

One –Day Seminar on Intellectual Property Rights on 14.01.2020

Title of the Seminar	Intellectual Property Rights
Venue	College Auditorium, Satabhisa Building
Date	14.01.2020
Time	1-30 p.m. to 4p.m.
Student Participants	77
Teacher Participants	1. Dr. Bimal Kumar Saha, Officer-in-Charge 2. Dr. Arijit Chakraborty, Coordinator IQAC 3. Dr. Joyjit Dhar 4. Sri Dilip Kumar Das 5. Sri Kunal Naskar 6. Sri Partha Sarathi Aich 7. Dr. Prajna Paramita Sarkar 8. Dr. Dibyatanu Dasgupta 9. Dr. Sanghamitra Dasgupta 10. Sri Arka Acharjee 11. Dr. Writuparna Chakraborty

Report on One –Day Seminar on "Intellectual Property Rights" organised by Department of Economics, Acharya Brojendra Nath Seal College, Cooch Behar, West Bengal :736101 in collaboration with Department of Law, University of North Bengal, West Bengal : 734013 on 14th January, 2020 (1:30 pm to 4 pm,)

According to WTO, 'Intellectual Property Rights'(IPR) are the rights given to persons over the creations of their minds. They usually give the creator an exclusive right over the use of his/her creation for a certain period of time. As a matter of fact, 'Intellectual Property Rights' refer to the general term for the assignment of property rights through patents, copyrights and trademarks. The main objective of intellectual property law is to encourage the creation of a wide variety of intellectual goods. The growth and development of human civilization depends on our capacity to come up with new ideas and creations. Technological progress requires the development and application of new inventions, while a vibrant culture will always try newer avenues to express itself. Accordingly, the right balance between the interests of innovators and the wider public interest is imminent and the IPR seek to foster an environment in which creativity and innovation can flourish.

In this backdrop, a one-day seminar titled 'Intellectual Property Rights' was organized by Department of Economics, A.B.N. Seal College in collaboration with the Department of Law, North Bengal University on 14th January, 2020. It was held at the Auditorium of the college at the Satabhisa Building. Students and faculty members of Economics, faculty members of other Departments and students of other departments attended the seminar. The seminar commenced at 1-30p.m. Dr. Joyjit Dhar, Head of the Department of Economics welcomed the august gathering and also the distinguished speaker of the day. Revered Officer-in-Charge of the College Dr. Bimal Kumar Saha, inaugurated the seminar by lighting the ceremonial lamp and delivered the inaugural speech. In his inaugural speech, Dr. Saha pointed out basic issues of Intellectual Property Rights, e.g., what is a Patent, Patent Rights, Trademarks, Industrial Design, Geographical Indication, Copyright, Protection etc. He concluded the talk by explaining the rationale of protection and its possible consequences on the economy concerned lucidly so that the heterogeneous participants can understand and take part in deliberations in the following technical session.



Fig: Inaugural Session

At the beginning of the technical session, Dr.Joyjit Dhar introduced the erudite speaker of the day Dr. Gangotri Chakroborty, Professor and Head of the Department of Law, North Bengal University. A few sentences about Dr.Chakroborty given below will speak for her proficiency and credibility in the relevant field:

Prof. Gangotri Chakroborty is Professor and Head of the Department of Law at North Bengal University, West Bengal. She is also the founding faculty of two National Law Universities, namely the W. B. National University of Juridical Sciences and the Gujarat National Law University. She was the founding faculty and the first Registrar of the W.B National University of Juridical Sciences at Kolkata and was instrumental in setting up of the University to its present stature. During her tenure in the WBNUJS, she was also the head of the School of Economics and Business Laws and a member of the School of Constitutional and Jurisprudential Studies. She has done major projects, one for the UNDP report of which was published in 2006, for the Department of Women and child Development, MHRD, Gujarat, report of which was published in 2008 and four in NBU for which the report has been submitted in 2016, 2017, 2018 and 2019 . She is deeply involved in women's rights advocacy, was an active member of the Legal Services Authority both at the State level and at the National Level. On 05 September, 2009 she has been awarded the first "Prof. N. R. MADHAVA MENON ACADEMIC EXCELLENCE AWARD-2009" instituted by the Society of Indian Law Firms and Bar Council of India. She has received appreciation as teacher by Prasara Bharati in 2018.



Fig: Lecture deliberation by the speaker

The technical session started with an excellent and interactive presentation on the “Intellectual Property Rights” by Dr. Chakraborty. Her presentation began with explaining the importance of IPR in the present scenario. Moreover, what is patent, the different tools available for patenting were also delineated in this session. The issues such as prerequisite and requirement for patentability were explained. The importance to file patents and how patent can be filed were discussed in detail. In this context, the patents classified into IPC (International patent classification), USPC (United States patent classification) and CPC (Cooperative patent classification) by World Intellectual Property Organization (WIPO) were mentioned. She also stressed upon the importance of copyright, the difference between author and creator, originality of literary works etc. She concluded the session by discussing the different rights granted by copyright such as the economic and moral rights, about right of paternity and right of integrity which comes under the moral rights. In the end, there was a very good question-answer round which clarified many doubts of the audience regarding IPR. The seminar ended at 4 pm with the vote of thanks by Dr. Joyjit Dhar, Head of the Department of Economics.

Outcome of the Seminar:

This seminar provided a platform for all the participants to gain an understanding about IPR and the present scenario in our country. Participants learnt how IPR establishes total control over a new innovation and its creator. They were also learnt how small innovations can influence societies at large and how they should indulge in innovating and be careful in patenting ideas that will be useful for different sections of society and economy.

Memorial Lecture on Indian Economy: Past and Present on 20.09.2019

Topic of the Memorial Lecture	Indian Economy: Past and Present
Venue	College Auditorium, Satabhisa Building
Date	20.09.2019
Time	1-30 p.m. to 3-30p.m.
Student Participants	48
Teacher Participants	4

Report on Memorial Lecture on "Indian Economy: Past and Present" organised by Department of Economics, Acharya Brojendra Nath Seal College, Cooch Behar, West Bengal on 20th September, 2019 (1:30 pm to 3-30 pm,)

India's independence marked a significant turning point in its economic history, as the country had endured severe impoverishment due to British-led deindustrialization. After the British left our country, India faced the challenge of systematically organizing its economy. The then Indian government judiciously chose to adopt a mixed economy model, allowing both public and private sectors to coexist. Since then, till 1991 Indian economy witnessed many upheavals but it did not deviate from this mixed economy path. After 1991, there was a sea change in respect of different sectors of the economy. The present fruits which the country is reaping now days are basically the fall out of 1991. However, there are some grey areas also.

