

### 1. Add-on course

The Department has taken a decision to start an Add-on course from March 2024, with

Student intake = 20.

Theory credit = 30

Practical credit= 20

Topic- Tools and techniques in applied Biology

Duration- 3months

MEETING - DISCUSSION ON OPENING AN ADD-ON COURSE

AGENDA

DATE - 22 DEC 2023

VENUE - DEPT. OF BIOTECHNOLOGY, PANDU COLLEGE.

Today, on 22 December 2023, a meeting and discussion was done for opening an add-on course in the Department of Biotechnology, Pandu College.

It is discussed that an add-on course should be started soon, if the formalities meet.

A course on 'Tools and techniques in applied Biology' can be started soon.

Attendees

Signature

① Dr. Aniruddha Sarma

~~AS~~ 22/12/23

② Dr. Anjan Barman

A 22/12/23

③ Ms. Anjuma Begum

abegum 22-12-23

④ Ms. Dhriamari Das

Dhriamari Das  
22/12/23

## SYLLABUS

**Title of the Add-On Course: Analytical tools for Biological Sciences**

**Course duration: 03 Months (February-April, 2024]**

**Credit Hours: 30 (Theory) +20 (Practical)**

**Maximum no of students: 20**

### **Unit I**

**Credit Hours: 09**

Basic concept of pH, buffer, measurement of pH, pH meter basics. Fundamentals of microscopy and utilities of microscopic techniques.

### **Unit II**

**Credit Hours: 09**

Principles of centrifugation, types of centrifugation techniques, utilities. General principle of chromatography.

### **Unit III**

**Credit Hours: 12**

Fundamentals of electrophoresis. Electrophoresis of biomolecules- e.g. nucleic acids, proteins. Restriction digestion of nucleic acids. Isolation/purification of plasmid DNA.

### **Practicals**

**Credit Hours: 20**

1. Preparation of Buffer
2. Measurements of pH of different biological samples
3. Microscopic studies of biological samples/organisms
4. Demonstration of centrifugation technique
5. Electrophoresis of DNA
6. Restriction digestion of plasmid/DNA

To,

Dated: 22/02/2024

The Principal,  
Pandu College, Ghy-12

**Subject:** Regarding approval of 'Add-on course' entitled "**Analytical tools for Biological Sciences**"

Sir,

The Department of Biotechnology, Pandu College, is pleased to introduce an 'Add-on' course entitled "**Analytical tools for Biological Sciences**" from February, 2024 onwards. The course details and syllabus of the same is being attached herewith for your kind information.

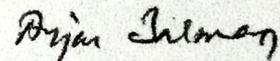
Sir, this is placed before you for your kind approval.

With kind regards



(Dr Aniruddha Sarma)

Head, Dept of Biotechnology



(Dr Anjan Barman)

Course Coordinator

Dept. of Biotechnology

## NOTICE

The Department of Biotechnology, Pandu College is going to start an 'Add-on' course on "Analytical tools for Biological Sciences" effective from February 1<sup>st</sup>, 2024 onwards. The course is of **50 Credit hours** [30 (theory) + 20 (practical)] and duration of the same is **03 (Three)** months. Interested students are hereby advised to enroll in the course on or before **30<sup>th</sup> of January, 2024**.

**Seat Capacity: 20 (Twenty)**

**Course Fee: Rs 200.00 (per student)**

*Dr Aniruddha Sarma*  
24/01/2024

Dr Aniruddha Sarma

Head, Dept. of Biotechnology

*Anjan Barman*

Dr Anjan Barman

Course Coordinator

Dept. of Biotechnology

Name of the Add on Course : Analytical tools for Biological Sciences

Department : Biotechnology

Session : February, 2024 to April, 2024

Duration of the course : 30 days

Sl. No.	Name of Student	Roll No.	Date of Enrollment	Signature of Student
1.	Prayashi Das.	UA-211-028-0324	29/01/2024	Prayashi Das.
2.	Armina Parbin	UA-211-028-0320	29/01/2024	Armina
3.	Neha Bharali	UA-211-028-0391	29/01/2024	Neha
4.	Bishal Thakuria	UA-211-028-0382	29/01/2024	Bishakuria
5.	Soi Malakar.	UA-211-028-0385	29/01/2024	Soi
6.	Sushorita Paul.	UA-211-028-0398	29/01/2024	Sushorita Paul.
7.	Higangkshi Das	UA-211-028-0384	29/01/2024	Higangkshi Das.
8.	ABHISHEK KUMAR DEB	UA-211-028-0377	29/01/2024	Abhishek
9.	BHARGAV KUMAR	UA-211-028-0381	29/01/2024	Bhargav Kumar
10.	Amrit De	UA-211-028-0378	29/01/2024	Amrit De
11.	Mazharul Islam	UA-211-028-0380	30/01/2024	Mazharul Islam
12.	PANKAJ SARMA	UA-211-028-0382	30/01/2024	Pankaj Sarma
13.	Dimple Das	UA-211-028-0384	30/01/2024	Dimple Das
14.	Trishna moni thakoi	UA-211-028-0379	30/01/2024	Trishna thakoi
15.	Himankshi swarajdas	UA-211-028-0388	30/01/2024	Himankshi swaraj
16.	Suman. Prasad Talukdar	UA-211-028-0377	30/01/2024	Suman P. Talukda
17.	Bosangsa Rabha	UA-211-029-0393	30/01/2024	Bosangsa Rabha
17.	Shujani Paul	UA-211-028-0396	01/02/2024	Shujani Paul
19.	Nayan Jyoti Basumatary	UA-211-028-0390	01/02/2024	Nayan Jyoti
20.	Bristi Kalita	UA-211-028-0383	01/02/2024	Bristi Kalita
21.	Arijit Palhak	UA-211-028-0399	01/02/2024	Arijit Palhak

