

### LIST OF CERTIFICATE PROGRAMS

A. Y: 2019-2020

S. NO.	NAME OF THE PROGRAM	DATE	NO OF STUDENTS PARTICIPATED
1	A Two Week Add-On Program on Mobile Application Development	01.08.2019 To 19.08.2019	70
2	A Two Week Add-On Program on Cyber Physical System	10.02.2020 To 17.02.2020	56
3	A Two Week Add-On Program on The Biological Impact of Pesticides and Fertilizers	05.08.2019 To 22.08.2019	113
4	A Two Week Add-On Program on Food Spoilage Microbes	02.12.2019 To 18.12.2019	110
5	A Two Week Add-On Program on Gene Manipulation for Advancement	02.09.2019 To 19.09.2019	58
6	A Two Week Add-On Program on Microbial Quality Control on Drinking Water and Food	06.09.2019 To 23.09.2019	30



**DIRECTOR**

Director  
MITS School of Biotechnology  
Bhubaneswar



Date: 22-07-2019

## CIRCULAR

It is hereby informed to all final/pre-final year students of BCA that the Department of Computer Science of this institute is conducting a Two Week Add-On program on **MOBILE APPLICATION DEVELOPMENTS** from **01-08-2019** to **19-08-2019**. Interested students shall register their names at the office of the coordinator on or before 4 PM, **27-07-2019**.




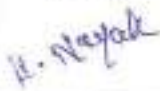


**Venue of the Programme** : Conference Hall, MITS School of Biotechnology.

**Coordinator** : **Prof. Kabita Sahoo**  
Asst. Professor  
Department of Computer Science  
MITS School of Biotechnology

  
**DIRECTOR**

Director  
MITS School of Biotechnology  
Bhubaneswar

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CE: For information					

## REGISTRATION FORM

Name.....

Course.....Yr(1/2/3)

Roll No.....

Institution.....

Address for Communication:

.....

.....

.....

Mobile.....

Email.....

Signature

Application to be submitted online in the above format along with the scanned copy of the registration form.

Last Date of Registration: 27.07.2019

Email: kabitasahoo789@gmail.com

**Address for Communication**

**Prof. Kabita Sahoo**  
Coordinator, Asst Professor  
Contact: +91-8908232258

**Chief Patron**

**Er. Sriram Panda**  
Chief Executive  
MITS Group

**Patron**

**Dr. G.K. Panda**  
Director  
MITS School of Biotechnology

**Convenor**

**Dr. Tapaswini Nayak**  
Head  
Dept. of Computer Science

**Coordinator**

**Prof. Kabita Sahoo**  
Asst Professor  
Dept. of Computer Science

**Advisory Committee**

**Prof. Benu Madhab Rath**  
Dept. of Computer Science

**Dr. Manisha Patnaik**  
Dept. of Biotechnology

**Dr. Mousumi Mishra**  
Dept. of Biotechnology

**A TWO-WEEK ADD-ON  
PROGRAMME  
ON**



**MOBILE APPLICATION  
DEVELOPMENTS**

Programme Schedule

01-08-2019 To 19-08-2019



Organized By:

**मिड्स जैव प्रौद्योगिकी संस्थान**  
**MITS SCHOOL OF BIOTECHNOLOGY**

Venue:

2(P), Infocity, Patia  
Bhubaneswar-751024 (Odisha)  
Website: msb.ac.in  
Email: principal@msb.ac.in

## About College

Consistently ranking as the best institute in the eastern part of India, MITS School of Biotechnology (MSB) is a self financing professional organisation that was founded in 2003. The faculty consists of having qualification of PhD, M.Tech as well as experience in both Academics and industrial research, so as the student graduates, who are equally impressive mostly working in leading industries of Biotechnology, Pharma and IT. MSB is considered to be most selective, accepting, growing and proven institute under Utkal University. The institute is located at the prime location of Infocity, Bhubaneswar. This prestigious Institute includes popular programs of Biotechnology, Applied Micro Biology and Computer Science.

