

# Add on Course

## Certificate Course on Recombinant DNA Technology

MEETING RESOLUTION BOOK			
Serial No. of Meeting: 26		Date of Meeting: 22.12.2023	
Venue of Meeting: Research Lab MBST Dept:		Time of Meeting: 2.30 PM	
Name of Members Present			
1	Abhishek Basu	9	17
2	Debjani Mandal	10	18
3	Shamshir Bhowmik	11	19
4	Prithu Potluri	12	20
5		13	21
6		14	22
7		15	23
8		16	24
RESOLUTIONS ADOPTED			
Serial No.	Notice for Meeting		
	A departmental meeting is convened on 22 <sup>nd</sup> of December, 2023 at 02:00pm in the departmental research lab to discuss about the followings.		
	i) Internal Assessment		
	ii) Result Analysis of 4 <sup>th</sup> Sem B.Sc. Honours.		
	iii) Departmental educational tour.		
	iv) Add on Course on RDT		
	Abhishek Basu		
	15/12/2023		
	Head and Assistant Professor dept. of Molecular Biology & Biotechnology Sripat Singh College Jaganj Murshidabad		

RESOLUTIONS ADOPTED	
Serial No.	Resolution
1.	4 <sup>th</sup> SEM B.Sc. Hons. result was as per expectation, where two students scored more than 8.0 CGPA. & two students scored more than 7.5 CGPA.
2.	Internal assessments (I & II) for all the semester Hons. & major students are completed. For PCC the assignments will be conducted by 1 <sup>st</sup> week of January.
3.	Departmental Educational tour will be organized to study the diversity in high altitudinal vegetation.
4.	A mentor mentee list for individual teachers will be prepared and submitted to IQAC.
5.	An Add on Course on Recombinant DNA Technology will be conducted.
	Abhishek Basu
	22/12/2023
	Head and Assistant Professor dept. of Molecular Biology & Biotechnology Sripat Singh College Jaganj Murshidabad

**Meeting resolution for conduction of Add on Course on RDT**



### Course Details

- Course Name: Recombinant DNA Technology
- Course Type: Certificate
- Course Duration: Six Weeks (35 hours)
- Eligibility Criteria: Honours in MBBT, Botany, Zoology with basic knowledge of Molecular Biology
- Intake Capacity: 20
- Intake Method: First Come First Serve
- Starting Date: 17 January 2024
- Course End Date: 28 February 2024
- Class Time: 10:00 am - 11:00 am
- Last Date for Registration: 15 January 2024
- Venue: Department of Molecular Biology & Biotechnology

### About Us

Established in 1982, Sripat Singh College's Molecular Biology and Biotechnology Department stands as the exclusive institution in Murshidabad dedicated to cultivating expertise in this field. With a comprehensive range of courses, including an honors program initiated in 2004, the department has seamlessly transitioned to the Semester system under CBCS since 2018-19. Affiliated with the esteemed University of Kalyani, our students consistently achieve top ranks, paving the way for advanced studies in renowned institutions such as IIT, IISER, JNU, CU, JU, and more.



**Course Coordinator:**  
Ms. Debjani Mandal, M.Sc.  
Assistant Professor  
Department of Molecular Biology & Biotechnology, Sripat Singh College



**Joint Course Coordinator:**  
Dr. Abhishek Basu, M.Sc., PhD  
Assistant Professor  
Department of Molecular Biology & Biotechnology, Sripat Singh College

**Course administrator**  
Mr. Shyam Sundar Sett  
9874128666  
[Registration link](https://forms.gle/MAT2mHZWr6xL7zXB8)  
<https://forms.gle/MAT2mHZWr6xL7zXB8>

### Certificate Course on Recombinant DNA Technology



**Organised by:** Department of Molecular Biology & Biotechnology in collaboration with IQAC & Career Development Counselling & Placement Cell of Sripat Singh College

An Add on Course on the topic ‘Recombinant DNA Technology’ was conducted by the Department of Molecular Biology and Biotechnology. Twenty one students from different departments, like Zoology, Botany and Molecular Biology and Biotechnology, registered in the course.

