Scholars: 550 per month, and (iii) Others: 150 per month
- Photocopies of books & journal articles including Back Volumes made: 848 copies per month
- Average number of internet users: 38 per month
- NEHU usage of E-Shodh Sindhu Consortium e-resources during 2019: 158514 full-text articles downloaded.

#### Revenue Generated by the Library during the Year

- Library Consultation fees  
: Rs. 7979.00
- Books: Overdue: Fines (including Law Department. Library) : Rs. 1,08,828.00
- **Total : Rs. 1,16,807.00**

#### Other Activities

##### *Awareness/Orientation/Internship Programme for Students and Research Scholars*

- *Library Orientation Programme* was conducted during September 23- October 01, 2019 in the Central Library Conference Hall for the first semester students of different academic Departments. The programme sensitized the newly enrolled library members with the library's rules and guidelines, in-house/online resources, Online Public Access Catalogue (OPAC) which concluded with a guided tour of the Central Library. (Co-ordinator: Dr. M. Rana).
- The *8<sup>th</sup> Library Internship Programme* was conducted by the Central Library during July 10-September 13, 2019 for the out-going M.LISc. 4<sup>th</sup> semester students of the Department of Library & Information Science, NEHU, Shillong. (Co-ordinator: Dr. Lalhmachhuana).
- The *Library House-Keeping Operations (Job Diary)* was conducted by the Library for the 2<sup>nd</sup> semester students of M.LISc., Department of Library and Information Science, NEHU, Shillong during March - May 2019. (Co-ordinator: Shri A. Blah).

### **Exposure to e-Resources across the Academic Fraternity**

- Access to the online resources that are accessible through the e-Shodh Sindhu and DelCON Consortium including those subscribed by the Library were provided to research scholars and faculty. Also, the library facilitates interaction with M.Phil. and Ph.D. research scholars on access to various electronic resources including the use of the Plagiarism Detection Software(PDS)-URKUND.
- Online services of the subscribed/renewed e-databases and e-journals were

extended through the Library webpage for various users.

- Remote access facilities to e-resources were made available to students and researchers of NEHU Shillong and Tura Campuses.

### **Membership with other Libraries/Network**

- The Central Library, NEHU is also a member of UGC's Inter University Centre (IUC) viz., INFLIBNET Centre, Gandhinagar, Gujarat.

### **Subscription to e-journals, e-books and Online Databases**

Sl. No.	Name of e-journals, e-books and Online Databases
1	Biological Abstracts
2	IEEE, IEL Online
3	Emerald eSS (138 titles Collection)
4	SciFinder Scholar
5	CMIE databases
6	IndiaStat
7	Scopus
8	Institute of Physics(IOP) Complete Collection (76 titles)
9	SIAM - 17 titles eSS Collection
10	EPWRF India Time Series database
11	Library and Information Abstracts
12	Elsevier Science Direct - eSS (10 Subjects Collection)
13	Royal Society of Chemistry Gold Collection (51 titles) excluding Archive 2019
14	Wiley Blackwell Publishing eSS (908 titles)

### **Activities/Steps Accomplished towards Improvement of Library Services**

- The Library subscribed to e-resources from seven publishers that were discontinued by e-Shodh Sindhu (ESS) through central funding.
- Additional equipment and infrastructure viz. computers, printers were installed.
- A total of 116 soft copies of Ph.D. Theses were uploaded in the Shodhganga repository.
- A total of 16,961 pages of the rare, out of print books and newspapers were digitized and uploaded on the NEHU Institutional Repository.

### **Seminars/Conferences/Orientation Course/Workshops/Extension Programmes etc.**

#### **Dr. F. R. Sumer**

Participated in the (i) “*North East Regional Training Programme on Plagiarism Detection Software (PDS) –URKUND*” organized by Central Library, NEHU in collaboration with INFLIBNET Centre, Gandhinagar and held in NEHU, Shillong on August 23, 2019. (Coordinator: Dr. F. R. Sumer), (ii) *National Digital Library of India (NDLI)-UNESCO International Symposium on Knowledge Engineering for Digital Library Design (KEDL 2019)* in IIT, Delhi during December 09-11, 2019, (iii) *Wiley Conclave and Wiley Library Awards 2019(3<sup>rd</sup> season)* held in New Delhi during December 15-16, 2019, (iv) *Springer Nature Summit* held in Mahabalipuram during September 02-04, 2019.

Delivered lectures as a resource person in the (i) 49<sup>th</sup> Orientation Programme con-

ducted by the UGC-HRDC, NEHU (three lectures) during October 14- November 03, 2019, (ii) Short-Term Course in Research Methodology for Basic Sciences conducted by the UGC-HRDC, NEHU (two lectures) during May 27 – June 01, 2019, (iii) “*National Workshop on Open Source Software for Digital Libraries and Library Automation*”, jointly organized by St. Clare College, Ziro, Arunachal Pradesh and Documentation Research Training Centre (DRTC), Indian Statistical Institute (ISI), Bengaluru, Karnataka held in St. Clare College, Ziro, Arunachal Pradesh during February 25-27, 2020.

Conducted practical examination as an external examiner for the paper “*Library Automation Practice*” of the Department of Library and Information Science, Assam University, Silchar, Assam on January 20, 2020.

Extended consultation services to NEHU affiliated college Libraries and other organizations located in North-east states on aspects related to library management, automation and delivery of online services.

Inspected: (i) North Eastern Institute of Ayurveda and Homoeopathy (NEIAH), Shillong, East Khasi Hills on April 01, 2019, (ii) St. Anthony’s College, Shillong, East Khasi Hills on May 01, 2019, (iii) North Eastern Indira Gandhi Institute of Health and Medical Sciences (NEIGRIHMS), East Khasi Hills, Shillong November 01, 2019.

#### **Dr. Lalhmachhuana**

Delivered lectures as a resource person in the (i) 48<sup>th</sup> and 49<sup>th</sup> Orientation Programmes conducted by the UGC-HRDC, NEHU (two lectures each) held during June 24 to July 14, 2019 & October 14- November 03, 2019, respectively, (ii) UGC-HRDC Short-

Term Course in Research Methodology for Basic Sciences & Social Sciences (two lectures) conducted by the UGC - Human Resource Development Centre, NEHU during May 27- June 01, 2019, (iii) “*Library House-Keeping Operations (Job Diary)*” conducted by the Department of Library and Information Science, NEHU, Shillong during March - May 2019, (iv) “*8<sup>th</sup> Library Internship Programme*” conducted by the library during July 10–September 13, 2019, (v) *Library Orientation Programme 2019* for the newly enrolled Students, Research Scholars of the University in the Central Library, NEHU, Shillong held during September 17 – October 01, 2019.

### **Dr. Manoj Rana**

Participated in the (i) “*Author Workshop on Scholarly Writing & Intellectual Ethics*” for the Students, Research Scholars and Faculties of the School of Life and Physical Sciences, NEHU jointly organized by Central Library, NEHU and Elsevier, South Asia during August 2019, (Coordinator: Dr. Manoj Rana), (ii) “*Elsevier 5<sup>th</sup> South Asia eBooks Forum 2019 (Themed: Evidence & Impact: Transforming Research Through Analysis and Insights)*” organized by Elsevier, South Asia held in, Guwahati, Assam during May 21–23, 2019, (iii) “*North East Regional Training Programme on Plagiarism Detection Software (PDS) – URKUND*” organized by Central Library, NEHU in collaboration with INFLIBNET Centre, Gandhinagar on August 23, 2019.

Delivered lectures as a resource person on/ in (i) “*OER (Open Educational Resources) and Digital Library*” at a one-day Workshop on MOOCs, SWAYAM and OER for Teacher Education at (a) College of Teacher Education (PGT), organized by Department. of Education, Centre for Pre-Ser-

vice Teacher Education, NEHU, Shillong in Collaboration with College of Teacher Education (PGT), Shillong on August 21, 2019, (b) College of Teacher Education, Tura organized by Department of Education, Centre for Pre-Service Teacher Education, NEHU, Shillong in collaboration with College of Teacher Education, Tura on August 30, 2019, (c) St. Mary’s CTE, Shillong organized by Department. of Education, Centre for Pre-Service Teacher Education, NEHU, Shillong on September 06, 2019, (d) Don Dosco CTE, Tura organized by Department. of Education, Centre for Pre-Service Teacher Education, NEHU, Shillong in collaboration with Don Dosco CTE, Tura on September 16, 2019, (ii) “*Blended Learning in Teacher Education*” at a one-day National Workshop on MOOCs, SWAYAM and OER for Teacher Educational at Don Dosco CTE, Tura organized by Department. of Education, Centre for Pre-Service Teacher Education, NEHU, Shillong in collaboration with Don Dosco CTE, Tura on September 16, 2019, (iii) “*SPSS: Descriptive Statistics and Bivariate Statistics*” at the first National Workshop on Application of SPSS in ICT Integrated Educational Research at Computer Centre, NEHU organized by Department. of Education, Centre for Pre-Service Teacher Education, NEHU, Shillong during October 29 – 30, 2019, (iv) “*Open Educational Resources (OER) of Theory and Practice of Learning*” at a one-day National Workshop on Integration of Theory and Practice of Education through ICT at DIET, Rongkhon, Tura organized by Department of Education, Centre for Pre-Service Teacher Education, NEHU, Shillong in collaboration with District Institute of Education & Training (DIET), Rongkhon, Tura on November 19, 2019, (vi) “*Correlation Types*” at the second



National Workshop on Application of SPSS in ICT Integrated Educational Research at Computer Centre, NEHU organized by Department of Education, Centre for Pre-Service Teacher Education, NEHU, Shillong in collaboration with Computer Centre, NEHU during November 21-22, 2019, (vii) “On-line Publication and Publication Processes” on ten-day Research Methodology Course in Social Sciences organized by Department. of Education, Sikkim University, Gangtok at Sikkim Central University, Gangtok, Sikkim during November 18-28, 2019, (viii) “Library House-Keeping Operations (Job Diary)” conducted by the Library for the 2<sup>nd</sup> semester students of Master of Library Science & Information Science (M.LISc.), Department of Library and Information Science, NEHU, Shillong during March - May 2019, (ix) “8<sup>th</sup> Library Internship Programme” conducted by the library for the students of Department of Library and Information Science, NEHU, Shillong during July 10 – September 13, 2019, (x) *Library Orientation Programme, 2019* for the newly enrolled Students, Research Scholars of the University in the Central Library, NEHU, Shillong during September 17- October 01, 2019 (Coordinator: Dr. M. Rana).

Participated and completed the online quizzes: (i) “*Election in India*” organized by My Gov and CEO, Govt. of India on May 06, 2019, (ii) “*Assam GK*” organized by MyGov Assam, Govt. of India on May 18, 2019, (iii) “*Entrepreneurship Quiz 2019*” organized by My Gov and Ministry of Skill Development & Entrepreneurship, Govt. of India on August 21, 2019, (iv) “*Ek Bharat Shrestha Bharat (Bihar Quiz 2020)*” organized by MyGov and Ministry of Tourism, Govt. of India, on February 16, 2020. (v) “*Ek Bharat Shrestha Bharat (Haryana*

*Quiz 2020)*” organized by My Gov and Ministry of Tourism, Govt. of India on February 18, 2020, (vi) “*Ek Bharat Shrestha Bharat (Telangana Quiz 2020)*” organized by MyGov and Ministry of Tourism, Govt. of India on February 20, 2020, (vii) “*Ek Bharat Shrestha Bharat (Tripura and Mizoram Quiz 2020)*” organized by MyGov and Ministry of Tourism, Govt. of India on February 21, 2020, (viii) “*Fit India Quiz 2.0*” organized by My Gov and Ministry of Youth Affairs and Sports, Govt. of India on March 02, 2020, (ix) “*Nari Shakti Quiz*” organized by MyGov and Ministry of Women and Child Development, Govt. of India on March 05, 2020 (x) “*Quiz on Vaccines Save Lives*” organized by My Gov and Ministry of Health & Family Welfare, Govt. of India on March 06, 2020.

### **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 of Loyola College, Williamnagar, Meghalaya with assistance from Circulation Section staff during February 2020.

Participated in the “*North East Regional Training Programme on Plagiarism Detection Software (PDS) –URKUND*” organized by Central Library, NEHU in collaboration with INFLIBNET Centre, Gandhinagar on August 23, 2019.

Delivered lectures on (i) “*Library House-Keeping Operations (Job Diary)*” conducted by the Library for students of Department of Library and Information Science, NEHU, Shillong during March - May 2019, (ii) “*8<sup>th</sup> Library Internship Programme*” conducted by the library for the students of Department of Library and In-

formation Science, NEHU, Shillong during July 10- September 13, 2019, (iii) *Library Orientation Programme 2019* for the newly enrolled Students, Research Scholars of the University in the Central Library, NEHU, Shillong during September 17-October 01, 2019.

### **Shri A. Blah**

Imparted training on the *Cataloguing and Serial Modules of the Koha Open Source Integrated Library Management Software* to the Librarian of Loyola College, Williamnagar with assistance from of the staff of the Technical and Periodical Sections during February 2020.