## Courses Offered at MSB

BCA	- 3 Years
B.Sc Biotechnology	- 3 Years
M.Sc Biotechnology	- 2 Years
M.Sc App. Microbiology	- 2 Years

## About Programme

Mobile application development is the process of making software for smart phones, tablets and digital assistants, most commonly for the Android and iOS operating systems. The software can be preinstalled on the device, downloaded from a mobile app store or accessed through a mobile web browser. The programming and markup languages used for this kind of software development include Java, Swift, C# and HTML. From retail, tele-communications and e-commerce to insurance, healthcare and government, organizations across industries must meet user expectations for real-time, convenient ways to conduct transactions.



## Objective of the Programme

The objectives of mobile development encompass creating applications that offer seamless user experiences across various devices and platforms. This involves designing intuitive interfaces, optimizing performance for different screen sizes with diverse operating systems .



## Resource Person

**R Behera**  
Head, Dept. of Computer Science  
MSB, Bhubaneswar



# मिटस जैव प्रौद्योगिकी संस्थान MITS SCHOOL OF BIOTECHNOLOGY

Date: 31-07-2019

## REGISTERED STUDENT LIST

Name of the Programme: A Two-Week Add-On Program on **MOBILE APPLICATION DEVELOPMENT**  
01-08-2019 to 19-08-2019

SN	Reg. No	Name of the Student	Year Branch	Signature
1	Y19UC01	ABHISEK KU. DUTTA	BCA	Abhisek Kumar Dutta
2	Y19UC02	AMIT KUMAR SIA	BCA	Amit Kumar Sia
3	Y19UC03	AMIT PRADHAN	BCA	Amit Pradhan
4	Y19UC04	ANIL KU. SRICHANDAN	BCA	Anil Ku. Srichandan
5	Y19UC05	ASHISH PATRA	BCA	Ashish Patra
6	Y19UC06	ASIFA AFRIN	BCA	Asifa Afrin
7	Y19UC07	AYUSHMITA DAS	BCA	Ayushmita Das
8	Y19UC08	BADAL KUMAR MANTRY	BCA	Badal Kumar Mantry
9	Y19UC09	BHABANI JENA	BCA	Bhabani Jena
10	Y19UC10	BISWAJIT PANDA	BCA	Bishwajit Panda
11	Y19UC11	BISWANATH BASTIA	BCA	Biswanath Bastia
12	Y19UC12	CHANDAN THATOI	BCA	Chandan Thatoi
13	Y19UC13	D.SUMAN	BCA	D-SUMAN
14	Y19UC14	DEBASISH SENAPATI	BCA	Debasish Senapati
15	Y19UC15	DIPEN SANKAR NAYAK	BCA	Dipen Sankar Nayak
16	Y19UC16	ETISHA BASANTRA	BCA	Etisha Basantra
17	Y19UC17	G.PUSPANJALI READY	BCA	G. Puspanjali Ready
18	Y19UC18	HELEN PATRA	BCA	Helen Patra
19	Y19UC19	JAYANTA MOHANTY	BCA	Jayanta Mohanty
20	Y19UC20	JITEN KUMAR BANUA	BCA	Jites Kumar Banua
21	Y19UC21	KHUSHBU KUMARI	BCA	Khushbu Kumari
22	Y19UC22	KHUSHI SHARMA	BCA	Khushi Sharma
23	Y19UC23	KRISHNA CH. NANDA	BCA	Krishna Ch. Nanda
24	Y19UC24	LUSY SHARMA	BCA	Lusy Sharma
25	Y19UC25	NILANCHAL SAHU	BCA	NILANCHAL SAHU
26	Y19UC26	PABITRA DAS	BCA	Pabitra Das
27	Y19UC27	PINKY KUMARY SAHANI	BCA	Pinky Kumary Sahani
28	Y19UC28	PRIYAMBADA SAR	BCA	Priyambada Sar
29	Y19UC29	RAJAT KUMAR MAHARANA	BCA	Rajat Kumar Maharana
30	Y19UC30	RAJESH KUMAR BARAL	BCA	Rajesh Kumar Baral