Arijit Palhak 01/02/2024  
Course Coordinator

01/02/2024  
Head of the Department

### **Brief Report on the completed Add On Course**

Department of Biotechnology, Pandu College, Ghy-12 had initiated a short term Add-on course entitled “**Analytical tools for Biological Sciences**”, open for the undergraduate (UG) students of Biological Sciences of the college. The course is of 50 credit hours duration that includes 30 credit hours for theory and 20 credit hours for practicals/demonstrations. The course had commenced from 1<sup>st</sup> of February, 2024 and was completed on 30<sup>th</sup> of April, 2024. In total, **seventeen (17)** numbers of students had enrolled in the course and were found eligible for obtaining ‘Completion’ Certificates.

After completion of this course, students are expected to develop key understandings of basic techniques/tools that are utilized for analyses of biological samples/organisms. The course is further anticipated to train the students for working with some basic instruments/equipments available in laboratories engaged in biological/biochemical research.



Syllabus Course  
ON  
**Analytical Tools For  
Biological Sciences**  
Course Duration: 30 Hrs (Theory)  
20 Hrs (Practical)  
Department of Biotechnology  
Pandu College, Majgaon, Guwahati-781012

 **GPS Map Camera**



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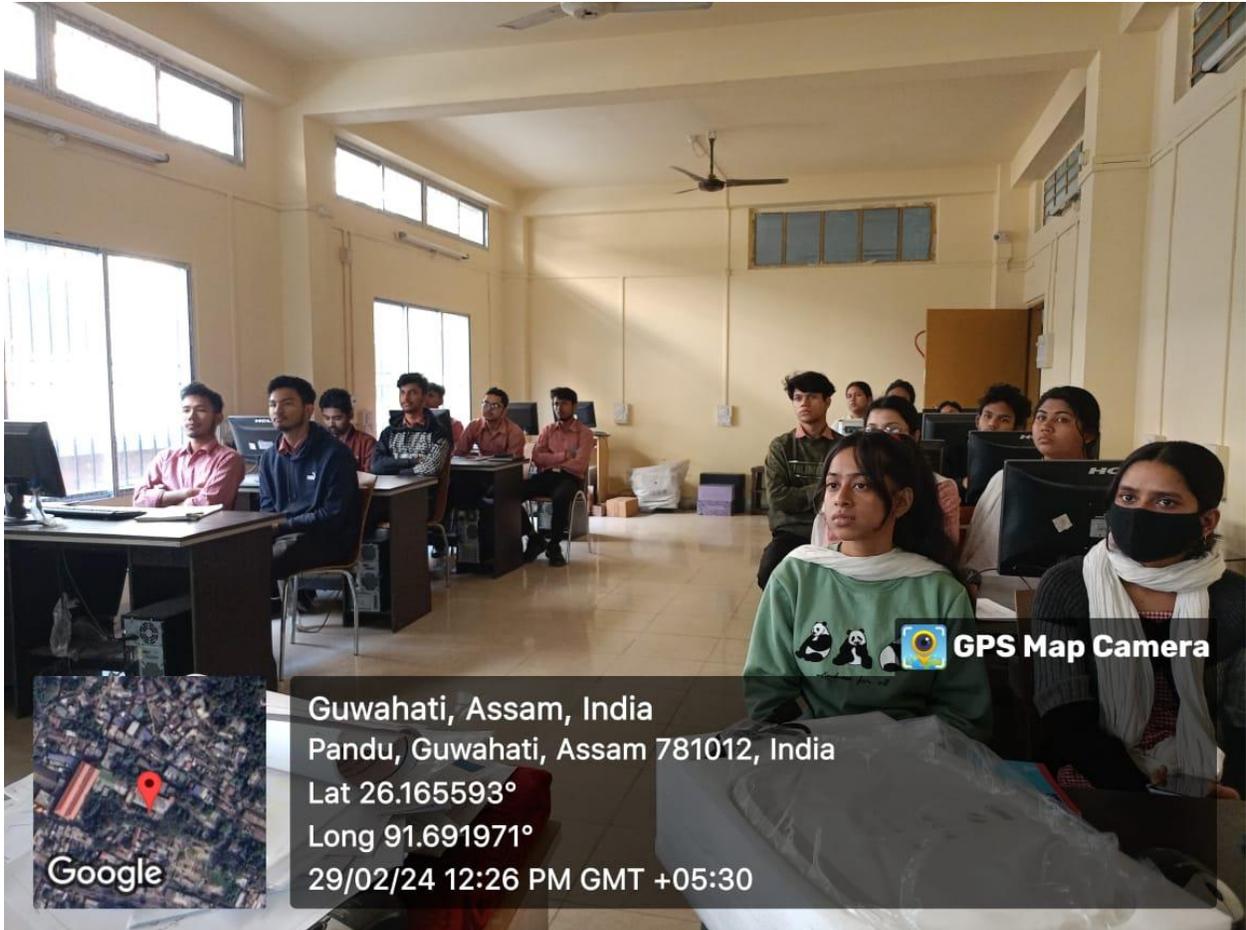
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 **GPS Map Camera**

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