Participated in the “North East Regional Training Programme on Plagiarism Detection Software (PDS) –URKUND” organized by Central Library, NEHU in collaboration with INFLIBNET Centre, Gandhinagar on August 23, 2019.

Delivered lectures in (i) “*Library House-Keeping Operations (Job Diary)*” conducted by the Library for students of Department of Library and Information Science, NEHU, Shillong during March - May 2019, (ii) “*8<sup>th</sup> Library Internship Programme*” conducted by the library for the students of Department of Library and Information Science, NEHU, Shillong during July 10- September 13, 2019.

Inspected (i) Tirot Sing Memorial College, Mairang, West Khasi Hills on June 24, 2019, (ii) Riwar College, Pynursla, East Khasi Hills on July 03, 2019, (iii) Shillong College, Shillong, East Khasi Hills on November 21, 2019.

### **Dr. B. Sten**

Participated in the “North East Regional Training Programme on Plagiarism De-

tection Software (PDS) –URKUND” organized by Central Library, NEHU in collaboration with INFLIBNET Centre, Gandhinagar on August 23, 2019.

Extended expert advice/training/ installation of (i) on aspects of library automation/ Integrated Library Management Software – Koha and Local Area Network (LAN) in libraries of Loyola College, Williamnagar during October 2019, (ii) Koha Integrated Library Software including setup of Local Area Network (LAN) at Shillong Commerce College, Shillong, during March, 2020, (iii) Dspace digital library software with LAN Setup at John Roberts Theological Seminary (JRTS), Mawklot, Meghalaya during June, 2019, (iv) on system administrative including data backup and the other modules of the software for the Librarians of Loyola College, Williamnagar & Shillong Commerce College, Shillong at the Central Library, NEHU during February, 2020 and March, 2020, respectively, (v) on digitization viz. Scanning, creating metadata & upload the digitized documents at the DSpace digital repository to the Librarian, John Roberts Theological Seminary (JRTS), Mawklot, Meghalaya in the Digitization Lab, at NEHU, Central Library with assistance from the staff of the section.

Delivered lectures in (i) “*Library House-Keeping Operations (Job Diary)*” conducted by the Library for students of Department of Library and Information Science, NEHU, Shillong during March - May 2019, (ii) “*8<sup>th</sup> Library Internship Programme*” conducted by the library for the students of Department of Library and Information Science, NEHU, Shillong during July 10- September 13, 2019.

Member of the University Court represent-

ing as General Secretary, Non-Teaching Staff Association, NEHU, Shillong.

Inspected Shillong College, Shillong, East Khasi Hills during February, 2020.

### **Achievement**

NEHU was awarded the “*Library Awards 2019*” for the highest usage of Wiley Journals eSS Collection 908 titles (Tier3) for

the year 2019. Dr. F. R. Sumer received the award on behalf of NEHU during the 3<sup>rd</sup> season of Wiley Library Awards 2019 held in New Delhi on December 16, 2019.

Dr Manoj Rana received “*Future Learn Award*” for “*An Introduction to Coding and Design*” offered by University of Leeds on February 21, 2020.

# CENTRAL LIBRARY (TURA CAMPUS)

**Assistant Librarian** : Dr. A. J. Singh  
**Telephone** : +919402196926 (M)  
**E-mail** : libtura@gmail.com

## Brief Statement of Activities

During 2019-2020, the Campus Library achieved outstanding progress in terms of its collection. The Library continued to offer services like Reference, Circulation, Bibliography Services, Reprography, OPAC, online access to e-journals & databases and internet browsing facilities to the students, research scholars, faculty members and non-teaching staff of the Campus.

The Annual Report of NEHU, Tura Campus Library for the year 2019-2020 is furnished below: -

### 1. Budget Allocation of Books & Periodicals 2019-2020 (Non-Plan) .....Rs. 14.50 lakhs

- i) Book Grant  
= Rs. 4.10 Lacs
- ii) Periodicals Subscription  
= Rs. 9.20 Lacs
- iii) Library Stationery and Others  
= Rs. 1.20 lacs

### 2. Collection Development.

- a) Total Book collection up to 31.03.2020 = **28806 Vols.**
- i) Books on Purchase  
= 28021 Vols.
- ii) Books on Gift  
= 785 Vols.

- b) Books Added during the year (2019-2020) = **255 Vols.**
- i) Purchased Books  
= 251 Vols.
- ii) Gifted Books  
= 04 Vols.
- c) No. of Journals Subscribed (2019 ) = **89**

- i) Indian Journals  
= 71
- ii) Foreign Journals  
= 18

### 3. Library Membership Statistics (2019-2020) = **617 Members**

- i) Students of 10 (Ten) PG Department = 477Members
- ii) M.Phil. / Ph.D. Scholars  
= 63 Members
- iii) Faculty Members  
= 41 Members
- iv) Guest Lecturers  
= 13 Members
- v) Non-Teaching Staff  
= 23 Members

### 4. Library Circulation Statistics (2019-2020)

- i) Books Issued  
= 6087 Vols.

ii) Books Returned  
= 6060 Vols.

iii) Books Consulted  
= 18,404 Vols.

**5. Statistics of Technical and Library Automation Unit**

i) Books Classified (2019-2020)  
= 255 Vols.

ii) Books Added in the Database & Barcoded = 255 Vols.

**6. Statistics of Reprography Units (2019-2020)**

i) Total no. of Xerox Exposure Provided = 37653 exposures

**7. Revenue Collected during 2019-2020**

i) Reprography Services  
= Rs. 23,447/-

ii) Overdue Fine  
= Rs. 6,590/-

**8. Activities by Library Staff.**

i) Library is using KOHA library software for its computerised housekeeping op-

erations. All the books are in the Computer processed database and they are available on OPAC and on Web-OPAC.

ii) Three days staff training on KOHA library software was held during October 15-17, 2019.

iii) Library provided orientation to the new students on the use of OPAC and introduced the library resources (Print & Electronic) to them.

iv) The library is using smart card for issue and return (Circulation) for the Students.

NEHU, Tura Campus Library is not only rendering services to its academic user communities but also providing Library services to the neighbouring colleges of Garo Hills district. NEHU Tura Campus Library always maintain its standard in regards to providing quality services to students, research scholars, faculty members and non-teaching staff members and aims to further advance the academic functioning of NEHU, Tura Campus, Tura.

# COMPUTER CENTRE

**Head (In-Charge)** : Prof. Mangal C. Mahato

**Telephone** : 0364-2723751/272 3759

**E-mail** : hodcc@nehu.ac.in

## Infrastructure Facilities

### High Performance Cluster Computer

SULEKOR-Dell Cluster has been in use by the University community primarily by Research Scholars from the Department of Chemistry, Physics, Bio-Chemistry, Biotechnology and BSSS. This system is available to the user 24x7. The SULEKOR has primarily users for Fortran, Gromacs and Gaussian.

### SULEKOR-HP High Performance Cluster Computer

SULEKOR-HP Cluster was reinstalled w.e.f. June'2016. It has been in use by the University community primarily by Research Scholars from the Department of Physics, Zoology and BSSS. This system is also available to the user 24x7. The SULEKOR-HP has primarily users for Fortran, and BLAST.

- 25 Desktop PCs (Linux)

All these Desktop PCs are connected on a LAN with NEHU internet facility.

- 25 Desktop PCs (Windows)

All these Desktop PCs are also connected on LAN with NEHU internet facility.

## Services Provided

Providing High Performance Computing facility (24 x 7) to faculty members, research scholars and students of the University, conducting short-term courses in

computer related subjects, and Supporting ICT/ UMS related automation activities of the University.

## Brief Statement of Academic/Other Activities

Research Scholars and Teachers/non-teaching staff from various Departments/Centres utilize the facilities of the Centre for computational work, documentation and internet facility.

Short Term Courses are conducted throughout the year and they are as follows:

- i)C Programming
- ii)Java Programming
- iii)Windows & MS-Office.
- iii)Computer Hardware & Networking

Support/Helpdesk to the online admission process conducted by the university and also provides the applicants of various University programmes to fill up the online forms every year.

Imparts support in ICT related activities to the 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.

Two days Workshop on Office Automation was organized by IQAC and Computer Centre in which 17 persons participated during May 09-10, 2019.

## Student Intake (Short Term Courses)

Enrolment capacity : 80

Programmes	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
Windows & MS-Office	05	04	-	08	-	01	09	-	09
C Programming	01	01	-	-	01	01	02	-	02

## Publications (Using HPCC facilities):

1. Laklita, P., Shukla, H., Das, K. C., Tripathi, T. (2019). Conserved Arg451 residue is critical for maintaining the stability and activity of thioredoxin glutathione reductase. *Archives of Biochemistry and Biophysics*, 674: 108098. <https://doi.org/10.1016/j.abb.2019.108098>
2. Ram, M., Saxena, A., Aly, A. E., Shankar, A. (2019). Study of half metallicity, structural and mechanical properties in inverse Heusler alloy  $Mn_2Zn_{(1-x)}Ge_x$  and a super lattice. *RSC Adv.*, 9:36680 – 36689. <https://doi.org/10.1039/C9RA06903H>
3. Bhattarai, S., Sutradhar, D., Chandra, A. K., Zeegers-Huyskens, T. (2020). A theoretical investigation of the interaction between substituted pyridines and  $CS_2$ . Versatility of the  $CS_2$  molecule. *Journal of Molecular Structure*, 1202: 127309. <https://doi.org/10.1016/j.molstruc.2019.127309>
4. Baidya, B., Lily, M., Chandra, A. K. (2019). Kinetics of Reactions of  $CH_2F_2CF_2CH_2OH$  with Cl Atoms and  $CHF_2CF_2CHO$  with OH Radicals and Atmospheric Degradation Pathways of  $CHF_2CF_2CH_2OH$ : A Theoretical Investigation. *Chemistry Select*, 4(24): 7134-7143. <https://doi.org/10.1002/slct.201901571>
5. Rohman, M. A., Sutradhar, D., Bangal, P. R., Chandra, A. K., Mitra, S. (2019). Excited State Decay Dynamics in 3-Formyl-4-hydroxy Benzoic Acid: Understanding the Global Picture of an ESIPT-Driven Multiple-Emissive Species. *Chemistry Select*, 4 (22):6702 - 6712. <https://doi.org/10.1002/slct.201901570>

## Workshop Organized

First National Workshop on “Applications of SPSS in ICT Integrated Educational Research” organized by Department of Education’s Centre for Pre-Service Teacher Education (NEHU) under the MHRD Scheme of Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PM-MMNMTT) at Computer Centre during October 29-30, 2019.



# DEEN DAYAL UPADHYAYA COMMUNITY COLLEGE FOR SKILL DEVELOPMENT (WAHIAJER, WEST JAINTIA HILLS DISTRICT, JOWAI)

**Principal (In-charge)** : Prof. Henry Lamin  
**Telephone:** :0364-2721008/1009 (O)/ 9436103856 (M)  
**E-mail:** : henrylamin30492@gmail.com

## Objectives of the Community Colleges

The main objectives of the Community College are (i) to integrate relevant skills into the higher education system in order to make higher education relevant to the learner and the community, (ii) to provide employable and certifiable skills based on National Occupational Standards (NOSs) with necessary general education to Senior Secondary School pass-outs, with general education and /or vocational education background, (iii) to provide for up-gradation and certification of traditional / acquired skills of the learners irrespective of their age, (iv) to provide opportunities for community-based life-long learning by offering courses of general interest to the community for personal development and interest, (v) to provide opportunity for vertical mobility to move to higher education

in future, and (vi) to offer bridge courses to certificate holders of general / vocational education, so as to bring them at par with appropriate NSQF level.

**Academic Activities:** The Centre is currently running one programme, viz. Medical Laboratory Technology. There are 35 students in the programme. This programme has been approved by the UGC on July 30, 2019; name of the programme is a Certificate Course. Other programmes have been sensitised to the youths for better understanding like Welding and Fabrication, Plumbing, Electrical Wiring and Food Processing. UGC have approved these programmes on the August 01, 2018. At present only Medical Laboratory Technology (MLT) certificate course has been offered in the year 2019-2020.

## Enrolment Capacity: MLT – 35 (Certificate Course)

Certificate Course	Male	Female	SC	ST	OBC	GEN	Meghalaya	Non-Meghalaya	Total
MLT	02	33	-	35	-	-	35	-	35

## Courses Conducted: Medical Laboratory Technology

### Programmes conducted for sensitisation:

1. Welding and Fabrication
2. Plumbing
3. Electrical Wiring
4. Food Processing.

## DESIGN INNOVATION CENTRE

**Director** : Prof. R. N. Sharan  
**Telephone** : 0364-2722121(O)/+91-94361-04164  
**E-mail** : [director.dic@nehu.ac.in](mailto:director.dic@nehu.ac.in)/[dic@nehu.ac.in](mailto:dic@nehu.ac.in); [rnsharan@nehu.ac.in](mailto:rnsharan@nehu.ac.in)

The Design Innovation Centre (DIC) was set up in North-Eastern Hill University (NEHU) to inculcate thinking of innovation and design in the minds of young students and researches, including members of the faculty. Appropriate activities have been initiated in all spheres of academic disciplines at NEHU in a multi-disciplinary mode. DIC, NEHU has a unique distinction of attracting a very large number of female students in the programme. In addition, all units at the Hub, Dept. of Cultural & Creative Studies, Dept. of Architecture and Department of Biomedical Engineering involve local artisans and grass-root workers/teachers in all their programmes and Workshops spreading the message of the DIC initiative to the society. Diverse disciplines such as, Biochemistry, Cultural & Creative Studies, Architecture, and Biomedical Engineering are among the others participat-

ing in the programme besides the expected modern and contemporary disciplines such as, IT, ECE, IoT, among others. All these innovative discourses are gaining significant popularity, strength and momentum at DIC, NEHU.