Timestamp	Name	Semester	Department	Year	Email	Mobile Number	WhatsApp Number	Join grou
1/12/2024 17:43:24	Barnali Bajpayee	5th semester	MBBT	2023-24	barnalibajpayee@gma	7478297586	7478297586	
1/12/2024 17:44:37	Shiladitya Biswas	3rd semester	MBBT	2023-24	shiladityabiswas22@g	9832200295	9832200295	
1/12/2024 17:44:49	Shraban Haldar	5th	MBBT	2023-24	shrabanalalghola@gmail	9883801764	9883801764	
1/12/2024 17:44:54	Dipan Singha	5th Semester	MBBT	2023-24	singhadipan999@gma	6295742348	6295742348	
1/12/2024 17:45:30	BISWARUP NANDI	3RD SEMESTER	MBBT	2023-24	okbiswarupnandi@gm	8927944607	8927944607	Joined
1/12/2024 17:45:47	Prongamita Saha	3rd semester	MBBT	2023-24	pmsaha23@gmail.com	8001172283	8001172283	
1/12/2024 17:46:01	SUBHAM DAS	5th semester	MBBT	2023-24	subhamdas2728@gm	7029392728	7029392728	
1/12/2024 17:46:10	Soham Das	3rd semester	MBBT	2023-24	sohamd689@gmail.co	7602756449	7602756449	
1/12/2024 17:46:41	Nirmalya Sarkar	3rd	MBBT	2023-24	sarkarnirmalya007@gr	9832873118	9832873118	
1/12/2024 18:31:08	Mouli Ghosh	3rd Semester	MBBT	2023-24	ghoshmouli780@gmai	7797747284	7797747284	
1/15/2024 12:34:11	SURAJIT HALDAR	3rd SEMESTER	Botnay	2023-24	srllegend99@gmail.cc	8391909794	8391909794	
1/15/2024 14:34:54	Fankul Hoque	3rd semester	Botnay	2023-24	hoquetuhin360@gmail	9635318115	9635318115	
1/15/2024 21:51:09	Nilesh Karmakar	3rd	Zoology	2023-24	nilukarmakar51@gmai	9932847593	9932847593	Yes
1/15/2024 21:54:27	ANISUZZAMAN	3rd	Zoology	2023-24	anisuzzamanrohit@gr	8759206647	8759206647	Joined
1/15/2024 22:18:01	Bidisha Das	5th semester	Zoology	2023-24	bidishadas255@gmail	8371833416	8371833416	
1/15/2024 22:18:12	Arian hoque	3rd	Zoology	2023-24	arianhoque600@gmail	6296259089	6296259089	Joined
1/15/2024 23:23:26	Tamanna Islam	3rd semester	Botnay	2023-24	tamannaislamig2021@	9064374128	8327305427	
1/15/2024 23:28:36	Nikita Ghosh	3rd semester	Zoology	2023-24	nikitaghosh120@gmai	7585032830	7585032830	
1/15/2024 23:42:44	Sayan Gupta	3rd	Zoology	2023-24	sayangupta29@gmail	9339747981	9339747981	

**Students registered in the course**

**Course-** Recombinant DNA Technology

**Course code:** RDT 01

**Offered by:** Department of Molecular Biology and Biotechnology, Sripat Singh College

**Course Instructor:** Ms. Debjani Mandal and Dr. Abhishek Basu

**Course Structure:** Theory (20 hour) + Practical (15 hour)

**Course Duration:** 6 Week

**Mode of Instruction:** Blended mode

**Mode of Evaluation:** Course End Examination + Participation in Practical Classes

**Syllabus**

**Module I**

**10 hour**

Restriction Enzymes and Restriction Modification System, Type of Vectors, Cloning and Expression hosts, Gene cloning, Transformation and Protein expression, Use of Selection Marker

**Module II**

**10 hour**

Gel electrophoresis- Agarose and Polyacrylamide Gel Electrophoresis, Southern blot, Northern blot, DNA Fingerprinting, Polymerase Chain Reaction, DNA Sequencing

**Practical**

**15 hour**

- Isolation of Plasmid DNA
- Isolation of Genomic DNA
- Agarose Gel electrophoresis
- Polymerase Chain Reaction (demonstration)
- Polyacrylamide Gel Electrophoresis (demonstration)

**SUGGESTED READING**

1. Brown TA. Gene Cloning and DNA Analysis. Blackwell Publishing, Oxford, U.K.
2. Primrose SB and Twyman RM. Principles of Gene Manipulation and Genomics, Blackwell Publishing, Oxford, U.K.