In this backdrop a memorial lecture titled 'Indian Economy: Past & Present' was organized by Department of Economics, A.B.N. Seal College on 20th September, 2019. It was held at the Auditorium of the college at the Satabhisha Building. Students and faculty members of Economics, faculty members of other Departments and students of other departments attended the lecture. The lecture commenced at 1-30 p.m. Sri Dilip Kr. Das , acting Head of the Department of Economics welcomed the august gathering and also the distinguished speaker of the day. Revered Officer-in-Charge of the College Dr.Bimal Kumar Saha, inaugurated the seminar by lighting the ceremonial lamp and delivered the inaugural speech. In his inaugural speech, Dr. Saha pointed out basic issues pertaining to the economic development of India. He also traced out the journey of the Indian economy since its independence very lucidly. And as usual he stressed the pros and cons of policies adopted for the development of this northern region of West Bengal.

At the beginning of the technical session, Sri Dilip Kr. Das introduced the erudite speaker of the day Sri Debabrata Lahiri, Associate Professor of Economics, Post Graduate Department of Commerce, Hooghly Mohsin College, Chinsuarh, West Bengal.



The technical session started with an excellent and interactive lecture on the 'Indian Economy, its glorious Past & eventful Present' by Dr. Lahiri. In his lecture he delineated the trajectory of Indian economic progress during different phases of its development. He described the economic journey of our country decade wise and also highlighted the major achievements and failures of the decade. In his lecture he discussed the heavy industrialization in India during 2nd plan, the essence of adopting green revolution, why public distribution system was created in India, different poverty eradication programmes, their success and failures and finally the background of initiation of the LPG model in the context of economic reforms.



He went on arguing in favour of the financial reforms and also setting up of new institutions like NITI Ayog and finally concluded that for equitable and sustainable growth India needs to focus on creation of semi-skilled jobs, increasing labour participation of women, more decentralisation of governance, effective use of technology, ensuring high quality education and healthcare provision, fiscal consolidation, infrastructure development and financial inclusion.

In the end, there was a very good question-answer round which clarified many doubts of the students. The seminar ended at 3-30 pm with the vote of thanks by Sri Kunal Naskar, Assistant Professor of Department of Economics.

National Workshop On Professional Development of Science Teachers and Researchers of Higher Educational Institutions during November 18-24, 2019

SUMMARY REPORT

**National Workshop
On
Professional Development of Science Teachers and Researchers of
Higher Educational Institutions
(18-24 November, 2019)**

Organised by

**Acharya B. N. Seal College
Coochbehar
[Accredited by NAAC with Grade A]**

In Collaboration with

**Bioinformatics Facility
University of North Bengal**

&

In Association with

**Directorate of Higher Education
Government of West Bengal**

Venue

**Vidyasagar Sabhagriha
Acharya B. N. Seal College
Cooch Behar 736 101, W.B.**

Acharya Brojendra Nath Seal College (ABNSC), Cooch Behar has a brilliant history to boast of. As Cooch Behar has a legacy of education since an era, this college is sure to have a memory-trove to cash in on, no doubt. Way back in 1858, His Highness Maharaja Nripendra Narayan Maop Bahadur, who was an enthusiast in expanding learning in this region, built this college in the bustling central hub of the town of Cooch Behar. This century old college is alma-mater of hundreds of well placed academicians, both in this country and abroad. Needless to say this educational institution is still playing a significant role in disseminating higher education into the dark crannies of North Bengal. During the NAAC Cycle II visit in 2017, the College was awarded with grade 'A'.

A seven days national workshop with concerted effort of Science departments including Geography of ABNSC College is scheduled to be held from **18th to 24th November, 2019** with a theme to augment science concepts and research methodologies towards meeting the national, state, and regional curriculum standards.

The workshop aims to improve the teaching and research skills & competence amongst the teachers and researchers by putting impetus on their theoretical knowledge as well as by giving them hands-on training via plethora of learning modules aimed at professional development of the participants.

Objectives:
The main objectives and expected outputs of the workshop are to identify and recommend appropriate innovative ideas for science teaching and research with due consideration to local ecological, socio-economic, and cultural conditions.





**National Workshop
On
Professional Development of Science
Teachers and Researchers of Higher
Educational Institutions
(18-24 November, 2019)**

Organized by
**Acharya B. N. Seal College
Cooch Behar**
(Accredited by NAAC with Grade A)

In Collaboration with
**Bioinformatics Facility
University of North Bengal**

In Association with
**Department of Higher Education
Govt. of West Bengal**

Venue
**Vidyasagar Subhagriti
Acharya B. N. Seal College
Cooch Behar 736 101, W.B.**

REGISTRATION FORM

Name: _____

Designation & Department: _____

Official Address: _____

Email: _____

Mobile: _____

Gender: _____

Post/Village / New-Village: _____

Target participants: Full time faculty members and research scholars

Email Address For Registration: abnscworkshop@gmail.com

Registration Fee: Rs. 2000.00 (Spot Payment)
(The registration fee includes workshop kit, lunch and tea)

Last date of application: 16/11/2019

Maximum No. of Participants: Sixty (60)

Participants will be selected on first-come first serve basis (Please send the digital copy of the filled in Registration Form to the above email address in advance)

Note: No TA/DA will be provided for participating in the workshop

Contact details: **Sri. Chapan Saha** (9830224300)
Smt. Suchamita Maiti (9433233710)
Smt. Suchandra Bhattacharya (9476204958)

Accommodation:
The Organizing Committee may arrange for accommodation for out station participants only on request and self payment, subject to availability of the suitable hotels, only on receiving the request on or before 15/11/2019. Request made thereafter shall not be forwarded.

How to Reach:
By Train: The nearest railway station is New Cooch Behar (NCB) which is well connected with other parts of West Bengal and rest of the Country.
By Road: The town is well connected by state transport, private buses, private cars, etc.
By Air: Bagdogra Airport (IXB) is ~180 km away from the town (~4 hr journey).