### The HUB

- a) Dept. of Cultural & Creative Studies(DCCS),NEHU, Shillong
- b) Dept. of Architecture (DA), NEHU, Shillong
- c) Dept. of Biomedical Engineering (DBME), NEHU, Shillong

### The SPOKES

- a) Indian Institute of Information Technology (IIIT), Guwahati
- b) St. Anthony's College (SMC), Shillong
- c) St. Mary's College (SAC), Shillong

### Courses under offer at DIC (Hub and Spoke):

Sl. No.	Name of the University/ Institution	Courses details
1	Dept. of Cultural & Creative Studies (DCCS), NEHU (Hub-1)	(i) Modeling and material behavior (ii) Experimental mechanism (Interior/Exterior)
2	Dept. of Architecture (DA), NEHU (Hub-2)	(i) Traditional product design proto typing (ii) Sustainable design component (Interior/Exterior)
3	Dept. of Biomedical Engineering (DBME), NEHU (Hub-3)	(i) DIC Course in Biomedical Engineering - Course I (ii) DIC Course in Biomedical Engineering - Course II
4	Indian Institute of Information Technology (IIIT), Guwahati (Spoke-1)	(i) Design of Internet of Things (ii) System on chip with Internet of Things Application
5	St. Anthony's College (SAC), Shillong, (Spoke-2)	(i) Product Design (ii) Protocol/Business model design
6	St. Mary's College (SMC), Shillong (Spoke-3)	(i) Culinary Art: Design and Innovation of Indigenous and Traditional Food (ii) Innovation design of the Domestic Waste Management: A Tool for Health promotion

### Enrolment of Students:

Students enrolled in

DIC Courses - 315

### Activities:

Number of Patents Filed - 1

Number of Innovative Products Delivered/Improved/Initiated - 10

Number of Workshops Held - 11

### New Initiative:

The Pavillion – An open Workshop to engage the public in the creation of products made from the recycle waste materials.

### Achievements:

**Project 1:** A novel “Cancer prognostic device” for clinical use (Indian patent application # 10193 of June 12, 2019; International PCT/IN2019/050449: June 12, 2019; International Search Report (ISR) of August 27, 2019 granted: “AAA” grade on the prior art)

**Project 2:** Stream Water Filtration, using bamboo as main components for source water collection and filtration for household use

**Project 3:** Emergency Rescue Shelter designed out of Bamboo

## EQUAL OPPORTUNITY CELL

**Assistant Registrar** : Ms. Georgina Umdor

**Telephone** : 0364 2721087(O)

**Email** : gumdor@nehu.ac.in

### **Brief Statement of Activities**

The Cell deals with matters pertaining to implementation of Government of India Orders, UGC Guidelines and other in-

structions issued from time to time on the subject of reservation, etc. in co-ordination with Establishment I & II Sections and Office of the Dean of Students' Welfare of the University.

### **Admission to various courses/degrees for the year 2019-2020:**

Course/Degree	Total Seats Sanctioned	Categories of Seats Filled					Total Filled	Vacant
		SC	ST	OBC	PWD	GEN		
U.G.	1532	88	580	25	-	382	1075	457
P.G.	2834	32	2258	40	08	391	2729	105
M.Phil.	Variable	01	25	05	-	13	44	—
Ph.D.	Variable	51	534	53	01	298	937	—
Cert./Dip.	Variable	06	145	07	01	63	222	—

## HEALTH CENTRE

<b>In-Charge</b>	<b>: Dr. M. B. G. Momin, Senior Medical Officer</b>
<b>Telephone</b>	<b>: 0364-2721705</b>
<b>Staff</b>	
<b>Shillong Campus</b>	
<b>Chief Medical Officers</b>	<b>: Dr. M. Marwein &amp; Dr. C. Mukhim</b>
<b>Staff Nurses</b>	<b>: One (Regular) and one (on contract)</b>
<b>Physiotherapist</b>	<b>: One (on contract)</b>
<b>Pharmacist</b>	<b>: One</b>
<b>Laboratory Technician</b>	<b>: One</b>
<b>Laboratory Assistant</b>	<b>: One (on contract)</b>

**Other Staff :** Two office staff, one MTS (on daily wage basis), two Receptionists (one regular and one on contract); One Dresser (on contract); one Data entry operator (on contract), one female medical attendant (on contract)

### **Facilities Available in the Health Centre**

**Consultation:** The Medical Officers are available for consultations at fixed hours as well as for emergency consultation beyond duty hours.

**Pharmacy:** The required medicines are purchased from the wholesale suppliers and kept in the pharmacy for issue 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 analysis are performed in the Health Centre Laboratory.

**Observation Room:** In the observation room, moderately sick patients are administered I. V. drips etc.

**Referral :** Patients requiring in-patient treatment are referred to the hospitals/ specialists within Shillong and thereafter outside Shillong depending upon the necessity.

**Ambulance:** Ambulance service is provided during emergency for transporting the severely sick patients from residence to Clinic/Hospitals.

**Emergency Duty:** The Resident Medical Officers and resident nurse in campus are doing emergency duty and attend to medical calls; outside duty hours whenever needed.

**Credit Billing Facility:** This facility is available for patients admitted to Nazareth and KJP Synod Robert's Hospitals in Shillong and CMC Hospital, Vellore (Tamil Nadu).

**First Aid:** First aid service is provided at various sport tournaments organized by the University.

**Physiotherapy:** This facility is available for the staff and their family members of the university.

**Medical camp:** Free medical camps like Bone Mineral Density, Eye checkup, Diabetes and Blood donation camps are held at the Health Centre from time to time.

## HINDI CELL

**Hindi Officer** : Shri Rajendra K. Ram  
**Telephone** : 0364-2721331(O)  
**E-mail** : 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 also constituted in the University for implementing, reviewing and monitoring the Rajbhasha Policy.

### Activities

The following activities were organized by the cell:

- Hindi Training Programme for the employees of the University was conducted under the aegis of the Government of India, Hindi Teaching Scheme, Shillong Centre
- Organization of different courses, i.e. *Prabodh*, *Praveen* and *Pragya*
- Hindi Divas at Shillong campus

during September 2019, in which several Hindi competitions, viz. Hindi extempore speech, Hindi essay writing, poem recitation and Hindi antakshari were conducted.

- Two-day Rajbhasha National Seminar in collaboration with Oil India Limited, Duliajan Assam during October 18-19, 2019
- Matribhasha Divas on February 21, 2020 in collaboration with Sindhi Bhasha Vikas Parishad, Ministry of Human Resources Department, New Delhi.

### Publication:

Annual-in-House Magazine  
'NEHU JYOTI' in Hindi, 3rd Edition

# INCUBATION CENTRE

**Chairman** : Prof. S. R. Rao  
**Telephone** : 0364- 2722404  
**E-mail** : sr Rao22@yahoo.com

The objective of the Incubation Centre (IC) is to provide an ecosystem for start-ups, to offer guidance, mentoring, physical space and network for funding and value-based collaboration for incubation of novel ideas.

The IC Management Committee started its activities on August 28, 2019. Shri Ramdas Athawale, Hon'ble Minister of State for Social Justice and Empowerment, Government of India formally inaugurated the IC NEHU by unveiling the plaque on August 28, 2019. Later Dr. Ramesh Pokhriyal 'Nishank', Hon'ble Minister of Human Resources Development, Government of India during his visit to the campus e-launched the proposed programmes of the Incubation Centre on February 14, 2020. The Centre is dedicated to promote entrepreneurship for the benefit of faculty, students and research scholars of NEHU.

## Focus Areas

The focus areas are: Agriculture; Biodiversity; Healthcare; Livelihood; Waste Management; Enabling Differently-abled etc.

## Activities

- A team of IC-NEHU visited the Innovation Park - Assam Startup at Guwahati, supported by Department of Industries & Commerce, Government of Assam on December 14, 2019. The possibility of signing an MOU was discussed.
- Members of IC-NEHU had an interactive session with Prof. S. Sanyal, CEO-IIM Calcutta Innovation Park, IIM Campus on September 28, 2019.
- Entrepreneurship Tinkering Program was organized with Karmyo Foundation in collaboration with Shillong Chapter, ISCA, Kolkata on November 16, 2019.



## INTERNAL COMPLAINTS COMMITTEE (ICC)

The Internal Complaints Committee (ICC) was formed according to the provisions of “The Sexual Harassment of Women” at Workplace Act, 2013. This Act seeks to provide protection against harassment of women at the workplace including prevention and redressal of complaints of sexual harassment. The ICC of NEHU was adopted in 2018 as an obligation under the Act and is committed to providing a safe environment to students and women employees. The Committee seeks to ensure fulfilment of the following objectives:

- To foster a safe and secure environment for protection of women from any act of sexual harassment at the workplace;
- To implement a policy for prevention of sexual harassment at the workplace;
- To devise a redressal mechanism for complaints relating to sexual harassment at the workplace;
- To raise awareness about sexual harassment and other gender-related issues.

### Members of the Internal Complaints Committee, Shillong Campus

Sl. No.	Name	Designation
1.	Prof. Ibadani S. Syiem, Department. of Education, NEHU, Shillong	Presiding Officer
2.	Prof. S. Umdor, Dean Student’s Welfare, NEHU, Shillong	Member
3.	Prof. Geetika Ranjan, Department of Anthropology, NEHU, Shillong	Member
4.	Dr. (Ms.) Begonia Dkhar, Scientific Officer, SAIF, NEHU, Shillong	Member
5.	Ms. F. Cajee, Technical Officer, UMS, NEHU, Shillong	Member
6.	Ms. Tshering Yangi, Senior Advocate The Shillong Bar Association, Shillong	Member
7.	Ms. Patricia Mary Hodge, Department of English, NEHU, Shillong	Member (Student Representative)
8.	Ms. Deigratia Dkhar Tmar, Department of Sociology, NEHU, Shillong	Member (Student Representative)
9.	Ms. Christine Ch. Momin, Department of Law, NEHU, Shillong	Member (Student Representative)

### Members of the Internal Complaints Committee, ICC Tura Campus

Sl.No.	Name	Designation
1.	Prof. B. M Jyrwa, Department of Physics, NEHU, Shillong	Presiding Officer
2.	Dr. (Mrs.) J. R. Marak, Department of Garo, NEHU, Tura	Member
3.	Dr. (Mrs.) L. K. Gracy, Department of English, NEHU, Tura	Member
4.	Mrs. Sabdoka D. Sangma, MTS, NEHU, Tura	Member
5.	Mr. L. M. Marak, UDC, NEHU, Tura	Member
6.	Mr. Pharmenach C. Marak, Department of English NEHU, Tura	Member (Student Representative)
7.	Ms. Brenda D. Marak, Department of Management NEHU, Tura	Member (Student Representative)
8.	Ms. Tengsil G. Marak, Department of Computer Applications NEHU, Tura	Member (Student Representative)
9.	Mrs. Balsa B. Sangma, President Mother's Union, Tura	Member
10.	Ms. Gomati Sharma, Advocate DC Court, Tura	Member

Institutional mechanism for transparency, timely redressal of student grievances, Prevention of sexual harassment and ragging cases during the year		
Total grievances received	Number of grievances redressed	Average number of days for grievance redressal
NIL	NA	NA

## INTERNAL QUALITY ASSURANCE CELL (IQAC)

**Director** : Prof. Purusottam Nayak

**Telephone** : 0364-2721070/1080(O); 9436111308 (M)

**E-mail** : directoriqac@nehu.ac.in

The IQAC is meant for planning, guiding and monitoring quality assurance and its enhancement. The cell performs necessary activities for achievement of the afore-mentioned objectives. It also aims at systematizing efforts and measures of the University towards its academic and overall excellence. The IQAC has organized the following activities in the line of the objectives of the cell:

- On May 24, 2019 Sixth IQAC meeting was convened to discuss on matters related to the new AQAR format devised by NAAC, Bengaluru and its adoption in NEHU for monitoring quality enhancement of the University;
- IQAC collected required information from various Departments/ Centers/ Administrative Sections

of the University for preparation of the Annual Quality Assurance Reports for the academic periods 2017-18 and 2018-19 as per the new format for submission to NAAC, Bengaluru;

- One-day workshop on “Quality Assurance under UGC Regulations 2018: Direct Recruitment and CAS Promotion” was organized on June 20, 2019 at Tura in collaboration with Department of Management, Tura Campus;
- One-day workshop on “UGC Regulations 2018: Issues and Concerns” was organized by NEHUTA on June 24, 2019;
- Two-day workshop on “Office Automation” was organized on August 08-09, 2019 for the Non-Teaching staff of the University.

