



## About the Institute

St. Edmund's College was established on 24<sup>th</sup> May, 1923 by the Christian Brothers of India with its headquarters in New Delhi. Since its inception, St. Edmund's College has been a centre for excellence in higher education catering to the needs of the academia from various parts of the country and abroad. It has been reaccruited by NAAC with Grade 'A' in 2009 and also is among the 26 colleges in India to receive STAR STATUS Award

## About the Department

The Department of Biotechnology at St. Edmund's College, Shillong was established on 5<sup>th</sup> June, 2006 by Prof. Pramod Tandon, CEO, Biotech Park, Lucknow during his tenure as Vice Chancellor, NEHU. Since inception the department is engaged in nurturing UG students through its various programmes and has successfully motivated students to pursue research careers in Bioscience. Beside these the department has conducted 10 hands on National workshops, guided 20 students from various universities around the country through HRD programmes. The department has published 22 research papers in reputed international & international journals, 24 oral & poster presentations in National conferences and also 1 paper in International Journals. The department is well supported by Bioinformatics & Advanced Level Biotech hub, Star Status Scheme funded by Department of Biotechnology, Govt. of India

## One Month Skill Development Training

# Value Additions to Rich Bio resources in North East Region

13<sup>th</sup> March, 2018 - 11<sup>th</sup> April, 2018

### Sponsored by

Institute of Bio resource & Sustainable Development, Imphal  
&  
Department of Biotechnology, Govt. of India

### Jointly Organized by

Biotech Park, Lucknow (U.P)  
&  
Advanced Level Biotech Hub  
Department of Biotechnology  
St. Edmund's College,  
Shillong, India

Course Coordinator

Dr. Samrat Adhikari  
Department of Biotechnology  
St. Edmund's College, Shillong  
Meghalaya, India





## Course Contents

### How To Reach

Shillong is well connected from Guwahati via buses and tourist taxis. Till Guwahati, you can reach via railway and by air. The nearest railway station is Guwahati and the nearest airport is Lokpriya Gopinath Bordoloi International Airport, Guwahati (Assam).

### Who Can Apply/Participate

Graduates in Biosciences & Biotechnology, who wish to join research later and also be in esteemed industrial companies in near future with the knowledge gained from the training.

### Intake Capacity:

20 (Twenty)

### Registration/Course Fee

No Course Fee/Registration Fee will be charged from the participants. However, participants need to manage their own accommodation, travel and food expenses.

### Module1

- Introduction to rich Biodiversity resources in North East India, Biodiversity Hot spots.
- Practically available databases of North East India in context to microbes, plants and animals.
- Problems and challenges for studying diversity, IPR Issues etc.
- Introduction of basic sampling tools for collection, identification of microbes & Plants.
- Use of Advanced Techniques like GIS enabled sampling with the help of Remote Sensing.
- Datamining.
- Identification of National & International status of the samples under collection and also its value additions as an economically important scenario.
- A General Introduction on the various Biotechnological techniques which can be utilized in the characterization of the samples under study.

### Module 2

- Molecular Characterization of the bio resources using various Genomics tools.
- Introduction to DNA/RNA Extraction, Sequencing techniques, PCR & Trouble shooting, Bioinformatics databases and network applications. Primary & Secondary databases.
- Isolation of DNA, RNA, electrophoresis techniques etc. Introduction to NCBI, Retrieval of nucleotide sequences, BLASTn analysis, trimming, annotations, Multiple Sequence Alignment (MSA), primer designing and trouble shooting.

### Module 3

- Molecular characterization of bio resources having valuable additional product value using various Proteomics techniques.
- Introduction to proteomics, techniques & tools.
- PAGE- SDS & NATIVE, Western blot.
- Protein BLAST & MSA, Domain analysis, Phylogenetic analysis, use of PERL programming in Bioinformatics.

### Module 4

- Value addition products & Society.
- Introduction to culture collection methods – plants & microbes.
- Purification of bacterial cultures, staining methods – capsule, spores.
- Plant tissue culture techniques, micro propagation.
- Entrepreneurship development and various approaches for self employment.





## Organizing Committee

### Chief Patron (s)

*Bro Simon Coelho, Secretary, GB, St. Edmund's College*

*Dr Sylvanus Lamare, Principal, St. Edmund's College*

### Organizing Secretary

*Dr Samrat Adhikari, Dept. of Biotechnology, St. Edmund's College*

### Advisor

*Prof Sumit Deb, Dept. of Chemistry, St. Edmund's College*

### Organizing Committee Members

*Prof B. Manners, Dept of Biotechnology, St. Edmund's College*

*Dr Gopesh Paul, Dept of Biotechnology, St. Edmund's College*

*Prof K. Nongkynrih, Dept of Biotechnology, St. Edmund's College*

*Prof S. Challam, Dept of Biotechnology, St. Edmund's College*

*Mr Bikash Thakuria, Bioinformatics Centre, St. Edmund's College*

*Dr Sunil Sharma, Advanced Biotech Hub, St. Edmund's College*

*Mr Yogesh Negi, Advanced Biotech Hub, St. Edmund's College*

*Ms Ninni Suthradhar, Advanced Biotech Hub, St. Edmund's College*

*Dr Sanjiban Goswami, Dept of Botany,, St. Edmund's College*

## How To Apply

Interested candidates may apply online at the

[www.biotechpark.org.in/coursenortheast.php](http://www.biotechpark.org.in/coursenortheast.php)

### For Details

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Organizing Secretary

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