31	Y19UC31	RAKESH PRAJAPATI	BCA	Rakesh Prajapati
32	Y19UC32	RASHMIDATTA MISHRA	BCA	Rashmi datta Mishra
33	Y19UC33	ROJANIL MAHAPTRA	BCA	Rojanil Mahapatra
34	Y19UC34	SATYAKI RANJAN PATRA	BCA	Satyaki Ranjan Patra
35	Y19UC35	SATYASARBAJIT BEHARA	BCA	SATYASARBAJIT BEHERA
36	Y19UC36	SHILPA JANA	BCA	Shilpa Jana
37	Y19UC37	SHIMAY KUMARA SAHOO	BCA	Shimay Kumara Sahoo
38	Y19UC38	SHRADHASHREE NAYAK	BCA	Shradhashree Nayak
39	Y19UC39	SOUVAGYA DAS	BCA	Souvagya Das
40	Y19UC40	SRIDHAR SHUBUDHI	BCA	SRIDHAR - Shubudhi
41	Y19UC41	SRIPATI HEMA	BCA	Sripati hema.
42	Y19UC42	SRISHTI RAJ	BCA	Srishti Raj
43	Y19UC43	SRUTI RANJAN PRADHAN	BCA	Sruti Ranjan Pradhan
44	Y19UC44	SUBBHALAXMI ROUIT	BCA	Subbhalaxmi Rout
45	Y19UC45	SUBHASHISH NAYAK	BCA	SUBHASHISH NAYAK
46	Y19UC46	SUBRAT KUMAR BEHARA	BCA	Subrat Ku. Behera
47	Y19UC47	SUDIPTA NAIK	BCA	Sudipta Naik
48	Y19UC48	SUNIL KUMAR SAHOO	BCA	sunil kumar saho
49	Y19UC49	SWAYAMPBABHA SWAIN	BCA	Swayampbabha Swain
50	Y19UC50	SWETA PANDA	BCA	Sweta panda

  
COORDINATOR

  
HOD

  
DIRECTOR  
MITS School of Biotechnology  
Bhubaneswar

Date: 01-08-2019

### REGISTERED STUDENT LIST

Name of the Programme: A Two-Week Add-On Program on **MOBILE APPLICATION DEVELOPMENT**  
01-08-2019 to 19-08-2019

SN	Reg. No	Name of the Student	Year Branch	Signature
51	Y19UC51	ALOK KU. NAYAK	3 <sup>rd</sup> Year BCA	Alok Ku. Nayak
52	Y19UC52	AMIT KU. PANDA	3 <sup>rd</sup> Year BCA	Amit Ku. Panda
53	Y19UC53	ASHISH KU. DALAI	3 <sup>rd</sup> Year BCA	Ashish Ku. Dalai
54	Y19UC54	DIBYA RANJAN JENA	3 <sup>rd</sup> Year BCA	Dibya R. Jena
55	Y19UC55	DIBYAJYOTI PATTANAYAK	3 <sup>rd</sup> Year BCA	Dibyajyoti Pattanayak
56	Y19UC56	HARE KRISHNA PAUL	3 <sup>rd</sup> Year BCA	Hare Krishna Paul
57	Y19UC57	JAGESHWAR KUMAR	3 <sup>rd</sup> Year BCA	Jageshwar Kumar
58	Y19UC58	LALAJI MAHARANA	3 <sup>rd</sup> Year BCA	Lalaji Maharana
59	Y19UC59	MALL MOHANISH	3 <sup>rd</sup> Year BCA	Mall Mohanish
60	Y19UC60	MONALISHA SWAIN	3 <sup>rd</sup> Year BCA	Monalisha Swain
61	Y19UC61	PRABHAT PRITY RANJAN BHOI	3 <sup>rd</sup> Year BCA	Prabhat Prity Ranjan Bhoi
62	Y19UC62	SAMBIT KUMAR SAHOO	3 <sup>rd</sup> Year BCA	Sambit Ku. Sahoo
63	Y19UC63	SANDIP KUMAR DAS	3 <sup>rd</sup> Year BCA	Sandip Kumar Das
64	Y19UC64	SASMITA SWAIN	3 <sup>rd</sup> Year BCA	Sasmita Swain
65	Y19UC65	SIBHADATTA SAHOO	3 <sup>rd</sup> Year BCA	Subhadatta Sahoo
66	Y19UC66	SOUMITRI SAHOO	3 <sup>rd</sup> Year BCA	Soumitri Sahoo
67	Y19UC67	SUBHENDU PATTNAYAK	3 <sup>rd</sup> Year BCA	Subhendu Pattanayak
68	Y19UC68	SUBHRANHA BISWAL	3 <sup>rd</sup> Year BCA	Subhranha Biswal
69	Y19UC69	SUVENDU SEKHAR SAMAL	3 <sup>rd</sup> Year BCA	Suwendu Sekhar Samal
70	Y19UC70	SWARNALATA SAHOO	3 <sup>rd</sup> Year BCA	Swarnalata Sahoo