## NATIONAL SERVICE SCHEME (NSS) CELL

**Programme Coordinator** : Dr. Deigracia Nongkynrih  
**Telephone** : 0364-2721151 (Fax)/ 2721152/ 2721153.  
**E-mail** : nss.nehu@gmail.com

### Objective

The objective of the National Service Scheme (NSS) is to utilize the free time of Colleges/University students for socially productive works. An important feature of the NSS is that the student volunteers themselves organize its programmes, under the guidance of the Programme Officers. The work undertaken by the NSS units involve Regular Activities and Special Camping. The volunteer strength has increased to 21567 comprising volunteers from 2 PG units, 40 colleges and 2 Medical institutes with 91 NSS Programme Officers in the last one year.

### Meetings Attended / Organized

- The NSS Cell NEHU organized a review meeting for the programme Officers at NEHU on June 07, 2019,
- Programme Coordinator and Programme Organizer attended the State Advisory Committee meeting at office of the DERT, Shillong on August 20, 2019,
- Programme Organizer attended the NSS Programme Coordinator Review meeting held at the Conference Hall, DSEL, Shillong on November 15, 2019.

### Blood Donation

- Four blood donation camps were organized with the cooperation of 119 NSS volunteers in collaboration with the Meghalaya AIDS Control Society (MACS), State Blood Transfusion Council

(SBTC) and Pasteur Institute, Nazareth Hospital, NEIGRIHMS and Tura Civil Hospital.

- An Awareness programme on blood donation was organized on April 24, 2019 at Don Bosco College, Tura in collaboration with blood bank Tura Civil Hospital, Tura.

### Republic Day Parade Camp

- Selection Camp for Pre Republic-Day Parade was conducted on September 06, 2019 for volunteers from various colleges of NEHU along with volunteers from ICFAI University, Martin Luther Christian University and William Carey University participated.

### Special Camps held under the Theme “Healthy Youth for Healthy India”

- Shillong College, Shillong at Nongkyn-dah village and Lyngkhong Village.
- Kiang Nangbah Government College, Jowai at Kudengrim village.
- Jaintia Eastern College, Khliehriat at Suchen Rim village.
- Lady Keane College, Shillong at Subakalai-Laitsohpliah village.
- Sohra Government College, Sohra at Mawkalang and Nongtraw village.
- Durama College, Tura at Chandigre village.
- St. Anthony’s College, Shillong at Lumsohpieng village.

- Ri-Bhoi College, Nongpoh at Umskun village.
- NSS NEHU, Unit, Shillong at Mawkneng Village.
- Phukan Memorial College, Dalu at Magupara village.
- Nabon Women's Synod College, Shillong at Umjathang village.
- Thomas Jones Synod College, Jowai at Sohphoh and LumpyrtuhMihmyntdu village.
- Mawsynram Border Area College, at Laitsohum village.
- Nongtalang College, Nongtalang at Amutong village.
- Women's College, Shillong at Mawdwar village.
- Union Christian College, Umiam at Mawlyndep village.
- Synod College, Shillong at Umdihar village.
- Umshyrpi College, Shillong at Kyrdemkulai village.
- Mawlai Presbyterian College at Laitmawroh village.
- Don Bosco College, Tura at Babadam village.
- St. Edmund's College, Shillong at Um-pohwin village.
- Loyola College, Williamnagar at Mandalgre village.
- St. Anthony's College extension, Byndihati at Lumshken village.
- Acheng Rangmanpa College, Mahendraganj at Chapahati village.

Major activities undertaken during these camps included 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. We are grateful to the DMHO's of the different districts and to Bansara Eye Care Centre, Shillong for their support.

#### **Workshops/Trainings/Orientations/ Seminars attended**

- Sensitization Workshops for Poll Volunteers was held at the State Head Quarters of Bharat Scouts & Guides, Shillong on April 03, 2019.
- Sensitization Workshops for Poll Volunteers was held at Tura on April 05, 2019.
- Mr. Badonbok Paliar and Mr. Sumeet Aggarwal, Ex-NSS volunteers of NSS Unit, NEHU, Shillong attended a two-day Training of Trainers on substance use prevention at IIE, Guwahati organized by National Institute of Rural Development during August 05-06, 2019.
- 27 NSS Programme Officers from various colleges of NEHU attended a 3-day Training of Trainers on Conflict Resolution and Peace Building organized by RGNIYD, Sripurumbudur and hosted by NEHU at the New Guest, NEHU during August 05-07, 2019.
- NSS Orientation program by the NSS unit, Ri-Bhoi College for the newly enrolled NSS volunteers on September 12, 2019.

- Workshop on “Gender Sensitization and Legal Awareness” in collaboration with the RUSA Institutional Committee and IQAC of Tura Government College on September 13, 2019.
- Poshan Abhijan (Nutrition Month) Seminar observed on September 16, 2019 by Acheng Rangmanpa College NSS unit, Mahendraganj.
- Three-day workshop on “Leadership and Team Building” at Youth Hostel, Shillong organized by RGNIYD, Chandigarh on September 19-21, 2019 where volunteers from Sohra Government College, Lady Keane, Don Bosco, St. Edmund’s College and NSS Unit, NEHU, Shillong attended.
- Poshan Abhiyan was observed by organizing a street play, seminar and an awareness programme by the NSS unit of Mawsynram Border Area College at the adopted village (Laitsohum Village).
- Five-day capacity building of youth on leadership and personality development through Life Skills on November 04 - 08, 2019 was organized by the NSS unit of Don Bosco College, Tura.
- Orientation session for new volunteers of Synod College was organized at the college campus on November 01, 2019.
- The NSS unit of Thomas Jones Synod College, Jowai organized a five-day Capacity building of Youth on Leadership and Personality Development through Life Skills at the college campus during January 13-17, 2020. 50 volunteers from different colleges of Garo Hills attended the same.
- 14 NSS volunteers from BBS and Shillong College, Shillong attended the In-

ter College Camp on Leadership and Personality Development organized by ICFAI University at KJP Assembly Guest House Auditorium during January 28-February 21, 2020.

### **NSS Day**

The NSS Cell, NEHU observed the 50th NSS Foundation Day on September 24, 2019 at Multi-Use Convention Hall, NEHU Campus, Shillong, which was attended by 600 NSS volunteers from 38 colleges. The programme was graced by Major General Bipin Bakshi, VSM, Additional Director General, NCC Directorate, North Eastern Region, Shillong as the Chief Guest and Registrar, NEHU as the Guest of Honour. Fifty saplings were also planted in the campus at the initiative and in the presence of Hon’ble Vice Chancellor, NEHU. On that occasion, the University Level NSS Awards for Best Unit, Programme Officer and Best Volunteers were announced. The Best NSS Unit Awards were presented to Lady Keane College, Shillong, Thomas Jones Synod College, Jowai and Union Christian College, Umsaw Khwan. The Best Programme Officer Award was presented to Mrs. Amina Marbanian, Shillong College, Shillong and the Best NSS Volunteer Awards were presented to Mr. Shembha Lamare, Jaintia Eastern College, Khliehriat, Mr. H. Samborlang Thabah, Shillong College, Shillong, Mr. Hame-U-Ri-Soo-KiniBareh, Jaintia Eastern College, Khliehriat and Mr. Badonbok Tohtih, NSS Unit, NEHU, Shillong. These awardees were selected on the basis of their committed and effective participation in community service.

### **.Cleaning Drive**

- Clean NEHU Campaign Rally was organized jointly by Rotaract, NEHU-

SU and NSS Unit, NEHU, Shillong at NEHU Campus on May 01, 2019 which marked the participation of 122 volunteers of NSS Unit, NEHU, Shillong. Pro-Vice-Chancellor, NEHU flagged off the rally and the Registrar, NEHU graced as the Chief Guest in the second session of the event at Multi-use Convention Hall.

- World Environment Day was celebrated on June 05, 2019, by organizing varied programmes such as tree plantation, campus-cleaning drives etc. by various units at their respective campuses.
- Cleaning Drive organized along the National Highway from Umshyrpi Bridge to 101 Area, Shillong on August 12, 2019 by 100 NSS volunteers from St. Edmund's College, Nabon Women's Synod College and St. Anthony's College, Shillong.
- Cleaning Drive organized by the NSS Unit of Ri-Bhoi College, Nongpoh on August 10, 2019, in and around the College Campus by 230 volunteers as part of the preparation to celebrate the 73<sup>rd</sup> Independence Day of the Nation and the 64<sup>th</sup> Foundation Day of the College on August 15, 2019.
- Swachhta Pakhwada was observed during August 01-15, 2019 by several NSS units.
- 150th Birth Anniversary of Mahatma Gandhi was observed on August 30, 2019 by the NSS unit, Ri-Bhoi College, where 50 tree saplings were planted by 50 NSS volunteers along with the program officers on Guwahati, Shillong road at Saiden, Nongpoh.
- Cleaning Drive programme at Umiam Lake View Point on November 07, 2019 was organized by 100 NSS volunteers along with staff of NSS unit of Union Christian College, UmsawKhwan.

- Cleaning Drive at Lad Nongkrem and Smit area on November 08, 2019 was organized by 60 NSS volunteers from the NSS unit of Synod College, on the following day of the Annual Nongkrem Dance Festival.

### **Other Activities**

- Approximately 150 NSS volunteers participated as Poll volunteers in the Lok Sabha Election in all districts of Meghalaya on April 23, 2019.
- In observance of World No Tobacco Day NSS units conducted programmes at their respective campuses on May 31, 2019.
- In observance of International Day of Yoga, various institutions conducted varied programmes at their respective campuses on June 21, 2019.
- 152 NSS volunteers from different colleges of NEHU served as poll volunteers during the Lok Sabha Elections on April 2019 and were awarded Certificates of Commendation by the Chief Electoral Officer, Meghalaya
- International Day against Drug Abuse & Illicit Trafficking was observed on June 26, 2019 by various Units by organizing a variety of programmes at their respective campuses.
- Block Level Campaign against Tobacco use, Drugs misuse and Depression, on the theme "Protecting the youth and Promoting Welfare of each one" organized by the National Health Mission, Government of Meghalaya on July 05, 2019, was attended by volunteers from the NSS Unit, Ri-Bhoi College, Nongpoh.
- Poster Campaign and Slogan Writing on the occasion of "The World Population Day", was organized on July 11, 2019 by the NSS unit of the Ri-Bhoi Col-



lege, Nongpoh in collaboration with the Women's Cell, Ri-Bhoi College, Nongpoh to create awareness on the issue of population and resources.

- Jal Shakti Abhiyan was organized by the NSS unit of Jaintia Eastern College, Khliehriat on July 25, 2019 as an awareness cum demonstration programme on water conservation practices for the residents of at the community hall, Khliehriat.
- Free Medical/Health Camp was organized on July 27, 2019 by the NSS unit of Shillong Commerce College at their adopted village of Umphrew for the village resident where 132 residents availed of the services.
- Platinum Jubilee Celebrations of The Shillong Times, on the theme of environment, on August 09, 2019, was graced by 60 NSS volunteers of St. Anthony's College, NSS Unit.
- Jal Shakti Abhiyan was observed by 50 students from Loyola and Williamnagar Government College on August 20, 2019 to undertake intensive afforestation programme at Norek, East Garo Hills.
- Jal Shakti Abhiyan and Intensive Afforestation Programme at Jongksha were organized by 260 NSS volunteers from Shillong College and St. Dominic's College along with NSS Cell, NEHU on August 27, 2019 in the collaboration with NCC, NYK, Forest Department and the Village Durbar.
- Independence Day was observed on 15<sup>th</sup> August. About 2000 saplings were planted.
- International Youth Day was observed by NSS unit of Kiang Nangbah Government on August 28, 2019. Activities include awareness programme on HIV and AIDS by Dr. P. Shylla of Jowai Civil Hospital, poster campaign on HIV and Aids at Jowai Polytechnic on August 28,

2019. Bosco Pnar, debate and extempore speech, essay writing and basketball competition. Prizes were given to the winners

- One-day Awareness programme on "Drug Abuse" on August 28, 2019 by 400 NSS volunteers from the NSS unit of Tura Government College, Tura along with other students attended the programme.
- Motor Vehicle Act and Road Safety Programme for students was organized by NSS unit of Tura Government College, Tura at the college auditorium on August 29, 2019.
- Fit India Movement initiative was organized by the NSS unit of Lady Keane College and Don Bosco College, Tura on August 29, 2019.
- Mock Drill was organized by the Disaster Management Cell and the NSS unit of the Kiang Nangbah Government College. Training was given to the volunteers on how to administer first aid during a disaster like earthquake or any other calamity.
- Digital Programme was organized by NSS unit of Union Christian College, Umsaw Khwan for the students at the college campus during September 16-20, 2019.
- Children's Day was organized by the NSS unit of Union Christian College on November 14, 2019. A Talent Show competition for school children was a special programme of the day.
- Constitution Day was observed by Several NSS units at their respective institutions by organizing various programmes on November 26, 2019.
- Road Safety Week was observed on January 11, 2020 by various NSS units.