*Abhishek Basu*  
Head and Assistant Professor  
Dept. of Molecular Biology & Biotechnology  
Sripat Singh College  
Jaganj, Murshidabad

*Debjani Mandal*  
Assistant Professor  
Dept. of Molecular Biology  
and Biotechnology  
Sripat Singh College, Jaganj, Med.

*Dr. Kamal Krishna Sarkar*  
10.8.23  
DR. KAMAL KRISHNA SARKAR  
Principal  
Sripat Singh College  
Jaganj, Murshidabad

**Syllabus of the course**

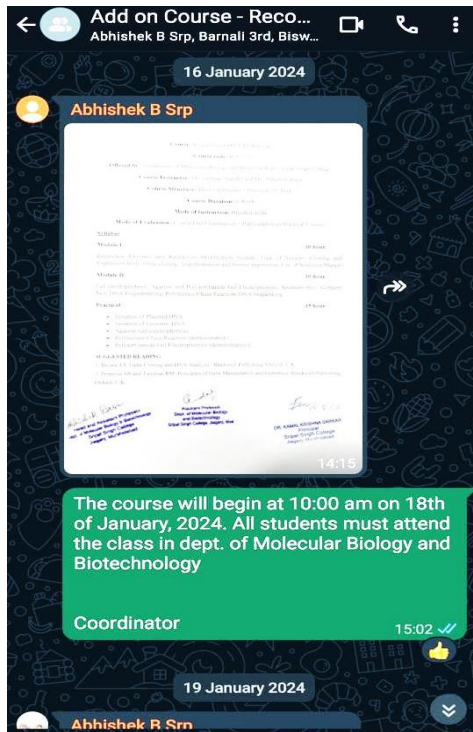
The course started on 17<sup>th</sup> of January, 2024 in the department. The course was inaugurated by the course coordinator Ms. Debjani Mandal and the joint course coordinator Dr. Abhishek Basu. The theory and practical classes of the course included hands on training, one to one student-teacher

interaction, presentation, etc. Both the course coordinators delivered series of lectures on different units of the topic Recombinant DNA Technology. Practical classes were organized on PCR, Restriction Digestion, Gel Electrophoresis, Plasmid and Genomic DNA Isolation, etc.

Fact Sheet									
Add on Course on Recombinant DNA Technology									
Organised by: Department of Molecular Biology & Biotechnology, IQAC & Career Development Counselling & Placement Cell of Sripat Singh College									
Sl	Name	Date	Present/Absent	Topic Covered	Class duration	In time	Out time	Practical/T heoretical	Signature of the teacher
		22/01/2024							
1	Barnali Bajpayee		P	Transformation	1 hour	10:00am	11:00am	Theoretical	(Signature) 22/1/24
2	Shiladitya Biswas		P	Transformation	1 hour	10:00am	11:00am	Theoretical	(Signature) 22/1/24
3	Shraban Halidar		P	"	"	"	"	"	(Signature) 22/1/24
4	Dipan Singha		P	"	"	"	"	"	(Signature) 22/1/24
5	Biswarup Nandy		P	"	"	"	"	"	(Signature) 22/1/24
6	Prongamita Saha		P	"	"	"	"	"	(Signature) 22/1/24
7	Subham Das		P	"	"	"	"	"	(Signature) 22/1/24
8	Soham Das		P	"	"	"	"	"	(Signature) 22/1/24
9	Nirmalya Sarkar		P	"	"	"	"	"	(Signature) 22/1/24
10	Mouli Ghosh		P	"	"	"	"	"	(Signature) 22/1/24
11	Surajit Halidar		P	"	"	"	"	"	(Signature) 22/1/24
12	Farikul Hoque		P	"	"	"	"	"	(Signature) 22/1/24
13	Nilesh Karmakar		A	"	"	"	"	"	(Signature) 22/1/24
14	Anisuzzaman		P	"	"	"	"	"	(Signature) 22/1/24
15	Bidisha Das		P	"	"	"	"	"	(Signature) 22/1/24
16	Arian hoque		P	"	"	"	"	"	(Signature) 22/1/24
17	Tamanna Islam		P	"	"	"	"	"	(Signature) 22/1/24
18	NIKITA Ghosh		P	"	"	"	"	"	(Signature) 22/1/24
19	Sayan Gupta		P	"	"	"	"	"	(Signature) 22/1/24
20									