K. Sahoo  
COORDINATOR

M. Sahoo  
HOD

C. Sahoo  
DIRECTOR  
MITS School of Biotechnology  
Bhubaneswar



## COURSE SCHEDULE

Name of the Program: A Two Week Add-On Programme on **MOBILE APPLICATION DEVELOPMENTS**  
01-08-2019 to 19-08-2019

SN	Date	Topic	Resource Person
1	01-08-2019	Introduction to the course and Getting started with development and debugging tools	Prof. R. Behera
2	02-08-2019	Introduction to paper prototyping	Prof. R. Behera
3	03-08-2019	Mobile Design Guidelines and Basic Widgets	Prof. R. Behera
4	05-08-2019	Themes and other UI customizations	Prof. R. Behera
5	06-08-2019	Threading, Services, Wake locks and Async Task	Prof. R. Behera
6	07-08-2019	Broadcast Receivers and Sensors	Prof. R. Behera
7	08-08-2019	Location and Sensing	Prof. R. Behera
8	09-08-2019	More On Sensors	Prof. R. Behera
9	10-08-2019	Storing Data Robustly	Prof. R. Behera
10	12-08-2019	Review Broadcast Receivers	Prof. R. Behera
11	13-08-2019	Review Broadcast Services	Prof. R. Behera
12	14-08-2019	Bluetooth, Networks and Wi-Fi	Prof. R. Behera
13	17-08-2019	Hands On Session	Prof. R. Behera
14	19-08-2019	Hands On Session	Prof. R. Behera

*K. Sahoo*  
COORDINATOR

*M. Jais*  
HOD

*C. K. Behera*  
DIRECTOR  
MITS School of Biotechnology  
Bhubaneswar





## PROGRAM REPORT

20-08-2019

**Name of the Event:** A Two Week Add-On Program on **MOBILE APPLICATION DEVELOPMENTS**

**Date:** 01-08-2019 to 19-08-2019

**Resource Person:** **Prof. Rashmikiran Behera**  
Asst. Professor, Department of Biotechnology.,  
MSB, Bhubaneswar.  
Contact Number: 7008018094

**Coordinator:** **Prof. Kabita Sahoo**  
Asst. Professor, Department of Computer Science,  
MSB, Bhubaneswar.

**Number of students attended:** 70

**Venue:** Conference Hall, MITS School of Biotechnology.

MITS school of Biotechnology, Bhubaneswar, organized a two week add-on program on **MOBILE APPLICATION DEVELOPMENTS** for BCA final semester students. **Prof. Rashmikiran Behera** was the resource person for the said event. This project-oriented course examines the principles of mobile application design and development. Students will learn application development on the Android platform. Topics will include memory management; user interface design; user interface building; input methods; data handling; network techniques and URL loading; and, finally, specifics such as GPS and motion sensing. Totally 70 students were participated in this training program and after the completion of the program they were able to understand the following objectives and learning outcomes.