Weather:
Usually the temperature in Cooch Behar during November will be around 16-24 °C.

Place of Interest:
Cooch Behar Palace, Maheswari Temple, Chitapani Forest, Ankuram National Park, Bora Tiger Reserve and others.

CHAIRMAN
Dr. Deb Kumar Mukherjee
Vice-Chancellor, Cooch Behar Panchanan Barma University, Cooch Behar

PRESIDENT
Dr. Binod Kumar Saha
Officer-in-Charge, A.R.N. Seal College, Cooch Behar

VICE-PRESIDENT
Dr. Anur K. Samanta, Department of Geography, ABNSC

ORGANISING SECRETARY
Dr. Binod C. Saha, Dept. of Botany, ABNSC (9433233710)

PROGRAMME SECRETARIES
Sri. Manoj Kumar (9433233710)
Dr. Jyoti K. Bhattacharya (9433233710)
Sri. Anur K. Samanta (9433233710)
Sri. Chapan Saha (9433233710)

CASHIER/ TREASURER
Sri. Anur K. Samanta (9433233710)
Sri. Chapan Saha (9433233710)

Members:
Smt. Suchamita Maiti
Smt. Priya Bora
Smt. Anurita Chakrabarty
Smt. Suchandra Bhattacharya

INVITED RESOURCE PERSONS

1. Dr. T. R. Ghata, Joint 001, Higher Education Dept., Govt. of West Bengal
2. Dr. Ramdas Chatterjee, Ex-Director, Chittaranjan National Cancer Institute, Kolkata
3. Prof. (Dr.) Ashwin P. Das, Raju Gandhi University, Bongaigaon
4. Prof. (Dr.) Kishore C. Majumder, Ex-Scientist, CSIR, Hyderabad
5. Prof. (Dr.) Anur K. Samanta, Coordinator, Bioinformatics Facility, NBU
6. Dr. Deb Prakash Pal, Dept. of Geography, Burdwan University
7. Prof. (Dr.) Rajib Bhattacharya, Dept. of Botany, Burdwan University
8. Prof. (Dr.) Dilip K. Debata, Dept. of Chemistry, CHPU
9. Prof. (Dr.) Pradyumn Kumar Halder, Dean (Science), CHPU
10. Dr. Anur K. Samanta, Dept. of Geography, ABNSC
11. Dr. Kajal K. Mondal, Dept. of Mathematics, CHPU
12. Dr. Suman Das, Dept. of Chemistry, Jalpaiguri University
13. Dr. Jyotirmay Das, Dept. of Botany, Alipore College
14. Dr. Kishore K. Das, Dept. of Botany, Duxbury College

Context of the Workshop

A national workshop with concerted effort of Science departments including Geography of ABN Seal College was held from **18th to 24th November, 2019** (seven days) to augment science concepts and research methodologies towards meeting the national, state, and regional curriculum standards.

This seven day workshop was held in a stimulating and resource-rich environment where the delegates will participate in sessions on topics including effective teaching strategies, course design, establishing a research program in a new setting, working with research institutions, balancing professional and personal responsibilities.

The workshop aimed to improve the teaching and research skills & competence amongst the teachers and researchers by putting emphasis on their theoretical knowledge as well as by giving them hands-on training via plethora of learning modules aimed at professional development of the participants.

Objectives

The main objectives and expected outputs of the workshop are to identify and recommend appropriate innovative ideas for science teaching and research with due consideration to local ecological, socio-economic, and cultural conditions. It would comprise:

- Defining of clear teaching and research problems.
- Innovative teaching and research targeted to social and economic interest.
- Qualitative and Quantitative Research Design.
- Application of Statistical Tools in research.
- Hands-on activities integrating science, mathematics, multimedia technology and environmental awareness.

Program Schedule

DATE & TIME	EVENT / RESOURCE PERSON / TITLE
17/11/19	
6:00 pm	Garlanding the statue of Kalidasa Kalidasa Chatterjee Tagore and Acharya Brojendra Nath Seal
6:15 pm	Flag Hoisting of ABN Seal College, S.C.T. NSS, AHSKPTA, AHSWAA
6:30 pm	MANGAL ACHARAN
18/11/19	
8:30 am	Accounting and reception of the Patron, Guests, etc. at the College gate through garlanding, blow of conch shell, flower petals, litaries and aarti puja on the forehand
9:00 am	Registration
9:30 am	Inauguration
9:35 am	Welcoming address by Organizing Secretary
9:40 am	Address by Dr. Deb Kumar Mukherjee, Hon'ble Vice-Chancellor, Cooch Behar Paschim Barma University, Vidyakumudi Street, Cooch Behar, WB, India
9:45 am	Address by Dr. Arunabha Sen, Professor of Botany and Coordinator & Head, Department of Biotechnology, University of North Bengal, WB, India
9:50 am	Address by Dr. Binod Kumar Saha, President & Officer-in-Charge, A.H.N. Seal College, Cooch Behar, WB
10:00 am-11:30 am	Deliberation by Dr. Tushita Kanti Ghara, Joint DPO, Department of Higher Education, Government of West Bengal (MSO) AHSKPTA WB and Nodal Officer, NAAC WB Title: <i>Relevance of Professional Development in Assessment and Evaluation System under Revised NAAC Framework</i>
11:45 am-12:00 noon	Ten Break
12:00 noon-1:15 pm	Deliberation by Dr. Ramdas Chatterjee, Former Head, Dept. of Tumor Virology, Chatterjee National Cancer Institute, Kolkata
1:15 - 2:15 pm	Lunch Break
2:15 - 3:30 pm	Deliberation by Prof. (Dr.) Pabitra Kumar Mukherjee, Dean (Science) & Professor of Physics, Cooch Behar Paschim Barma University, Cooch Behar, WB Title: <i>Introduction to Particle Physics</i>
3:30-4:45 pm	Ten Break
4:45-5:45 pm	Interactive Session and Discussion
6:30-5:30 pm	Summary report by Rapporteurs
19/11/19	
10:30-11:30 am	Deliberation by Dr. Anand Sen, Professor of Botany and Coordinator & Head, Department of Biotechnology, University of North Bengal, WB, India Title: <i>Introduction to Biotechnology with special reference to microbial genetics</i>
11:30-11:45 am	Ten Break
11:45 am-1:15 pm	Hands-on Training on: Cloning and Transformation using GelBeet® software. By Dr. Anand Sen, Arunabha Sen and