## NEHU DATA AND VOICE NETWORK (NDVN)

**Administrative In-Charge** : Prof. A. K. Chandra  
**Telephone** : 272-6195, 272-6196, 272-6197 and 255-1297  
**E-mail** : admin@nehu.ac.in & ndvn@nehu.ac.in

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 to all academic and administrative departments, centre, service facilities along with hostels and residential quarters.

### Facility & Services

#### A. The WIFI project of the MeitY - MHRD

1. The WIFI project of the MeitY - MHRD through ERNET is fully operational with more than 6000 registered users with LDAP authentication. The following are the major components of the Network

Sl. No.	Description	Quantity
1	Core Switch - Cisco Nexus 7000, N7K-C7010 + 48 port 10/100/1000Base-T module	1
2	Zonal Switch-type2 - Cisco Nexus 5000, N5K-C56128P	4
3	Cisco WS-C2960X-24PD-L 24 port PoE 10/100/1000 Mbps Switch	50
4	Cisco WS-C2960X-24TD-L 24 port 10/100/1000 Mbps Switch	106
5	Cisco 5520, AIR-CT5520-100-K9 Wireless LAN Controller	2
6	Cisco 3702E Wireless Access Points	430
7	Cisco 3702E with external enclosure Wireless Access	17
8	Cisco UCS C240 M4S with Enterprise Linux Server-& Windows	3
9	KVM switch, Keyboard & display	1
10	5KVA online UPS with 1-hour battery backup	4
11	1KVA UPS with 30 minutes battery backup	36
12	Network Management Software (NMS) for 100 switches - Cisco Prime Infrastructure, R-PI2X-K9	1
13	Additional licenses for 50 switches for NMS (ref. Previous PO)	1
14	Firewall: Appliance based Hardware firewall with minimum 4x 1Gigabit Ethernet ports - Cisco ASA 5555-X with Fire POWER services, ASA5555-FPWR-K9	1
15	All required Passive components (Racks, UTP, Fibre cables & accessories)	

## B. Servers

1. **HP ML 150 Gen9 2x86 64bit** processor (Intel Xeon E52620 v3) ; 64 GB; 2\*600 GB SAS running NEHU Web-server <http://www.nehu.ac.in>
2. Dell Server running Mail ([nehu.ac.in](http://nehu.ac.in)) and **LDAP** for single sign on authentication
3. **The HP Blade Chassis C7000 host 9 Blade Servers for the following services: -**
  - i. 4 Nos of Squid **Proxy servers**
  - ii. **Examination Webserver** (<http://exams.nehu.ac.in/>)
  - iii. **DNS Servers**
4. IBM servers running HP's Intelligent Management Center (IMC) and Extreme's Epicenter for **Network Management System**.
5. IBM Server running **Avaya Vis Ability Management Suite** for telephony Administration.

## C. Data Network

- a. The **National Knowledge Network (NKN) of 1Gbps link** commissioned on May 19, 2010 provides internet access and other related applications (Internet, IP authenticated e-journals from UGC-Infonet E-journal consortium, mail and web etc.) to all academic and administrative departments.
- b. The Extreme Summit **Black Diamond 8806 Core Switch** with 24 ports 1/10 Gbps Fibre connectivity and latest MSM and OS provides connectivity, routing, vlans access to and from all layers 2 (L2) switches located in departments' buildings.

- c. 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.
- d. Dedicated Internet connections with 48 port L2 HP Procurve Switches are provided to most departments having **computer laboratory facilities**.
- e. The **NextGen Firewall** DELL SonicWall Super Massive 9200 provides the required up-to-date network security and performance.
- f. The DELL SonicWall **Email Appliance Security** (ESA) provides enhanced security and spam filter for the mail server.
- g. **WI-FI** connectivity in all **hostels** with Fortinet LAN-Controller based Access Points.
- h. **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 nos. of **IPDSLAM**.

- i. The Network provides **IP CCTV** cameras connectivity across the campus.

## D. Voice Network

- a. 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-Backbone.

- b. 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
- c. Voice Network (Telephone connectivity) is extended to all Departments, Centres, Administrative building and most residences quarters with a capacity of over 1500 telephone extensions.
- d. **2 nos. of Desktop PC DELL OPTIPLEX 3060MX XCTO** having Windows 10 Pro 64 Licensed & Preloaded Intel® Core™ i5-8500 8 GB DDR4-2666 SDRAM 1 TB 7200 rpm SATA for **CUBE Software** for call logging and required billing and Remote Maintenance respectively.

#### **E. OTHER SERVICES**

- a. **Intranet and Internet connectivity** for the **Digital Repository** under the Library Digitalization Project of UPE.
- b. **Intranet and Internet connectivity** for the University Management Software (**UMS**), the ERP e-governance project running several Academic, Finance and Administration Modules.
- c. Web and sub-domain services to
  - i) Library Services (OPAC).
  - ii) Access to Computer Centre's HPC (Sulekor)
  - iii) Bioinformatics Centre - NEIHPID (North-East India Helminth Parasite Information Database <http://nepiac.nehu.ac.in>).
  - iv) Geography Department's Automatics weather station.

## SOPHISTICATED ANALYTICAL INSTRUMENT FACILITY (SAIF)

**Head** : Prof. S. Dey

**Telephone** : 0364 - 2721801(O), 2550212, +91 9436119787 (M)

**E-mail** : hodsaiif@nehu.ac.in, saifnehu@gmail.com

### Brief Statement of Activities

In order to provide facilities of sophisticated analytical instruments to researchers from within and outside the University and to encourage various R&D activities in pursuit of various branches of scientific knowledge, SAIF carries out analysis of samples received from the scientists / institutes and provides facilities of sophisticated analytical instruments to scientists and other users from academic/research institutions, R&D laboratories and industries to enable them to carry out advanced research. It also acquires and develops capability for preventive maintenance and repair of sophisticated instruments, and organizes short-term training courses/workshops on the use and application of sophisticated instruments and analytical techniques. In addition, SAIF trains technicians for maintenance and operation of sophisticated instruments as well as undertakes design and development of instruments/accessories of existing instruments.

### Infrastructure Facilities

The following sophisticated analytical instruments are available for analytical services:

- i. Scanning Electron Microscope (JEOL JSM 6360)
- ii. EDS (Attached with SEM, Oxford INCA 350)
- iii. Carbon Coating Unit (Hind High Vacuum SCANCOAT SIX BT -150)

- iv. Transmission Electron Microscope (JEOL JEM 2100)
- v. EDS (Attached with TEM, XMAX 65)
- vi. FT-NMR 400 MHz (BRUKER AVANCE II-400)
- vii. LC-MS Spectrometer (Waters ZQ-4000)
- viii. Graphite Furnace (Analytik Jena AG Vario 6)
- ix. Liquid Nitrogen Plant (Philips PLN 106)
- x. Microscope with Image Analyser (LEICA DMRX)
- xi. Inductively Coupled Plasma (ICP)-AES, (Thermo Scientific™ iCAP™ 7600)
- xii. A Seminar room (capacity: 50 seats)
- xiii. A Conference room (capacity: 14 seats)

### 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 in biological, chemical and industrial samples; Mass spectra of compounds, and supply of liquid nitrogen to academic, research and industrial institutions.

## Instrument Uses

Instrument	Total number of samples Analyzed	Total number of Users utilizing the facility
Scanning Electron Microscope (JEOL JSM 6360) + EDS	552	66
Transmission Electron Microscope (JEOL JEM 2100) + EDS	514	131
FT-NMR 400 MHz (BRUKER AVANCE II-400)	3227	79
LC-MS Spectrometer (Waters ZQ-4000) *	-	-
Graphite Furnace (Analytik Jena AG Vario 6) *	-	-
ICP-AES (Thermo Scientific™ iCAP™ 7600)	1669	32
DMRX (Leica Q600)	47	9

\*Under maintenance

**Total Revenue Earned:** Rs. 21,69,792.00

(External users: Rs.; 13,80,510.00 Internal users: Rs. 7,89,282.00)

## Other Activities

SAIF-NEHU hosted visits of (i) MSc (4<sup>th</sup> Semester, Zoology) students from Pandu College, Guwahati – 12, (ii) 6<sup>th</sup> Semester BSc students from Zoology Department, West Goalpara College, Ambari, Goalpara, (iii) students from PG Department of Zoology, Handique Girls College, Guwahati, (iv) Class XII students from KV NEHU, Shillong, (v) BSc Bio-technology students from University of Science and Technology, Meghalaya (vi) Students from Department of Botany, B. H. College, Haoli District,

Barpeta, Assam, (vii) MSc IIIrd Semester, Zoology students from Bodoland University, Kokrajhar, Assam. (viii) Students from Department of Botany and Zoology, Pragjyotish College, Guwahati, Assam, (ix) BSc 3<sup>rd</sup> Semester, Bio-technology students of St. Edmund's College Shillong, Meghalaya (x) MSc Students from Department of Zoology, NEHU Shillong, (xi) 5<sup>th</sup> Semester BSc Students from St. Mary's College, Shillong, Meghalaya (xii) Students from RSC Salters Chemistry Camp, Department of Chemistry, NEHU, Shillong.

## SPORTS DEPARTMENT

**Teacher-in-Charge** : Prof. S. Umdor  
**Telephone** : 0364-2721381  
**E-mail** : nehusports@gmail.com

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 organizing 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 organized from time to time.

### Activities

1. The annual meeting of NEHU Sports Board was convened on June 07, 2019 chaired by the Pro-Vice-Chancellor, NEHU.
2. *Inter-College Badminton (Men & Women), Table Tennis (Men & Women) and Chess (Men & Women) Tournament*, August 07-09, 2019 at Indoor Stadium and Community Hall, NEHU, Shillong.
3. *Inter-College Football (Men) Tournament*, August 16-18, 2019 at J. N. Sports Complex, Polo, Shillong.
4. National Sports Day in commemoration of Birth Anniversary of Major Dhyan Chand organized an Inter-College Cross Country and the NEHU Cross-Country Run-on August 29, 2019.
5. Fitness Pledge on the launch of “Fit India Movement”: The NEHU Vice-Chancellor, Pro-Vice-Chancellor and other

teaching and non-teaching staff and students of the University took the fitness on the occasion.

6. Three session Zumba Dance at Community Hall, NEHU, Shillong.
7. An *Inter-College Football (Women) Tournament*, September 02-05, 2019 at J. N. Complex, Polo, Shillong.
8. *Inter-College Basketball (Men & Women) Tournament* in NEHU Campus, Shillong.
9. Inter-College Volleyball (Men & Women) Tournament, February 26-28, 2020 at NEHU Campus, Shillong.
10. Inter College Cricket Men Tournament, March 11-17, 2020 at Multi-Purpose Ground, NEHU Campus, Shillong.

### Facilitated participation of Teams from the University

1. NEHU Table Tennis (Women) Team, for (i) *East-Zone Inter-University Table Tennis (Women) Tournament* organized by the KIIT University, Bhubaneswar, Odisha during October 06-09, 2019, (ii) *All India Inter-University Cross Country (Women) Championship* organized by the Andhra University, Visakhapatnam, Andhra Pradesh on October 09, 2019.
2. NEHU Archery (Women) Team, for *All India Inter-University Archery (Women) Championship* organized by the



- KIIT University, Bhubaneswar, Odisha during December 26-30, 2019.
3. NEHU Kickboxing (Women) Team for *All India Inter-University Kickboxing (Women) Championship* organized by the Andhra University, Visakhapatnam, Andhra Pradesh during December 28-30, 2019.
  4. NEHU Cycling Team for *All India Inter-University Cycling Road (Men) Championship* organized by the Maharaja Ganga Singh University, Rajasthan during January 02-05, 2020.
  5. NEHU Athletics(Men) Team for the *All India Inter-University Athletics (Men) Championship* organized by the Rajiv Gandhi University of Health Sciences Karnataka at the Alva's Education Foundation, Moodbidri, Mangalore, Karnataka during January 02-06, 2020.
  6. NEHU Cycling (Women) Team for *All India Inter-University Cycling Road (Women) Championship* organized by the Rani Chinnamma University, Bangalore, Karnataka during February 08-12, 2020.
  7. NEHU Kickboxing (Men) Team for *All India Inter-University Kickboxing (Men) Championship* organized by the Veer Bahadur Singh Purvanchal University, Jaunpur (U. P.) during February 14-18, 2020. Two participants Mr. Hame Shaniah Suiam, and Mr. Ioonis Mynsong secured 3<sup>rd</sup> place in their respective weight categories and were awarded with bronze medals.
  8. NEHU Taekwondo (Women) Team for *All India Inter-University Taekwondo (Women) Championship* organized by the Punjabi University, Patiala, Punjab during March 10-13, 2020.
  9. NEHU Taekwondo (Men) Team for *All India Inter-University Taekwondo (Men) Championship* organized by the Punjabi University, Patiala, Punjab during March 14-17, 2020.