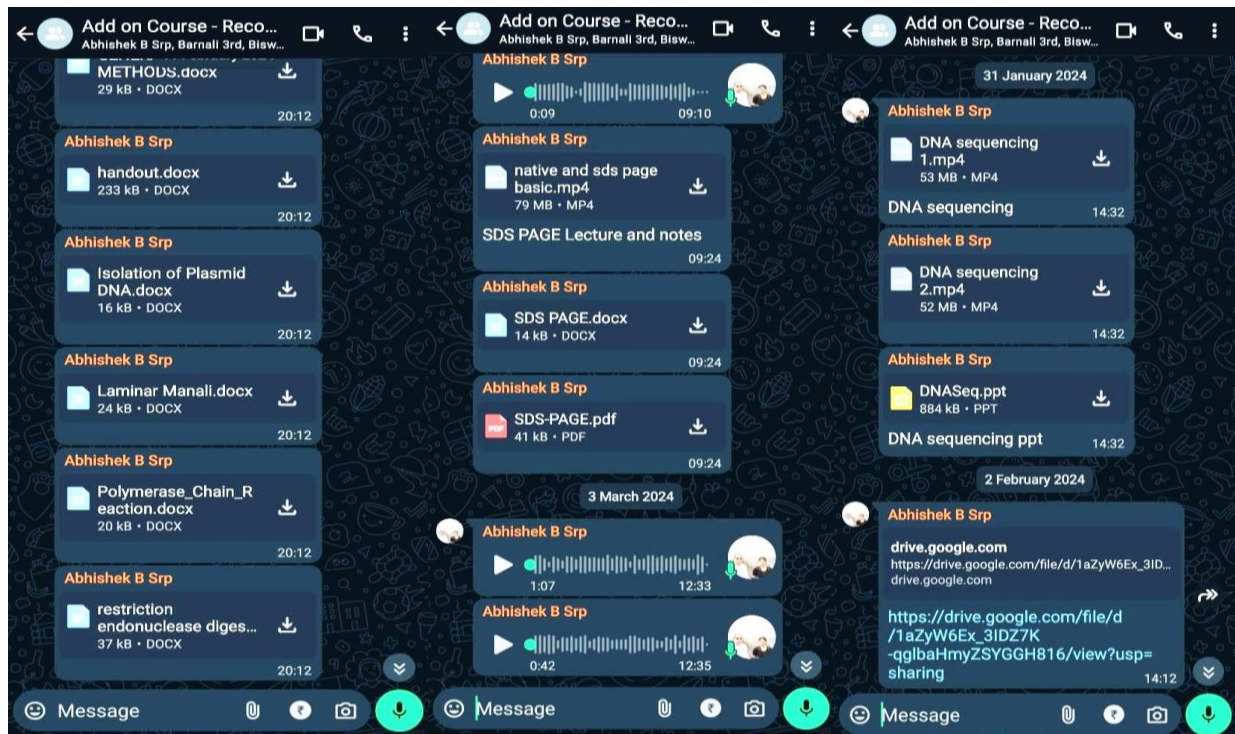
Fact Sheet									
Add on Course on Recombinant DNA Technology									
Organised by: Department of Molecular Biology & Biotechnology, IQAC & Career Development Counselling & Placement Cell of Sripat Singh College									
Sl	Name	Date	Present/Absent	Topic Covered	Class duration	In time	Out time	Practical/T heoretical	Signature of the teacher
		24/01/2024		PCR	1 hr.	10:00am	11:00am	Theoretical	Abhishek Basu
1	Barnali Bajpayee	24/01/2024	P	"	"	"	"	"	Abhishek Basu
2	Shiladitya Biswas	24/01/2024	P	"	"	"	"	"	Abhishek Basu
3	Shraban Halidar	24/01/2024	P	"	"	"	"	"	Abhishek Basu
4	Dipan Singha	24/01/2024	P	"	"	"	"	"	Abhishek Basu
5	Biswarup Nandy	24/01/2024	P	"	"	"	"	"	Abhishek Basu
6	Prongamita Saha	24/01/2024	P	"	"	"	"	"	Abhishek Basu
7	Subham Das	24/01/2024	P	"	"	"	"	"	Abhishek Basu
8	Soham Das	24/01/2024	P	"	"	"	"	"	Abhishek Basu
9	Nirmalya Sarkar	24/01/2024	P	"	"	"	"	"	Abhishek Basu
10	Mouli Ghosh	24/01/2024	P	"	"	"	"	"	Abhishek Basu
11	Surajit Halidar	24/01/2024	P	"	"	"	"	"	Abhishek Basu
12	Farikul Hoque	24/01/2024	P	"	"	"	"	"	Abhishek Basu
13	Nilesh Karmakar	24/01/2024	P	"	"	"	"	"	Abhishek Basu
14	Anisuzzaman	24/01/2024	P	"	"	"	"	"	Abhishek Basu
15	Bidisha Das	24/01/2024	P	"	"	"	"	"	Abhishek Basu
16	Arian hoque	24/01/2024	P	"	"	"	"	"	Abhishek Basu
17	Tamanna Islam	24/01/2024	P	"	"	"	"	"	Abhishek Basu
18	Nikita Ghosh		A						
19	Sayan Gupta		A						
20									