### Objectives:

1. Describe those aspects of mobile programming that make it unique from programming for other platforms.
2. Critique mobile applications on their design pros and cons.
3. Utilize rapid prototyping techniques to design and develop sophisticated mobile interfaces.
4. Program mobile applications for the Android operating system that use basic and advanced phone features and Deploy applications to the Android marketplace for distribution.

Pg 1 of 2

### Learning Outcomes:

1. Students will be able to KNOWLEDGE AND UNDERSTANDING K1d Master practical tools, methods and techniques for the design, implementation, and pilot testing of mobile phone software applications.
2. K2d Understand advanced aspects of mobile application development such as memory and process management, user interface design, data handling, network techniques and use of mobile sensing.
3. SUBJECT SPECIFIC SKILLS S1d Critically assess existing mobile applications on their design and implementation. S2d Become a sophisticated mobile application developer familiar with the best coding practices and industry standards in the Android application ecosystem.
4. TRANSFERABLE AND PROFESSIONAL SKILLS T1d and 4d Complete a working application, from inception to deployment in the market.
5. T2d demonstrate effectively to peers as well as prospective users to design the application.



A Two Week Add-On Program on **MOBILE APPLICATION DEVELOPMENTS**,  
01-08-2019 to 19-08-2019, Prof. Rashmiranjan Behera.

This course was very useful to the students and their feedback is positive. The management and Professor (Dr.) G. K. Panda, Director of MSB thanked the resource person and participants for making the programme successful.

K. Sahoo  
COORDINATOR

  
HOD

  
DIRECTOR  
MITS School of Electrotechnology  
Bhubaneswar



मिड्स जैव प्रौद्योगिकी संस्थान  
**MITS SCHOOL OF BIOTECHNOLOGY**

2(P), INFOCITY, PATIA, BHUBANESWAR-751024



## *Certificate*

The MITS School of Biotechnology hereby certifies that

**BHABANI JENA**  
BCA-3rd Year

has successfully completed  
A Two Week Add-On Programme On  
**MOBILE APPLICATION DEVELOPMENTS**  
01-08-2019 To 19-08-2019

*K. Sahoo*

COORDINATOR

*[Signature]*

DIRECTOR



मिट्स जैव प्रौद्योगिकी संस्थान  
**MITS SCHOOL OF BIOTECHNOLOGY**  
2(P), INFOCITY, PATIA, BHUBANESWAR-751024



## *Certificate*

The MITS School of Biotechnology hereby certifies that

**HELEN PATRA**  
BCA-3rd Year

has successfully completed  
A Two Week Add-On Programme On  
**MOBILE APPLICATION DEVELOPMENTS**  
01-08-2019 To 19-08-2019

*K. Sahro*

COORDINATOR

*[Signature]*

DIRECTOR



मिड्स जैव प्रौद्योगिकी संस्थान  
**MITS SCHOOL OF BIOTECHNOLOGY**  
2(P), INFOCITY, PATIA, BHUBANESWAR-751024



# Certificate

The MITS School of Biotechnology hereby certifies that

**LUSY SHARMA**  
BCA-3rd Year

has successfully completed  
A Two Week Add-On Programme On  
**MOBILE APPLICATION DEVELOPMENTS**  
01-08-2019 To 19-08-2019

*K. Sahoo*  
\_\_\_\_\_  
COORDINATOR

*C. S. Sahoo*  
\_\_\_\_\_  
DIRECTOR



मिट्स जैव प्रौद्योगिकी संस्थान  
**MITS SCHOOL OF BIOTECHNOLOGY**  
2(P), INFOCITY, PATIA, BHUBANESWAR-751024



## *Certificate*

The MITS School of Biotechnology hereby certifies that

**PABITRA DAS**  
BCA-3rd Year

has successfully completed  
A Two Week Add-On Programme On  
**MOBILE APPLICATION DEVELOPMENTS**  
01-08-2019 To 19-08-2019