## STUDENTS' WELFARE CELL

**Dean, Students' Welfare** : Prof. S. Umdor  
**Provost, NEHU** : Prof. L. Joyprakash Singh (up to November 24, 2019)  
: Dr. Benjamin F. Lyngdoh (w.e.f. November 25, 2019)  
**Telephone** : 0364 272-1181  
**E-mail** : dsw@nehu.ac.in

The Office of the Dean, Students' Welfare serves as the nodal agency for student services. The major activities includes management of the Halls of residences of the students, organizing academic study tours through the Departments, co-ordination of students' sports and cultural activities, conduct of elections to the students union, processing/ award

of scholarship/ fellowship and Students Aid Fund to UP/PG students and Research scholars, grant to outstanding students and grant of Students' Aid to economically weak students. The office also facilitates admission of international students and is responsible for processing of their visa applications.

**Allotment of Hostels (Shillong Campus):** Students allotted hostel accommodation during the year are as follows:

Particulars	Gender	GEN	ST	SC	OBC	International students	Total
RS	Men	74	105	18	34	7	238
	Women	70	127	11	29	2	239
PG	Men	47	242	11	17	3	320
	Women	64	292	9	16	4	385
UG	Men	160	217	47	75	3	502
	Women	70	101	12	33	1	217
<b>Total</b>		485	1084	108	204	20	1901

### Study Tour

The office coordinated the study tours for the following nine academic Departments:

(i) Philosophy, (ii) IT, (iii) Statistics, (iv) Political Science, (v) Linguistics, (vi) Law, (vii) Education (MEd), (viii) DACE, (ix) Anthropology.

### Student Aid Fund

73 students (7 PG and 66 UG) were awarded Student Aid Fund @ Rs. 3000/- per student per annum for PG student and @ Rs. 4000/- per student per annum for UG students.

### **NEHU PG Merit Scholarship**

33 Post graduate students were awarded the NEHU PG Merit Scholarship, of which 28 numbers were fresh allottees and 5 were renewal allottees @ Rs.3000/- per student per annum.

### **UGC Non-NET Fellowship**

A total number of 341 PhD scholars and 47 MPhil scholars were awarded UGC Non-NET Fellowship @ Rs. 8000/- per student per month for PhD scholars, and @ Rs.5000/- student per month for MPhil scholars.

### **Other Activities**

1. Supported the programme SYMPHONY (Charity Musical Eve-

ning) in aid of CM's Relief Fund for flood hit victims organized by NEHU Research Scholar Forum on August 02, 2019.

2. Organized the (i) "Student Induction Programme (DEEKSHARAMBH) for newly admitted students on September 30, 2019.
3. First Responder/First Aid Training in collaboration with the Indian Red Cross Society during September 27-28, 2019.
4. A special talk on "A One Hour Session That Can Change Your Life" delivered by Prof. David R. Syiemlieh, former UPSC Chairman in collaboration with NEHUSU on November 28, 2019.

## STUDENTS' WELFARE CELL (TURA CAMPUS)

<b>Teacher-in-Charge, Students' Welfare</b>	: Dr. Crystal Cornelious D. Marak
<b>Teacher-in-Charge, Sports</b>	: Dr. Gino A. Sangma
<b>Coordinator (Special Lecture Group)</b>	: Dr. Deepak Bhagat
<b>Telephone</b>	: +91-9436742768, +91-9612155002, +91-9436733357
<b>E-mail</b>	: crystalmarak@gmail.com

The Office of the Teacher-in-Charge Students' Welfare, NEHU, Tura campus provides ample scope, opportunities and facilities for the all-round development of the students. The major activities of the office are coordination of students admission in various hostels of the university, management of post-graduate students' hostels, conduct of elections of the

office bearers and other representatives of students union, supervision and coordination of co-curricular, cultural and sports activities of the students, issuing of travel concession to the students for educational/industrial tours and organizing special lectures by eminent personalities etc. The number of students residing in the hostels in NEHU Tura Campus are as follows:

Particulars		SC	ST	OBC	GEN	International Students	Total
PG	Male	01	86	10	29	-	126
	Female	—	133	12	13	-	158
PhD	Male	01	-	03	01	01	06
	Female	01	01	—	-	-	02
<b>Total</b>		03	220	25	43	01	292

**Study Tours/Industrial Tours:** The Office of the Teacher-in-Charge Students' Welfare, NEHU, Tura campus facilitated the study tours/industrial tours of the following academic departments of the Tura Campus: (a) Department of English, (b) Department of Garo, (c) Department of RDAP, (d) Department of Management, and (e) Department of Horticulture.

### Additional Students' Activities

(a) **Annual Varsity Week (April, 2019):** Supported the Annual Varsity Week organized by PGSU, NEHU, Tura

Campus.

(b) **International Yoga Day (June 21, 2019):** International Yoga day was organized with the participation of teaching, non-teaching staff and students.

(c) **Death Anniversary of Sonaram Sangma (August 27, 2019):** The students have participated in the Death Anniversary of Sonaram Sangma at Bakrapur, Assam.

(d) **150 Years of Celebrating the Ma-**

**hatma (October 02, 2019):** NEHU, Tura Campus celebrated Mahatma Gandhi's 150th birth anniversary by organizing a series of seminars, public events, cleanliness drive and plastic-free campaigns through-out the year to propagate Mahatma Gandhi's ideals.

- (e) **P. A. Sangma Memorial Lecture (September 02, 2019):** The 3<sup>rd</sup> Memorial Lecture was delivered by Shri Prem Das Rai, former Member of Parliament (Lok Sabha), Sikkim on the topic, "Late P. A. Sangma's Political Legacy and What North-East Leaders Can Learn From It."
- (f) **Orientation Programme (September 20, 2019):** An orientation programme for the newly admitted 1<sup>st</sup> Semester Students was organized in the campus.
- (g) **PGSU Election (November 19-21, 2019):** Election for new office bearers

of PGSU, NEHU, Tura Campus was held on during the period.

- (h) **Mental Wellbeing at Work Place (November 26, 2019):** A special talk on "Mental Wellbeing at Work Place" was delivered by Prof. Kalpana Sarathi, Tata Institute of Social Science, Guwahati.
- (i) **NEHU Tura Campus Foundation Day (February 24, 2020):** The 24<sup>th</sup> Foundation Day of NEHU, Tura Campus was organized in NEHU Tura Campus, Chasingre.
- (j) **The Experience of Nalini Nayak (March 03, 2020):** A special talk on "The Experience of Nalini Nayak" was delivered by Ms. Nalini Nayak, Founder Member, SEWA, Kerala.

**Other Events:** The PGSU, NEHU, Tura Campus organized several other events viz. Parting Social, Fresher's Social & Teachers' Day during the period.

## UGC-HUMAN RESOURCE DEVELOPMENT CENTRE

**Director** : Prof. Rakesh Mohan (up to January 31, 2020)  
Prof. S. Rama Rao (w.e.f. February 19, 2020)  
**Telephone** : 0364-2721401/2721402; 2550103 (Fax)  
**E-mail** : hrdcnehu@gmail.com

**Faculty: 03**

Designation	Name and Qualification	Specialization
Professor	Dr. S. Rama Rao, MSc & PhD (Univ. of Jodhpur)	Plant Biotechnology and Cytogenetics, Molecular Biology, Phylogeny of plants.
Associate Professor	Dr. Quendarisa Kharbuli, MSc & PhD (NEHU)	Zoology (Genetics)
Assistant Professor	Dr. Kuheli Biswas Das, MSc & PhD (NEHU)	Zoology (Biochemical Adaptation)

The UGC-Human Resource Development Centre (UGC-HRDC) was established in 2006 to upgrade the knowledge and skills of faculty members of the institutions of higher education, under the Faculty Development Programme of the UGC, New Delhi. The UGC-HRDC organizes Refresher Courses (RCs), Orientation Programmes (OPs), Summer and Winter Schools for the faculty, librarians and physical educators of Universities and Colleges, located in the North-Eastern region as well as in other parts of the country. In these fourteen years of its existence, the Centre has extended its services to the North-East Region in particular and the country as a whole, which has magnanimously benefitted its target group.

### Brief Activities

Though the main objective of organizing these programmes is to aid the faculty in

their promotions through CAS, these programmes have also provided a platform to update and acquaint the participating teachers with the latest developments and recent trends in their field. OPs are targeted for new entrant teachers to equip them with the teaching skills as well as other skills required within the gambit of the higher education system. Besides, UGC-HRDC conducts Short-Term Courses and Workshops for the Faculty, Research Scholars, Academic Administrators as well as Principals. Lately, with the advancement in Information and Communication Technology, the Centre has taken initiatives to create awareness in MOOCs which is expected to have helped the teachers in transmitting knowledge to a wider audience especially students during the pandemic.

### Facilities Available

Two lecture rooms, one library-cum-documentation room and a computer laboratory with 24 state of the art PCs, a Server, two

Network Laserjet Printers, a DLP Projector and a Scanner.

The UGC-HRDC conducted a total 14 nos. of programmes as detailed below:

Sl. No.	Orientation Programme	Duration
1	48th Orientation Programme	June 24-July14, 2019
2	49th Orientation Programme	October 14-November 03, 2019
3	50th Orientation Programme	March 11-31, 2020 (Discontinued on March 16, 2020 due to COVID-19 Pandemic)

Sl. No.	Refresher Courses	Duration
1	Refresher Course in Folkloristics & Semiotics	September 16-29, 2019
2	Refresher Course in Chemistry	October 21- November 03, 2019
3	Refresher Course in Khasi	November 11-23, 2019
4	Refresher Course in Tribal Studies	November 14-27, 2019
5	Refresher Course in Business Studies	November 18 - December 01, 2019

Sl. No.	Short-Term Course/ Workshop	Duration
1	Short Term Course in Research Methodology for Basic Sciences	May 27 –June 01, 2019
2	Short Term Course in Research Methodology for Social Sciences	May 27 – June 01, 2019
3	Short Term Course in SPSS	September 02–07, 2019
4	Short Term Course in Soft Skills	September 23–28, 2019
5	Workshop on MOOCs	December 02-07, 2019



Sl. No.	Special Summer/ Winter School-2019	Duration
1	Special Summer School in Basic Science and Technology	July 08- July 21, 2019

### Study Tour/Field Trip

**Teacher-in-Charge** : Dr. (Mrs.) K. B. Das

**Places/Institutions Visited** : Ever living museum Mawshbuit village and Sweet Falls

**Duration of Tour** : One day (October 19, 2019)

**Purpose of Tour:** Field trips and visits are a regular feature and are a part of the curriculum, designed for Orientation Programmes and Refresher Courses whose objective is to generate knowledge and awareness. Furthermore, 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 cultural biodiversity of North-East India.

### Seminars/ Conferences/ Symposia/ Extension Programmes etc.

**Dr. (Mrs.) Q. Kharbuli**

- Presented a paper on “*Inclination toward Research: A cross-sectional study on female faculty of Higher Education belonging to Scheduled Tribes of North-East India*” in a national seminar “Empowerment of Tribal Women in India: Issues, Challenges and Perspective” at National Law Institute University, Bhopal, Madhya Pradesh during March 07-08, 2020 and also chaired a session.
- Chaired an international seminar on “The Role of Research in Biodiversity and Conservation” organized by Zool-

ogy Department, Lady Keane College, Shillong on October 24, 2019.

### • Funds Received from Agencies including NEHU/UGC

The UGC-HRDC was sanctioned Rs. 40.00 lakhs for the year 2019-20 from the University Grants Commission, New Delhi, for conducting Refresher Course and Orientation Programmes, Short-Term Courses/ Workshops in approved subjects and for meeting other expenditures.

### Infrastructure added during the period: Library books (12 nos.)

### Other Activities

**Dr. (Mrs.) Q. Kharbuli**

Delivered lectures on (i) Concept of Measurement in the Short-Term Course in Research Methodology for Social Sciences during May 27–June 01, 2019, (ii) Project Proposal, Minor and Major Project and API-2010, 2016, 2018 (4 lectures) in 48<sup>th</sup> Orientation Programme during June 24–July 14, 2019, (iii) API-2010, 2016, 2018 in 50<sup>th</sup> Orientation Programme during March 11-31, 2020, (iv) SPSS Environment and Concept of Measurement, Data

Entry, Measures of Association (5 lectures) in the Short Term Course in SPSS during September 02–07, 2019, (v) Nanocarrier in Drug Delivery Systems Summer School in Basic Sciences and Technology during July 08-21, 2019, (v) Gender Sensitization for Tour Guide (2 lectures) in Indian Institute of Tourism and Travel Management Camp, Institute of Hotel Management, Shillong on May 09, 2019.

**Dr. (Mrs.) K. B. Das**

Coordinated in the (i) Short-Term Course in Research Methodology for Social Sciences during May 27– June 01, 2019, (ii) 48<sup>th</sup> Orientation Programme during June 24 – July 14, 2019, (iii) Short-Term Course in SPSS during September 02-07, 2019, (iv) Short-Term Course in Soft Skills during September 23-28, 2019, (v) 49<sup>th</sup> Orientation Programme during October 14 – November 03, 2019, (vi) Refresher Course in Tribal Studies during November 14-27, 2019, (vii) 50<sup>th</sup> Orientation Programme during March 11-31, 2020.