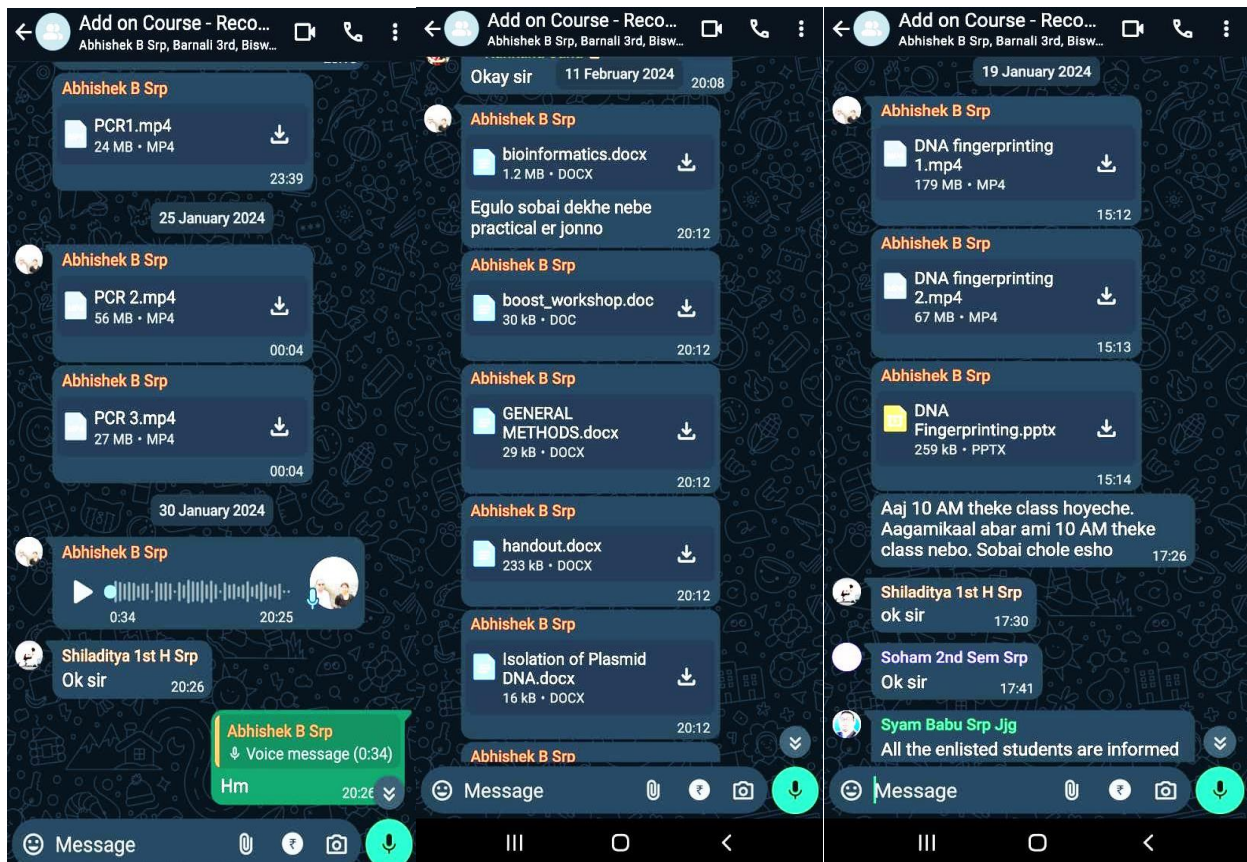
Attendance sheet of Students



Notification regarding commencement of the course

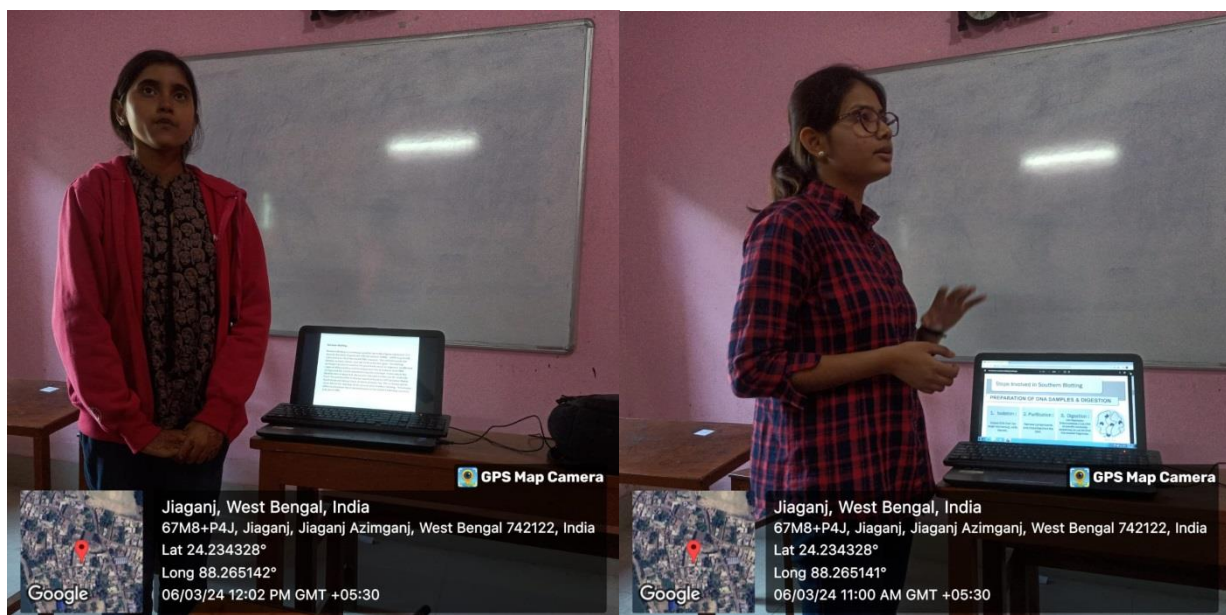
[https://www.youtube.com/playlist?list=PL7E\\_ArQyHd\\_FkmWDj58Bq6S46unKzq4lu](https://www.youtube.com/playlist?list=PL7E_ArQyHd_FkmWDj58Bq6S46unKzq4lu)