DATE & TIME	EVENT / RESOURCE PERSON / TITLE
1:15-2:15 pm	Deliberation by Dr. Anand Sen, Professor of Botany and Coordinator & Head, Department of Biotechnology, University of North Bengal, WB
2:15-3:15 pm	Hands-on training on: Phylogenetic tree construction using MEGA6 software. By Dr. Anand Sen, Pabitra Kanti Mukherjee and Arunabha Sen
3:15-4:15 pm	Hands-on training on: Homology modelling. By Dr. Anand Sen, Arunabha Chatterjee and Arunabha Sen
4:15-5:30 pm	Ten Break
5:30-5:45 pm	Summary report by Rapporteurs
20/11/19	
10:30-11:45 am	Deliberation by Dr. Satish Das, Associate Professor, Department of Chemistry, Jadavpur University, WB Title: <i>Understanding Physical Chemistry- Some difficulties</i>
11:45 am-12:00 noon	Ten Break
12:00 noon-1:15 pm	Deliberation by Dr. Rajat Kumar Mondal, Associate Professor & Head, Department of Mathematics, Cooch Behar Paschim Barma University, Cooch Behar, WB Title: <i>On dispersion of radiance in a turbulent channel flow from continuous classical sources</i>
1:15-2:15 pm	Lunch Break
2:15 pm-3:30 pm	Deliberation by Dr. Jyotirmoy Halder, Ex-Principal, Bangorah Evening College, Kolkata, WB Title: <i>Language Development</i>
3:30-4:15 pm	Interactive Session
4:15-5:30 pm	Ten Break
5:30-5:45 pm	Summary report by Rapporteurs
21/11/19	
10:30 am-11:45 am	Deliberation by Prof. (Dr.) Uday K. Datta, Professor of Chemistry, Cooch Behar Paschim Barma University, Cooch Behar, WB Title: <i>Chemistry and sustainability</i>
11:45 am-12:00 noon	Ten Break
12:00 noon-1:15 pm	Deliberation by Dr. Saikat Kumar Samanta, Associate Professor & Head, Department of Geography, ABN Seal College, Cooch Behar, WB Title: <i>Evolution of Geography and its role in the progress of Human Civilization</i>
1:15-2:15 pm	Lunch Break
2:15 - 2:45 pm	Deliberation by Dr. Jyotirmoy Das, Head, Department of Botany, Alipahar College, Alipahar, WB Title: <i>Introduction of Fertilizer in study and research use</i>
2:45-4:15 pm	Hands-on training on Fertilizer by Dr. Jyotirmoy Das
4:15-4:30 pm	Ten Break
4:30 pm-5:30 pm	Rapporteurs report and discussion
22/11/19	
10:30 am-11:45 am	Deliberation by Prof. (Dr.) Abhaya P Das, Adjunct Professor, Department of Botany, Raj's Gandhi University, Doodhick, Shantigarh, Amanchul Pradesh, India Title: <i>Conservation of Biodiversity: Climate diversification and Future of the Biosphere</i>
11:45 am-12:00 noon	Ten Break
12:00 noon-1:15 pm	Deliberation by Prof. (Dr.) Rajib Bhattacharyya, Professor of Botany, The University of Burdwan, Bardhaman, WB Title: <i>Southern Ocean interdecadal Oscillation: All we may learn and explore</i>
1:15-2:15 pm	Lunch Break
2:15 - 3:30 pm	Deliberation by Dr. Kishore Kumar Thapa, Head, Department of Botany, Dibrugarh College, Cooch Behar Title: <i>Origin and Development of Tea Industry: Historical Aspects and Modern Outlook</i>
3:30-3:45 pm	Ten Break
3:45-4:30 pm	Interactive Session
4:30-5:00 pm	Rapporteurs report and discussion
23/11/19	
10:30 am-11:45 am	Deliberation by Dr. Deb Prakash Pal, Senior In-Office (Selection Grade) (Cartographer), Department of Geography, The University of Burdwan, Bardhaman, WB Title: <i>A brief concept of geo-spatial technology in Modern Research and Development techniques using Geoinformatics</i>
11:45 am-12:00 noon	Ten Break
12:00 noon-1:15 pm	Hands-on training using open source software by Dr. Deb Prakash Pal
1:15-2:15 pm	Lunch Break
2:15-4:15 pm	Continuation of Hands-on Training by Dr. Deb Prakash Pal
4:15-5:30 pm	Ten Break
5:30-5:45 pm	Rapporteurs report and discussion
24/11/19	
10:30-11:45 am	Deliberation by Dr. Khushboo Chatterjee, Ex-Scientist U (Director Grade), Centre for Cellular & Molecular Biology (CCMB), Hyderabad, India Title: <i>An amazing story of the DNA, from double helix to CRISPR</i>
11:45 am-12:00 noon	Ten Break
12:00 noon-1:15 pm	Final report by Rapporteurs and discussion
1:15-2:15 pm	Lunch Break
2:15 - 4:30 pm	Validation Session

PARTICIPANTS

Teacher Participants (Registered)		Student Participants (Unregistered)	TOTAL PARTICIPANTS
In-House	Out-House	In-House	
25	10	150	185