Delivered lectures at (i) Indian Institute of Tourism and Travel Management Camp, Institute of Hotel Management, Shillong (4 lectures) during June 07-10, 2019, (ii) 48<sup>th</sup> Orientation Programme (5 lectures) during June 24 – July 14, 2019, (iii) STC in Soft Skills (3 lectures) during September 23-28, 2019, (iv) 49<sup>th</sup> Orientation Programme (4 lectures) during October 14– November 03, 2019, (v) 50<sup>th</sup> Orientation Programme (2 lectures) during March 11-31, 2020.

Completed the 4 credits SWAYAM ON-LINE Certificate Course on “Academic Writing” offered by HNB Garwhal University (A Central University) Srinagar Garwhal, Uttarakhand during July 15-October 26, 2019.

Self-Learning Online Course on “Understanding Open Educational Resources”, offered by the Commonwealth of Learning, British Columbia, Canada on November 05, 2019.

Attended workshop on MOOCs organized by the UGC-HRDC, NEHU, Shillong during December 02-07, 2019.

## **Appendix A**

### **MEMBERS OF THE UNIVERSITY COURT**

*(Constituted under Clause 10A of the University Statute)*

*(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**

1	Chancellor	Vacant
2	Vice-Chancellor	Prof. Sri Krishna Srivastava
3	Pro-Vice-Chancellor, Shillong Campus	Prof. Henry Lamin
	Pro-Vice Chancellor, Tura Campus	Prof. G. Singaiah
4	Dean of Students' Welfare	Prof. S. Umdor
5	Registrar	Dr. J. N. Nayak
6	Librarian	Dr. F. R. Sumer (In-charge)
7	Proctor	Dr. R. L. Nongkhaw
8	Finance Officer	Shri L. M. K. Lyngrah

#### **Representatives of Schools and Departments**

9. Deans of Schools of studies
10. All Professors
11. Heads of Departments, who are not Professor
12. Two Associate Professors who are not Head of Department and two Asstt. Professor to be appointed by rotation in the manner prescribed by Ordinance.

#### ***Associate Professors***

- i. Dr. B. K. Gupt  
Department of Statistics  
NEHU, Shillong
- ii. Dr. P. Ramanujam  
Department of Botany  
NEHU, Shillong.

#### ***Assistant Professors***

- i. Dr. E. R. Tongper  
Department of Philosophy  
NEHU, Shillong

- ii. Dr. R. C. Pandey (up to December 28, 2019)  
Centre for Distance Education, NEHU, Shillong
- iii. Smt. J. R. Marak (w.e.f. July 25, 2019)  
Department of Garo, NEHU, Tura Campus, Tura

### **13. Seven Principals of Colleges in the State of Meghalaya**

up to November 14, 2019

- i. Principal, St. Mary's College  
East Khasi Hills Dist. Meghalaya  
Laitumkhrah, Shillong-793003.
- ii. Principal, St. Mary's College of Teachers Education,  
Laitumkhrah, Shillong – 793003.
- iii. Principal, Union Christian College  
Umiam Khwan, Ri Bhoi District.
- iv. Principal, Shillong College  
Shillong, Meghalaya
- v. Principal, Tura Government College, Tura.
- vi. Principal, Sankardev College, Shillong.
- vii. Principal, College of Teacher Education, (PGT)  
East Khasi Hills District, Shillong

### **w.e.f. February 02, 2020**

- i. Principal, Shillong Law College  
E. K. Hills Dist.  
Dhankheti – 793001
- ii. Principal, Synod College,  
E. K. Hills Dist.  
Shillong – 793002
- iii. Principal  
Kiang Nangbah Govt. College  
West Khasi Hills Dist.  
Jaintia -793150

- iv. Principal  
Mendipathar College  
Mendipathar, North Garo Hills Dist.- 794112.
- v. Principal  
Sengkhasi College  
East Khasi District  
Shillong-793002
- vi. Principal  
Tura Law College  
West Garo Hills District, New Tura  
P.O. Araimile, Tura- 973119, Shillong.
- vii. Principal  
Nongstoin College  
West Khasi Hills District  
Nongstoin -973119

**14. Four Teachers from Affiliated Colleges Nominated by the Visitor on the Recommendation of the Vice-Chancellor**

- i. Dr. (Ms) Berylida Hedi Patti Buam  
College of Teacher of Education  
Shillong
- ii. Dr. Padmini Bhattacharjee  
Associate Professor  
St. Anthony`s College, Shillong
- iii. Dr. Ashutosh Dey  
Associate Professor  
Department of Economics  
Ri - BhoiCollege, Nongpoh, Meghalaya
- iv. Dr. (Mrs) E. Kharkongor  
Associate Professor  
Department of Economics  
Shillong.

### ***Representatives of Parliament***

Six representatives of Parliament, four to be nominated by the Speaker of the Lok Sabha from among the members thereof and two to be nominated by the Chairman of the Rajya Sabha from among the members thereof. However, in the event that a member of Parliament becomes a Minister or Speaker / Deputy Speaker / Lok Sabha, or Deputy Chairman, Rajya Sabha, her/his nomination/ election on the Statutory Body shall be deemed to have been terminated.

### **LOK SABHA**

#### **Up to October 25, 2019**

- i. Smt. Bijoya Chakravarty  
18.Mahadev Road  
New Delhi-110012
- ii. Shri Biren Singh Engti  
17 Winsor Palace  
Ferozeshah Road  
New Delhi-110001
- iii. Sh. Ram Prasad Sarmah  
House No. 6 Kacharibasti  
Ulubari, Kamrup Metro  
Guwahati, Assam – 781007

**w.e.f. October 26, 2019**

- Vacant

### **Rajya Sabha**

- i. Shri Oscar Fenandes (up to September 25, 2019)  
4-1-40 Doris Rest Heaven  
Brahmagiri, Ambalapadi Post  
Udupi- 576103
- ii. Shri Kamakhya Prasad Tasa (w.e.f. August 09, 2019)  
Garamur Dulia Gaon,  
P.O-Jorhat Engineering College  
Jorhat, Assam-785007.

- iii. Shri Rakesh Sinha (w.e.f. August 09, 2019)  
Village: Manserpur, P.O: Lakhminia  
Dist.: Begusaria (Bihar)-851211

**Persons Representing Learned Professions and Special Interests** (Ten members to be nominated by the Visitor)

**16. Ten Members Representing Learned Professions and Special Interests including Representatives of Industry, Commerce, Trade unions, Banking and Agriculture, to be Nominated by the Visitor**

- i. Ms. Suman Lata Yadav, Associate Professor  
Hindi Government Girls College  
Rewari-123401
- ii. Dr. Narendra Deo Goswami Registrar (In-Charge)  
Dr. Shyam Prasad Mukherjee University  
Ranchi – 834008  
E-mail: registrar@dspuranchi.ac.in
- iii. Dr. Arun Sinha  
Medical and Process Chemistry  
CSIR –Central Drugs Research Institute  
Lucknow -226031  
E-mail: aksinha@cdri.res.in
- iv. Dr. Satish Kumar  
Professor  
Department of Political Science,  
D3, Plot No.421, Sector 4Vaishali  
Gaziabad UP-201010.  
Mahendargarh Haryana - 123001  
E-mail: SatishKsingh@hotmail.com  
singhsatis@gmail.com



- v. Prof. Khumukcham Tomba Singh  
Professor, Department of Commerce  
Manipur University, Manipur-795003  
E-mail: kctomba@gmail.com
- vi. Dr. Pardeep Kumar  
Scientist, Department of Vegetable Science &  
Floriculture, College of Agriculture  
Chaudhary Sarwan Kumar Himachal Pradesh Krishi  
Vishwavidyalaya, Palampur-176062
- vii. Dr. Aarti Srivastava  
Associate Professor  
Department of Higher & Professional  
Education, NIEPA, New Delhi-110016
- viii. Shri Aribam Brajakumar Sharma  
Retd. Selection Grade Lecturer  
D. M. College (Sc), Imphal (Social Worker) -795001
- ix. Dr. Dilip Nath  
In-charge, Krishi Vigyan Kendra  
Dima Hasao,  
Assam and former Managing Trustee  
Vivekananda SevaNyas (VISEN), Tripura  
Dima Hasao, Assam -788819
- x. Prof. V. Muralidhara Sharma  
Vice-Chancellor  
Rashtriya Sanskrit Vidyapeetha, Tirupati  
Tirupati- 517501

17. **Six Representatives of the Registered Graduates of the University to be elected in the manner prescribed by Ordinance - Vacant**

***Student Representatives***

18. **Four students nominated by the Vice-Chancellor, for a period of one year up to May 22, 2019**

- i. Larity Myrsing  
Department of Statistics, NEHU, Shillong
- ii. Mr. Austin Bankerlang Syndor  
Department of Tourism & Hotel Management,  
NEHU, Shillong
- iii. Ms. Evarisa Nengnong  
Department of Tourism & Hotel Management,  
NEHU, Shillong
- iv. Mr. Raju Borah  
Department of Biotechnology, NEHU, Shillong

**w.e.f. July 25, 2019**

1. Mr. Bobby Lyngdoh, Department of Botany,  
NEHU, Shillong
2. Ms. JeannyPohtam, Department of Adult &  
Continuing Education, NEHU, Shillong
3. Mr. Pranjal Dubey, PhD Scholar  
Department of Environmental Science,  
NEHU, Shillong

4. Ms. Ruby Lalrinsangim, PhD Scholar  
Department of Education  
NEHU, Shillong

***Other Members***

**19. Five persons nominated by the Visitor.**

**w.e.f. August 16, 2018**

1. Prof. Bechanlal  
Department of Zoology, Institute of Science  
Banaras Hindu University, Varanasi 221005  
E-mail: lalbhu@yahoo.co.in  
Mobile No:919336938955
5. Prof. Hijam Tombi Singh, Vice-Chancellor  
University of Bhagavata Culture  
Airport Road,  
Imphal, Manipur -795001.  
E-mail: tmbsingh@gmail.com  
Mobile No: 09450587733
3. Prof. Suneet Dwivedi  
Banerjee Centre of Atmospheric and Ocean Studies  
University of Allahabad  
Allahabad, Uttar Pradesh – 211002  
E-mail: Suneetdwivedi@gmail.com  
Mobile No:09412596137
4. Prof. Ashoi Mittal  
Department of Economics,  
Aligarh Muslim University UP -202002  
E-mail: askmittal@yahoo.com

5. Prof. MadhoolikaAgarwala, Professor and  
Head, Department of Botany  
Banaras Hindu University (BHU)  
Varanasi-221005  
E-mail: madhooagrawal@gmail.com  
Mobile No: 9415628573

**19. (b) Two persons nominated by the Chancellor - Vacant**

**19. (c) Two persons nominated by the Chief Rector**

- i. Dr. H. Iangrai (w.e.f. April 03, 2018)  
Associate Professor,  
Shillong College
- ii. Shri O. R. Challam, Retd. (w.e.f. May 01, 2019)  
Senior Associate Professor, History  
PanaliarJowai, WJHD-793150  
E-mail: orchallam@gmail.com  
Mobile No: 8794535589, 9436106481

#### **Representatives of the Non-Teaching Staff**

**20.** Two members of non-teaching staff to be nominated by the Vice-Chancellor

- i. President  
Non-Teaching Staff  
Association  
NEHU, Shillong
- ii. General Secretary  
Non-Teaching Staff Association  
NEHU, Shillong

### ***Representatives of State Governments***

**21. Two representatives of the State of Meghalaya nominated by the State Government**

- i. Smt. D. Pde (w.e.f. August 07, 2019)  
Kiang Nangbah College,  
Jowai -793150.
- ii. Shri S. Bhattacharjee (w.e.f. October 21, 2019)  
Joint Director of Higher & Technical  
Education Meghalaya.