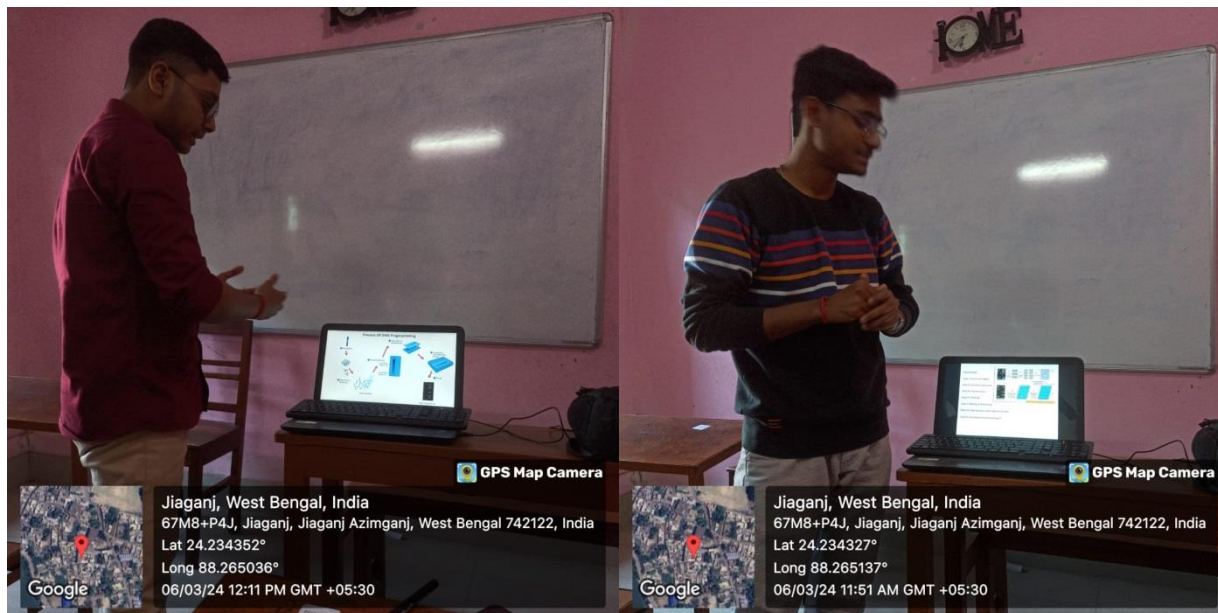




### Study material shared to the students

Students were evaluated on the basis of their performance in viva-voce and PPT presentation on 6<sup>th</sup> of March, 2024. Each students delivered short presentation (10 minutes) on particular unit of Recombinant DNA Technology.





### Students giving presentation on 6<sup>th</sup> of March, 2024

The students were evaluated on the basis of their performance in the presentation and viva voce. The best presenter and best performer of the course were awarded with memento. Course completion certificate was given to all the students.



**Dr. Abhishek Basu, Joint Course Coordinator, conducting the certificate distribution programme.**



**Participants attending the certificate distribution programme**



**Dr. Kamal Krishna Sarkar, Principal, Sripat Singh College, inspiring the students through a short speech.**





**Best presenter and best performer were awarded with memento**



**Certificate distribution to the students**



Sample copy of the certificate



Ms. Debjani Mandal, Course Coordinator, delivering her valedictory speech

The students and faculty members highly appreciated the classes and provided positive feedback about the Add on Course. They also demanded for more of such courses. The course ended with the valedictory session by Ms. Debjani Mandal.

## **Course Outcomes**

1. Students became more competent in the subject Biotechnology.
2. Students gained the theoretical knowledge on different modules of RDT.
3. The students learned the basic experimental techniques of classical and modern RDT.
4. They could isolate genomic and plasmid DNA from bacteria.
5. They also learned the process of transformation of bacteria with recombinant vector.
6. Students were given demonstration on PCR.