List of Registered Participants

Sl. No.	Name	Designation	Department	College	Phone No.
1.	Satadal Adhikary	Assistant Professor	Zoology	A.B.N.Seal College	8981234115
2.	Abhisek Saha	Assistant Professor	Chemistry	Tufanganj Mahavidyalaya	7001036581
3	Dr. Aninda Mandal	Assistant Professor	Botany	A.B.N.Seal College	9434602182
4	Dr. Tuhin Suvro Banerjee	Assistant Professor	Physiology	A.B.N.Seal College	8017929760
5.	Dr. Tridib Chakraborty	Assistant Professor	Physiology	A.B.N.Seal College	9831171341
6.	Ajoy Das	Assistant Professor	Botany	A.B.N.Seal College	7432899707
7.	Srijit Das	Assistant Professor	Chemistry	A.B.N.Seal College	7479308778
8.	Md Tausif SK	Assistant Professor	Mathematics	A.B.N.Seal College	9609167815
9.	Chayan Saha	Assistant Professor	Physics	A.B.N.Seal College	9832549300
10.	Suchismita Maiti	Assistant Professor	Physics	A.B.N.Seal College	9434255720
11.	Biplab Kumar Mandal	Assistant Professor	Physics	A.B.N.Seal College	9732741013
12.	Amar Sha	Assistant Professor	Mathematics	A.B.N.Seal College	9046447484
13.	Suchitra Ray	Assistant Professor	Geography	A.B.N.Seal College	9564730418
14.	Pasang Tshering Dukpa	Assistant Professor	Physiology	A.B.N.Seal College	08770984137
15.	Subrata Mondal	Assistant Professor	Geography	A.B.N Seal College	9749160428
16.	Sahidul Karim	Assistant Professor	Geography	A.B.N Seal College	9732409476
17.	Ranjan Barman	Assistant Professor	Mathematics	Dinhata College	7602981104
18.	Dr. Amit Pramanik	Assistant Professor	Chemistry	A. B. N. Seal College	9874446466
19.	Suchandra Bhattacharya	Assistant Professor	Chemistry	A. B. N. Seal College	9476362838
20.	Dr. Alokemoy Basu	Assistant Professor	Botany	A. B. N. Seal College	9432137598
21.	Debashis Kumar Mandal	Assistant Professor	Mathematics	Kalimpong College	
22.	Dr. Rabindra Dey	Assistant Professor	Chemistry	Coochbehar College	9832047672
23.	Manjil Gupta	Assistant Professor	Zoology	Dinhata College	9126082716
24.	Hemen Biswas	Assistant Professor	Zoology	A.B.N.Seal College	8910614457
25.	Partha Sarathi Debnath	Assistant Professor	Physics	A.B.N.Seal College	9474590804
26.	Dr. Sulagna Dutta	Assistant Professor	Physics	Mathabhanga College	
27.	Partha Das	Assistant Professor	Geography	A.B.N.Seal College	9883441764
28.	Dr. Prites Ch Biswas	Assistant Professor	Geography	A.B.N.Seal College	9748633080
29.	Dr. Writuparna Chakraborty	Assistant Professor	Geography	A.B.N.Seal College	8942824348
30.	Payel Banik	Assistant Professor	Physiology	A.B.N.Seal College	08770984137
31.	Dr. Manoj Majumder	Assistant Professor	Chemistry	Mathabhanga College	9474963981
32.	Dr.Binod Ch. Sharma	Associate Professor	Botany	A.B.N.Seal College	9434575465
33.	Dr. Bappa Sarkar	Assistant Professor	Geography	Dinhata College	9475835341
34.	Sariful Hoque	Assistant Professor	Botany	Dinhata College	7872341200
35.	Himangshu Barman	Assistant Professor	Zoology	Ramnagar College	

Inaugural Session

The workshop was formally inaugurated by Dr. Deb Kumar Mukherjee, Hon'ble Vice Chancellor, Coochbehar Panchanan Barma University, Patron of the workshop in presence of Dr. Bimal Kumar Saha, Officer-in-Charge, ABN Seal College, Coochbehar, Dr. Tushar Kanti Ghara, Joint Director of Public Instructions, Department of Higher Education, Govt. of West Bengal, Dr. Arnab Sen, Professor of Botany and Head & Co-Ordinator, Department of Bioinformatics, North Bengal University, Dr. Ramdas Chatterjee, CNCI, Kolkata and other dignitaries. Dr. Binod Ch. Sharma, Organising Secretary, welcomed the gathering and Smt. Shampa Dutta, Co-ordinator, NAAC steering Committee, ABN Seal College proposed vote of thanks.

A total of 35 teachers from different colleges of West Bengal (in-house 25; outside 10) along with more than 150 UG and PG students have been participated in the workshop to make it grand success.

Technical Sessions

- The NAAC assessment is a holistic, systematic and transparent experience, based on up-to-date data, which can contribute to institutional improvement. **Dr. Tushar Kanti Ghara, Jr. DPI and Nodal Officer (NAAC), Department of Higher Education, Government of West Bengal**, in his deliberation on "Relevance of Professional Development on Assessment and Evaluation System under Revised NAAC Framework" highlighted the major modifications in the new NAAC guidelines. He advised teachers to inculcate thinking power to students. This will motivate the students for expression of their innovative ideas, which would lead to real advancement of education. Institutional data should be updated and uploaded regularly which may lead to wider dissemination of institution-specific policies and practices, some of which may be the best practices, for other institutions to emulate. Proper and rational utilization of institutional property would save time and money which can be utilized for the procurement of essential items. New NAAC guidelines involves extensive use electronic mode of communication, thus, Dr Ghara insisted the faculty members becoming sound in computer programming.

- Dr. Ramdas Chatterjee** in his awareness centric lecture on "An insight in to oral cancer and pre-cancer with reference to North Bengal" elaborated in detail the subject cancer. Oral cancer has become menace with the increase in the consumption of tobacco and related products like betel leaves, betel-nut etc. Prevalence of oral cancer is more in North-eastern states as well as central India. Symptoms of oral cancer are seen in mouth, tongue and cheek. Even if the cause is identified, the diagnostic approaches are not upto the mark due to lack of trained health professionals and rapid diagnostic tools. Proper identification of oral premalignant lesions supplemented by other molecular markers should reach to the every corner of country for early diagnosis of cancer.

- Dr. Prabir Kumar Haldar, Professor of Physics and Dean (Science), Coochbehar Panchanan Barma University** in his interactive deliberation on "Introduction to Particle Physics" thrown some light on constituents of matter, facts from beginning to present day, four fundamental forces, interaction among them also on different families of particles in the form of particle zoo, leptons, baryon, mesons. He also highlighted the occurrence of antiparticles, referring Dirac who interpreted this to mean that for every particle that exists there is a corresponding antiparticle, exactly matching the particle but with opposite charge. For the electron, for instance, there should be an "antielectron" called the positron identical in every way but with a positive electric charge. It was supported by theories of pair production, annihilation, quark model, quark applet. He explained the journey from big bang to current findings on particles. Progress to in the recreation of baby universe, proposed LHC (coldest place in universe) and other experiments on LHC like CMS, ALICE, ATLAS, LHC B etc. The LHC will cause the beams to collide with each other, and then record the resulting events caused by the collision. Scientists hope that these events will tell us more about how the universe began and what it's made of. The LHC is the most ambitious and powerful particle accelerator built to date. He encouraged the participants for continuation of research on particle physics for the solution of yet to solve problems.