**22. Members of the Executive Council, who are not otherwise members of the Court: for a period of 3 years**

- i. Principal  
Women's College, Shillong
- ii. Principal up to September 26, 2019)  
Sohra Govt College  
Saitsohpen, Sohra 793108
- iii. Director,  
Higher & Technology Education,  
Government of Meghalaya.
- iv. Principal,  
Ri-Bhoi College (w.e.f. October 21, 2019)  
Nongpoh College
- v. Director (w.e.f. July 22, 2019)  
Higher & Technology Education,  
Government of Meghalaya
- vi. Shri Milind Sudhakar Marathe,  
Associate Professor,  
Department of Electronics Engineering,
- vii. K. J. Somaiya College of Engineering  
Mumbai-400077

- viii. Shri Rabi Ranjan Sen  
Assistant Professor (Senior Scale),  
Department of History, Katwa College  
West Bengal -713130
- ix. Dr. Bubul Kumar Saikia  
Principal, L. T. K, College  
P. O. Azad North Lakhimpur  
Assam-787031
- x. Prof. Anjila Gupta  
Vice-Chancellor  
Guru Ghasidas, Vishwavidyalaya  
Bilaspur-495009

**Registrar -Ex-Officio Secretary**

## **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, Higher and technical education, Govt. of Meghalaya
8. Two members of the Court
9. Four persons to be nominated by the Visitor

#### **Details**

- |   |   |          |
|---|---|----------|
| 1. Prof. Sri Krishna Srivastava<br>Vice-Chancellor, NEHU.<br>Fax No: 03642550076<br>Ph. No: 2721001/2721002/2550074(R)<br>E-mail: vcnehu@nehu.ac.in   | - | Chairman |
| 2. Prof. Henry Lamin<br>Pro-Vice-Chancellor<br>NEHU, Campus, Shillong<br>Mob. No: 9436103856<br>E-mail: henrylamin30492@gmail.com                     | - | Member   |
| 3. Prof. G. Singaiah<br>Pro-Vice-Chancellor<br>NEHU, Tura Campus, Tura<br>Mob. No: 9485190779<br>E-mail: gsingaiah@yahoo.com, nehutura@rediffmail.com | - | Member   |



## Four Deans

1. Prof. (Mrs.) C. A. Mawlong - Member  
Dean  
School of Social Sciences  
NEHU, Shillong.  
E-mail: camawlong@yahoo.com
2. Prof. S. M. Sungoh - Member  
Dean, School of Education (up to July 22, 2019)  
NEHU, Shillong.  
Prof. B. B. P. Gupta - Member  
Dean, School of Life Sciences (w.e.f. July 23, 2019)  
NEHU, Shillong  
E-mail: gupta@nehu.ac.in
3. Prof. Gautam Saha - Member  
Dean, School of Technology (up to November 21, 2019)  
NEHU, Shillong.  
Prof. R. Khongsdier - Member  
Dean (w.e.f. November 22, 2019)  
School of Human and Environmental Sciences  
NEHU, Shillong  
E-mail: rkhongsdier@hotmail.com
4. Prof. R. H. D. Lyngdoh - Member  
Dean (up to February 02, 2020)  
School of Physical Sciences  
NEHU, Shillong.  
E-mail: rhdl@nehu.ac.in  
Prof. B. Panda - Member  
Dean (w.e.f. February 03, 2020)  
School of Economics, Management & Information Sciences  
NEHU, Shillong  
E-mail: bhagirathi2@yahoo.co.in

**One Senior most Professor** - Vacant

**One Associate Professor**

Dr. B. K. Gupta - Member  
Department of Statistics  
NEHU, Shillong  
E-mail: bkgupt@yahoo.co.in

**Two Principals**

1. Principal - Member  
Women's College  
Shillong  
E-mail: womens@gmail.com
2. Principal - Member  
Sohra Government College (up to September 26, 2019)  
Sohra-793108  
Contact No:03637-2534676(O)  
E-mail: sohragovernmentcollege@gmail.com
- Principal - Member  
Ri-Bhoi College (w.e.f. September 27, 2019)  
Nongpoh-793102  
Ri-Bhoi District, Meghalaya.  
E-mail: rbcRibhoi@yahoo.com

Director - Member  
Higher & Technical Education  
Govt. of Meghalaya, Shillong  
Fax No: 22286015  
Ph: 2226015 (M) 9485034201.  
E-mail: dydhtetechanical@gmail.com

### **Two Members of the Court (Nominated by the Visitor)**

- |    |                                  |   |        |
|----|----------------------------------|---|--------|
| 1. | Prof. HijamTombi Singh           | - | Member |
|    | Vice-Chancellor                  |   |        |
|    | University of Bhagavata Culture  |   |        |
|    | Hare Krishna Road Land           |   |        |
|    | Airport Road, Imphal             |   |        |
|    | Manipur- 795001                  |   |        |
|    | E-mail: tmbsingh@gmail.com       |   |        |
| 2. | Prof. Madhoolika Agrawal         | - | Member |
|    | Professor and Head               |   |        |
|    | Department of Botany             |   |        |
|    | Banaras Hindu University (BHU)   |   |        |
|    | Varanasi-221005                  |   |        |
|    | E-mail: madhoo.agrawal@gmail.com |   |        |

### **Four Members nominated by the Visitor (Visitors' Nominee)**

- |    |   |   |        |
|----|---|---|--------|
|    | Shri Milind Sudhakar Marathe                        | - | Member |
|    | Associate Professor                                 |   |        |
|    | Department of Electronics Engineering               |   |        |
|    | K. J. Somaiya College of Engineering, Vidyavihar    |   |        |
|    | Mumbai-400077                                       |   |        |
|    | E-mail: milindsmarathe@gmail.com                    |   |        |
| 1. | Shri Rabi Ranjan Sen                                | - | Member |
|    | Assistant Professor (Senior Scale)                  |   |        |
|    | Department of History, Katwa College,               |   |        |
|    | Katwa, Barddhaman,                                  |   |        |
|    | West Bengal- 713130                                 |   |        |
|    | E-mail: ranjan740@yahoo.com,rabiranjansen@gmail.com |   |        |

- |   |          |                             |
|---|----------|-----------------------------|
| <p>2. Dr. Bubul Kumar Saikia<br/>Principal, L.T.K. College<br/>P. O. Azad North Lakhimpur<br/>Assam-787031<br/>E-mail: bsaikie418@gmail.com</p> | <p>-</p> | <p>Member</p>               |
|   |          |                             |
| <p>3. Prof. Anjila Gupta<br/>Vice-Chancellor<br/>Guru Ghasidas Vishwavidyalaya<br/>Bilaspur-495009.<br/>E-mail: vcpaggu@yahoo.com</p>           | <p>-</p> | <p>Member</p>               |
|   |          |                             |
| <p>Finance Officer<br/>NEHU, Shillong<br/>Ph. No: 2721021/2721020</p>   | <p>-</p> | <p>Permanent Invitee</p>    |
|   |          |                             |
| <p>Registrar<br/>NEHU, Shillong<br/>Ph. No: 2721011/2721012/2551909(R)</p>  | <p>-</p> | <p>Ex-Officio Secretary</p> |

## Appendix C

### MEMBERS OF THE ACADEMIC COUNCIL

(Constituted under Clause 14(1) 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

- (i) Vice-Chancellor
- (ii) Pro-Vice-Chancellor
- (iii) Deans of Schools
- (iv) Dean of Students' Welfare
- (v) Heads of Departments and Centres of Studies
- (vi) Librarian
- (vii) Principals of Colleges maintained by the University
- (viii) All Professors, other than the Heads of Departments and Centres to be nominated by the Vice-Chancellor

#### DETAIL

- |  |   |          |
|--|---|----------|
| 1. Prof. Sri Krishna Srivastava<br>Vice-Chancellor<br>NEHU, Shillong | - | Chairman |
| 2. Prof. Henry Lamin<br>Pro-Vice-Chancellor<br>NEHU, Shillong        | - | Member   |
| 3. Prof. G. Singaiah<br>Pro-Vice-Chancellor<br>NEHU, Tura Campus     | - | Member   |

All Deans of Schools NEHU, Shillong	-	Members
Prof. S. Umdor Dean, Students Welfare	-	Member

**All Heads of the Department/Centre** - Members  
NEHU, Shillong/Tura.

Dr. F. R. Sumer - Member  
Librarian (In-charge)  
NEHU, Shillong

**All Professors, Other than the Heads of the Department and Centres** - Members  
NEHU, Shillong/Tura

**(ix) Six Principals of Colleges admitted to the Privileges of the University**

- i. Principal, St. Dominic's College, Dumdum, Nongthymmai, Shillong -793014
- ii. Principal, Thomas Jones Synod College, Jowai -793150, West Jaintia Hills District, Meghalaya
- iii. Principal, Mawsynram Border Area College, Mawsynram - 793113, East Khasi Hills District, Meghalaya
- iv. Principal, Nabon Women's Synod College, Jaiaw, Shillong-793002, East Khasi Hills District, Meghalaya
- v. Principal, North-East Adventist College, Thadlaskein, Jowai - 793151, West Jaintia Hills District, Meghalaya.
- vi. Principal, Williamnagar Government College, Williamnagar -794111, East Garo Hills District, Meghalaya.

**(x) Five teachers of the University, by rotation according to seniority of which two shall be Associate Professors and three Assistant Professors**

**Two Associate Professors**

- i. Dr. B. K. Gupt, Department of Statistics, NEHU, Shillong
- ii. Dr. P. Ramanujam, Department of Botany, NEHU, Shillong.

**Three Assistant Professors**

- i. Dr. R. C. Pandey, Centre for Distance Education, - (up to July 26, 2019) NEHU, Shillong.  
Mrs. W. S. Myllemngap, Department of Adult & - (w.e.f. August 06, 2019)  
Continuing Education.
- ii. Smt. J. R. Marak, Department Garo, NEHU, Shillong, - (up to July 26, 2019)  
Tura Campus.  
Dr. Jonnsly W. Dkhar, Department of Anthropology- (w.e.f. August 06, 2019)  
NEHU, Shillong.
- iii. Dr. P. K. Ambasht, Department of Bio-Chemistry, NEHU, Shillong.

**(xi) Four persons, not being employees of the University or of a College or Institution by or affiliated to it, to be nominated by the Visitor for their special knowledge**

- i. Prof. Pradeshi Lal, Vice-Chancellor, Nagaland University, Nagaland -797001
- ii. Prof. Saket Khushwaha, Vice-Chancellor, Rajiv Gandhi University  
Arunachal Pradesh, Rono Hills, Doimukh, Arunachal Pradesh- 791 112
- iii. Prof. S. Vasudevan, Department of Inorganic and Physical Chemistry,  
IISC Bangalore -560012
- iv. Dr. Vibhash Chandra Jha, Senior Professor, Department of Geography, Visva  
Bharati Santiniketan, West Bengal-731235.

**(xii) Six teachers of the Colleges admitted to the Privileges of the University**

- i. Dr. A. R. Myrthong, Lady Keane College, Shillong
- ii. Dr. S. K. Pradhan, St. Anthony's College, Shillong
- iii. Dr. (Ms.) B. H. Buam, College of Teacher, Education, Shillong
- iv. Dr. Prashanta Sarkhel, St. Edmunds College, Shillong
- v. Dr. E. Kharkongor, Shillong College, Shillong
- vi. Dr. Davidson Diengdoh, Jaintia Eastern College, Khliehriat.

**(xiii) Two Post-Graduate Students of the University One from Sciences and one from Humanities and one Research Scholar to be elected on academic merit in the manner prescribed by an Ordinance**

**Post Graduate Students**

1. Mr. Nangiaiphrang Langstieh, Department of Zoology  
NEHU, Shillong.
2. Ms. Merininal Jamir, Department of English NEHU,  
Shillong

**Research Scholar**

1. Mr. Md. Atiqur Rahman, Department of ECE  
NEHU, Shillong

(w.e.f. May 22, 2019)

**Permanent Invitee(s)**

1. Director, College Development Council, NEHU, Shillong
2. Controller of Examinations, NEHU, Shillong

**Secretary (Ex-Officio)**

Registrar, NEHU, Shillong



## Appendix D

### MEMBERS OF THE BOARD OF RESEARCH STUDIES

(Constituted under Clause OA-6(1) of the Ordinances of the University)

Prof. S. K. Srivastava	Chairman - Ex-Officio
Vice-Chancellor	
NEHU, Shillong	

Prof. Henry Lamin	Member - Ex-Officio
Pro-Vice-Chancellor	
NEHU, Shillong	

Prof. G. Singaiah	Member - Ex-Officio
Pro-Vice-Chancellor	
NEHU, Tura Campus	

All Deans of Schools	Members - Ex-Officio
NEHU, Shillong	

All Heads of Department / Centre	Members - Ex-Officio
NEHU, Shillong / Tura	

All Professors, other than Dean	Members - Ex-Officio
of Schools and Head of Departments	
& Centres in NEHU, Shillong / Tura	

**Six Associate Professors, three are from Humanities and Social sciences and three from Sciences**

- i. Dr. Rekha M. Shangpliang  
Department of Sociology, NEHU, Shillong
- ii. Dr. L. Cajee  
Department of Geography  
NEHU, Shillong
- iii. Dr. A. Bhattacharjee  
Department of Management  
NEHU, Tura Campus, Tura
- iv. Dr. R. L. Nongkhlaw  
Department of Chemistry  
NEHU, Shillong.

- v. Dr. Aseem Sinha  
Department of Basic Sciences &  
Social Sciences  
NEHU, Shillong
- vi. Dr. Jemino Mawthoh  
Department of Adult & Continuing Education  
NEHU, Shillong

**Four External experts, two representing from Humanities & Social Sciences and two from Sciences**

1. Prof. Aswini Kumar Mohapatra  
Centre for West Asian Studies  
School of International Studies  
JNU, New Delhi - 110067  
E-mail: akmohapatra@ mail.jnu.ac.in; aswinijnu @gmail.com
2. Prof. R. R. Pandey  
Department of Life Science  
Manipur University  
Imphal, Manipur - 795003
3. Prof. Jai Prakash Lal  
Former Professor & Head  
Department of Genetics & Plants Breeding  
Banaras Hindu University  
B-3 Maa Bhagitri Nagar  
Varanasi-221005, India  
E-mail: head\_gpbbu@yahoo.co.in, head\_gpbbhu@rediffmail.com
4. Prof. Dhirendra Bahadur  
Former Professor, Department of Metallurgical Engineering  
& Material Science  
Indian Institute of Technology  
Goa- 403401  
E-mail: dhiren@iitb.ac.in

**Registrar**  
NEHU, Shillong

**Secretary - Ex-Officio**