- Professor (Dr.) Arnab Sen, Professor of Botany and Coordinator & Head, Department of Bioinformatics, University of North Bengal, WB, India**

Title: Introduction to Bioinformatics with special reference to microbial genomics

The lecture started with a brief history about a very recent and budding topic "Bioinformatics, with its conventional and scientific definitions. The ultimate goal of the subject is to enable the discovery of new biological insights as well as to create a global perspective from which unifying principles in biology can be discerned. A very good example of the successful contribution of this discipline is Human Genome Project. Various types of data that is of interest to biologist can be interpreted through bioinformatics. The perspective of bioinformatics is equivalent to the perspective of life and it includes the cell, the organism and the tree of life. The lecture also enriched the participants how bioinformatics can also be useful to decipher different issues of social science. Basic knowledge of different bioinformatics databases like Protein Data Bank (PDB), Integrated Microbial Genomes (IMG), etc were also discussed. The first complete genome sequence present in the IMG database in the year 1995 was one and as on 18/11/2019 it is 117242. So it clearly states the growth and usefulness of the subject. The speaker also highlighted some related research work from his laboratory and gave basic information of different indexes like CBI, CAI etc. A detailed discussion regarding phylogenetic tree and its implication were also made. The talk also included an insight into the origin of life and evolution of various species across the globe. Researchers based on little infrastructural facilities can take bioinformatics as subject because it has transformed the discipline of biology from a purely lab-based science to an information-based one. Data collection and analysis unravels the wealth of biological information in reasonable time. It would enable mankind to enter the kingdom of customized medicines, and harvest environmental benefits. Database, algorithm, infrastructure are the tool makers and Agriinformatics, medicoinformatics, public health informatics are the tool users. One of the Government of India initiative is agriinformatics as the site Farmer's window termed Mera Gaon Mera Desh where every information on agriculture is available. Similarly, **Public health informatics** has been defined as the systematic application of information and computer science and technology to public health practice, research, and learning. It is one of the subdomains of health informatics.

- **Dr. Suman Das, Associate Professor, Department of Chemistry, Jadavpur University, WB** in his worthy and highly interactive chalk and talk deliberation on "Understanding Physical Chemistry-Some difficulties" focused on the problems faced by College and University students in plotting different mathematical functions and their derivatives. He started with simple linear equations and then with exponential functions, trigonometrical functions and their product functions. He correlated such derivative plots with continuity and their applications in quantum mechanics. The plotting of enthalpy with temperature and hence specific heat was explained. The condition of spontaneity in terms of Gibbs-free energy variation, the phase change, effect of pressure on phase transition, plotting of p-orbitals by simply plotting the polar graph for trigonometric functions were discussed in details.
- The informative deliberation of **Dr. Kajal Kumar Mondal** entitled "On dispersion of solute in a turbulent channel flow from continuous elevated sources" commenced with the explanation on the diversity of differential equations and their solutions. He shared the idea of alternative numerical methods like FEM, FDM, Taylor's series expansion method, forward difference method, backward difference method, central difference method etc to solve non-linear equations. He elaborated on the goals of dispersion of particles in fluid mechanics and its utility in real life problems like controlling pollutants in liquid medium. Various types fluid flow like laminar flow, turbulent flow and the formulation of equations of motion with appropriate boundary conditions were explained in detail. New dimensions for solving 1D convection-diffusion problem using Gelarkin's finite element method with graphical support and 2D advection-diffusion with suitable boundary conditions was explained in an elaborative way. The findings of Dr. Mondal were in accordance with the well recognized experimental values of validations. Fluids include all liquids and gases and a rather strange state of matter called plasma, an ionized gas that scientists believe accounts for 99% of the matter in the visible universe. Thus fluid mechanics is the basis of research in engineering, medicine, environmental science and others.
- Immunisation is a technique that enables us to fight off disease. **Dr. Jyoti prakas Haldar**, Ex-Principal, Bangabasi Evening College, Kolkata, WB in his deliberation "Vaccine: History and Development" acquainted the house about the importance of vaccine. Dr. Haldar discussed in detail the origin of immunology as a branch of biological science through centuries and the trajectory of discoveries in this discipline to decipher the immunogenic mechanisms in the body like types of immune cells, haematopoiesis, and cellular interaction, formation of memory cell, antibody types, perforin and granzyme mediated lysis of target cell. Finally his deliberation coalesced into different types of vaccines like Polio vaccine, whole/subunit vaccine, toxoid vaccine, recombinant Hepatitis B vaccine production, recent DNA Vaccine and their applications to combat the present day issues of medical sciences and urged the participants to work towards the development of vaccines to save the world population from incurable or difficult to cure diseases.
- **Prof (Dr.) Dilip K Debnath, Professor of Chemistry, Cooch Behar Panchanan Barma University, Cooch Behar, WB** started his deliberation on "Chemistry and Sustainability" with a question to the audience that has the Earth's sixth mass extinction already arrived? In this context Prof. Debnath said that introduction of contaminants as well as increasing population into an environment causes instability, disorder, harm and discomfort to the ecosystem although richest countries are denying the air pollution risks. And then the term "Sustainability" comes before us.
- A detailed insight into the origin, chronological advancement of cartography and modern day applications was discussed by **Dr. Samir Kumar Samanta** in his deliberation entitled "Evolution of Cartography and its role in the progress of human civilization". Cartography involves the determination of polar, rectangular coordinates and mapping of reticules. Ancient use of cartography in surveying in building of pyramids (Egypt), irrigation of land, planning of household gardens (Babylon), settlement planning etc. during 18th century, modern cartographic and surveying instruments were developed in their earliest forms e.g., theodolite, sextant etc. In modern India cartography began its journey under European leadership. Survey of India published their first topographical map in 1767. After independence, National Atlas Organisation, presently known as NATMO was established in 1957, then ISRO in 1969. Now cartography has entered digital era. Cartography has become the basis of all development and research programmes.
- **Dr. Jyotsna Das** in her informative session on "Introduction of Foldscope as Study and Research Tool" highlighted on the utility of Foldscope as Microscope for everyone which is ultra-affordable microscope. Foldscope has magnification up to 2000X and resolution of 2 micron. Foldscope has given our children direct access to the world of science with minimum intervention, as field research tool, useful for microscopical diagnosis of different human diseases like malaria, African sleeping sickness, schistosomiasis etc. It is going to be an important tool for diagnosis of different plant diseases. Farmers will also learn to use in the field.
- **Prof. (Dr.) Abhaya P. Das, Adjunct Professor, Department of Botany, Rajiv Gandhi University, Doimukh, Itanagar, Arunachal Pradesh, India** in his extensive deliberation on the title "Conservation of Biodiversity, Climate Amelioration and Future of the Biosphere". Prof Das provided his insights on the present day crisis of environmental sustainability due to population explosion and indiscriminate urbanization. In his deliberation he has discussed the socio-political aspects of the problem and its possible impact on biosphere. He strongly proposed the need for conservation in present degraded environmental condition in hills of eastern and north eastern India. He focused mainly on forest degradation on account of tourism, crop cultivation, Jhum cultivation, saw mills, man animal conflict, destruction of rare Rhododendron plants in Singalila NP for providing amenities to the tourists, habitat fragmentation and socio-political boundaries, plastic pollution, Great Pacific Garbage Patch, Everest traffic, space debris, construction works on riverside and riverbed and the hindrance of the its natural flow. If loss of biodiversity and climate change continues in present speed then it is assumed that in next 35 years Himalaya will be ice-free; Arctic sea could be ice free by 2040.
- **Prof (Dr.) Rajib Bandopadhyay, Professor of Botany, The University of Burdwan, Bardhaman, WB**, delivered a prodigious lecture on "Southern Ocean Antarctica Expedition: All we may learn and explore." The unique geological conditions of Southern Antarctica make it a much-congenial place for research and study. Antarctica has a vital role to play in the global

oceanic and climatic systems. On account of its climatic extremes and isolation, Antarctica is easily one of the most untouched regions on earth. This makes it extremely valuable for all types of scientific research. Dr. Bandopadhyay highlighted the chronological development of sophistication of research facility by Government of India along with other countries who have set up research stations here to study the climate, weather, geology, and wildlife of this unique region.

- **Dr. Kishore Kumar Thapa, Department of Botany, Dinhata College, Cooch Behar, WB** in his commendable address on "Development of Tea Industry: Historical Insights and Modern Outlook" discussed the origin, popularization, commercial plantation and its spread, current scenario in terms of cultural, research, economy of tea. Tea was initially used as medicine in ancient China, slowly evolved as a beverage, then introduced to Japan. All tea products - green, black, white, oolong, puerh and yellow tea, come from the same plant - *Camellia sinensis* that's native to East Asia (China and India). On morphological differences between the Assamese and Chinese varieties, botanists have long asserted a dual botanical origin for tea. Dr. Thapa also shed light on the inception and sequential development of tea industry in India. The ups and down of tea market, high management cost, financial irregularities, political issues, scientific approaches for better tea quality and others were also intensively discussed. The speaker stressed upon the researchers to involve themselves in new research areas on tea hence to sustain its popularity vis-à-vis economy. The session was informative and interactive, as reflected from the feedback from the participants.

- **Dr. Deb Prakash Pahari, Scientific Officer (Selection Grade) [Cartographer], Department of Geography, The University of Burdwan, Bardhaman, WB** started his creditable deliberation on "i) Basic concept of geo-spatial technology ii) Modern Research and Development techniques using Geotechnology" with the overall importance of geotechnology across different discipline like Geography, Environmental Science, Botany, Zoology, Physics and others. According to him Geotechnology is that part of Information Technology (IT) which deals with the information related to earth surface and works successfully with Nanotechnology and Biotechnology. Three emerging fields e.g., Geographical Information System (GIS), Remote Sensing (RS) and Global Positioning System (GPS) are included under geoinformatics.

In the second session **Dr. Pahari** conducted hands on training on open-source cross-platform Geographical Information System (GIS) software named QGIS or Quantum GIS. Participants basically learnt digitization, editing and analysis of geospatial data by using QGIS software. The learning modules were:

1. Digitization of geospatial features by creating layers
2. Editing and presenting non-spatial data through attribute tables
3. Identification of features from Satellite Imageries
4. Use of Google Earth Pro for mapping purpose as well as for the detection of temporal changes of various geospatial features on the surface of the earth
5. Use of GPS for pointing out the location of samples collected during fieldwork, for collection of other spatial data such as latitude, longitude, altitude and other survey purposes

- Deliberation by **Dr. Kshitish Ch Majumdar, Ex- Scientist G (Director Grade), Centre for Cellular & Molecular Biology (CSIR), Hyderabad, India** delivered a storming workshop lecture on "An amazing story of the DNA, from double helix to CRISPR." CRISPR technology is a simple yet powerful tool for editing genomes. It allows researchers to easily alter DNA sequences and modify gene function. Its many potential applications include correcting genetic defects, treating and preventing the spread of diseases and improving crops. However, its promise also raises ethical concerns.

CONCLUSION

The event was basically designed to bring the teachers and researchers in ABN Seal College, Coochbehar on a single platform and share the information on teaching-cum-research strategies needed for effective professional development. The workshop covered various topics in the fields of science and geography and they were equipped with a deep understanding of the topics covered.

Participants took keen interest in practical work to acquire hands-on experience in the use of microscopy and handling of softwares on Bioinformatics and Geoinformatics. The participants actively took part in interactions during the workshop which helped themselves to build up confidence levels in the field of their discipline. Selected participants provided feedback about the workshop. The resource persons motivated the participants to undertake research in the field discussed so far. Dr. Binod Ch. Sharma, Organising Secretary presented concluding remarks. The formal vote of thanks on behalf of the organizing committee was proposed by Dr. Writuparna Chakraborty, Convener, Seminar and Research Committee. Dr. Bimal Kumar Saha, Officer-in-Charge, ABN Seal College announced the formal end to the conclusion of the workshop.

Valedictory Session

Dr. Binod Ch. Sharma, Organising Secretary presented concluding remarks. The formal vote of thanks on behalf of the organizing committee was proposed by Dr. Writuparna Chakraborty, Convener, Seminar and Research Committee. Dr. Bimal Kumar Saha, Officer-in-Charge, ABN Seal College formally concluded the workshop.

PHOTO GALLERY



National Workshop on Professional Development of Science Teachers and Researchers of Higher Educational Institutions
A. B. N. Seal College, Cooch Behar, (18-24 November, 2019)
Attendance sheet for participants

Sl. No.	NAME	DEPARTMENT	COLLEGE	SIGNATURE							
				18/11/19	19/11/19	20/11/19	21/11/19	22/11/19	23/11/19	24/11/19	
1.	Sumit Kishore	Zoology	A.B.N. Seal College								
2.	Arpana Saha	Chemistry	Talagang Mahavidyalaya								
3.	Arpana Mondal	Biology	A.B.N. Seal College								
4.	Ujjwal Kumar Bhattacharya	Physiology	A.B.N. Seal College								
5.	Dr. Ujjwal Choudhury	Physiology	A.B.N. Seal College								
6.	Arpana Das	Botany	A.B.N. Seal College								
7.	Dr. Subir Ray	Chemistry	Talagang Mahavidyalaya								
8.	Subir Das	Chemistry	A.B.N. Seal College								
9.	Mr. Faruk M.	Mathematics	A.B.N. Seal College								
10.	Ujjwal Saha	Physics	A.B.N. Seal College								
11.	Subir Mondal	Physics	A.B.N. Seal College								
12.	Ujjwal Kumar Mondal	Physics	A.B.N. Seal College								
13.	Arpana Das	Mathematics	A.B.N. Seal College								
14.	Subir Ray	Geography	A.B.N. Seal College								
15.	Ujjwal Choudhury	Physiology	A.B.N. Seal College								
16.	Subir Mondal	Geography	A.B.N. Seal College								
17.	Subir Kumar	Geography	A.B.N. Seal College								
18.	Rajendra Kumar	Mathematics	Dakshin College								
19.	Arpana Mondal	Chemistry	A. B. N. Seal College								
20.	Dr. Subir Choudhury	Zoology	Dakshin College								
21.	Subir Kumar Bhattacharya	Chemistry	A. B. N. Seal College								
22.	Dr. Arpana Das	Biology	A. B. N. Seal College								
23.	Subir Kumar Mondal	Mathematics	Kalyanpur College								
24.	Dr. Subir Das	Chemistry	Candrabhaga College								
25.	Mr. Ujjwal	Zoology	Dakshin College								
26.	Mr. Subir	Zoology	A.B.N. Seal College								
27.	Subir Kumar Datta	Physics	A.B.N. Seal College								
28.	Dr. Subir Das	Physics	Mathuranga College								
29.	Arpana Das	Geography	A.B.N. Seal College								
30.	Mr. C. K. Das	Geography	A.B.N. Seal College								
31.	Dr. Arpana Choudhury	Geography	A.B.N. Seal College								
32.	Mr. Subir	Physiology	A.B.N. Seal College								
33.	Dr. Subir Majumdar	Chemistry	Mathuranga College								
34.	Dr. Subir Ch. Choudhury	Biology	A.B.N. Seal College								
35.	Subir Mondal	Biology	Dakshin College								
36.	Subir Kumar	Geography	Dakshin College								
37.	Ujjwal Kumar Mondal	Zoology	Kalyanpur College								
38.											

Application of Remote Sensing and GIS in varied Fields on 23.11.2019

Seminar: “Application of Remote Sensing and GIS in varied Fields”

A Seminar entitled “Application of Remote Sensing and GIS in varied Fields” was organized by the Department of Geography held on 23-11-2019 in the Vidyasagar Sabhagriha, Centenary Building of the College; the Speaker was Dr. Deb Prakash Pahari, Scientific Officer, Department of Geography, University of Burdwan; 82 participants enthusiastically attended the lecture. The students listened with great interest as the subject matter dealt with the contemporary issues related to GIS and its application especially in connection with the security and scientific research of the country.



Felicitation of Dr. Deb Prakash Pahari by our esteemed faculty members



Group Photo of the students and faculty members with Dr. Deb Prakash Pahari

1st Orientation Programme on “Human Values and Professional Ethics” on 16.09.2019**BRIEF REPORT OF THE ACADEMIC PROGRAMMES ORGANISED BY THE DEPARTMENT OF PHILOSOPHY IN JULY 2019-JUNE 2020****1. 1st Orientation Programme:**

Department of Philosophy organised the 1st Orientation Programme on 16th September, 2019 from 12 Noon. The deliberation was on “Human Values and Professional Ethics”. Prof. Jyotish Chandra Basak, Professor, Department of Philosophy, North Bengal University discussed on the same. He elaborately explained the concept of values as depicted in both the Indian and Western thought. Then he discussed the definition and meaning of the term “Professional Ethics” and dealt with the different branches of professional ethics e.g. Medical ethics, Business ethics, Research ethics, Media ethics, ethics in Administration etc. The next step of his deliberation encompassed the standards for the behaviour and values of people working within all these specific fields. All the participants were highly enlightened by his deliberation. 70 students and 7 faculty members attended and 5 from the students asked very relevant questions on the relationship between different professions and human values and they interestingly pointed out towards some constraints in pragmatic field. All their queries were perfectly attended by Professor Basak. Total duration of the deliberation was 3 hours.



Fig: Rsource Person

Special Lecture on “Philosophy of Mind” on 06.02.2020

Report on Special Lecture:

A Special Lecture was organised by the Department of Philosophy on 6th February, 2020 from 10 am. Prof. Amita Chatterjee, Professor, Department of Philosophy, Jadavpur University delivered the lecture on “Philosophy of Mind”. Dr. Chatterjee was also the Director of Centre for Cognitive Science, Jadavpur. Philosophy of Mind or Cognitive Science is a very current trend in Philosophy. It is that branch of Philosophy that studies the ontology and nature of the mind and its relation with the body. Dr. Chatterjee elaborately dealt with the nature of mind, various mental properties, mental functions, mental events, consciousness and the nature of their relationship with the physical body. She mentioned the “Hard Problem of Consciousness” in her lecture and how the materialistic reductionism faces serious challenges in explaining the human consciousness in terms of the functions related to nerves, brain and neurons. It was an entirely fascinating session and lots of questions came from the audience. 60 students and 8 faculty members attended with rapt attention.



Prof. Chatterjee delivering her lecture