*K. Sahoo*

COORDINATOR

*C. P. S.*

DIRECTOR



मिट्स जैव प्रौद्योगिकी संस्थान  
**MITS SCHOOL OF BIOTECHNOLOGY**

2(P), INFOCITY, PATIA, BHUBANESWAR-751024



## *Certificate*

The MITS School of Biotechnology hereby certifies that

**SRIPATI HEMA**  
BCA-3rd Year

has successfully completed  
A Two Week Add-On Programme On  
**MOBILE APPLICATION DEVELOPMENTS**  
01-08-2019 To 19-08-2019

*K. Sahoo*

COORDINATOR

*C. S. S.*

DIRECTOR



मिट्स जैव प्रौद्योगिकी संस्थान  
**MITS SCHOOL OF BIOTECHNOLOGY**  
2(P), INFOCITY, PATIA, BHUBANESWAR-751024



## *Certificate*

The MITS School of Biotechnology hereby certifies that

**SUDIPTA NAIK**  
BCA-3rd Year

has successfully completed  
A Two Week Add-On Programme On  
**MOBILE APPLICATION DEVELOPMENTS**  
01-08-2019 To 19-08-2019

*k. Sahoo*

COORDINATOR

*C. S. Sahoo*

DIRECTOR





मिट्स जैव प्रौद्योगिकी संस्थान  
**MITS SCHOOL OF BIOTECHNOLOGY**

2(P), INFOCITY, PATIA, BHUBANESWAR-751024



# Certificate

The MITS School of Biotechnology hereby certifies that

**SWETA PANDA**

BCA-3rd Year

has successfully completed  
A Two Week Add-On Programme On  
**MOBILE APPLICATION DEVELOPMENTS**  
01-08-2019 To 19-08-2019

*K. Sahoo*

COORDINATOR

*[Signature]*

DIRECTOR



मिट्स जैव प्रौद्योगिकी संस्थान  
**MITS SCHOOL OF BIOTECHNOLOGY**  
2(P), INFOCITY, PATIA, BHUBANESWAR-751024



## *Certificate*

The MITS School of Biotechnology hereby certifies that

**SASMITA SWAIN**  
BCA-3rd Year

has successfully completed  
A Two Week Add-On Programme On  
**MOBILE APPLICATION DEVELOPMENTS**  
01-08-2019 To 19-08-2019

*K. Sahoo*

COORDINATOR

*C. S. S.*

DIRECTOR



मिड्स जैव प्रौद्योगिकी संस्थान  
**MITS SCHOOL OF BIOTECHNOLOGY**  
2(P), INFOCITY, PATIA, BHUBANESWAR-751024



## *Certificate*

The MITS School of Biotechnology hereby certifies that

**SAMBIT KUMAR SAHOO**  
BCA-3rd Year

has successfully completed  
A Two Week Add-On Programme On  
**MOBILE APPLICATION DEVELOPMENTS**  
01-08-2019 To 19-08-2019

*K. Sahoo*

COORDINATOR

*[Signature]*

DIRECTOR



मिट्स जैव प्रौद्योगिकी संस्थान  
**MITS SCHOOL OF BIOTECHNOLOGY**

2(P), INFOCITY, PATIA, BHUBANESWAR-751024



## *Certificate*

The MITS School of Biotechnology hereby certifies that

**SOUMITRI SAHOO**  
BCA-3rd Year

has successfully completed  
A Two Week Add-On Programme On  
**MOBILE APPLICATION DEVELOPMENTS**  
01-08-2019 To 19-08-2019

*K.Sahoo*

COORDINATOR

*C. S. Sahoo*

DIRECTOR



# मिटस जैव प्रौद्योगिकी संस्थान MITS SCHOOL OF BIOTECHNOLOGY

Date: 30-01-2020

## CIRCULAR




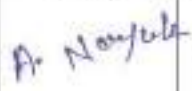
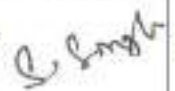

It is hereby informed to all final/pre-final year students of BCA that the Department of Computer Science of this institute is conducting a Two Week Add-On program on **CYBER PHYSICAL SYSTEM** from **10-02-2020 to 27-02-2020**. Interested students shall register their names at the office of the coordinator on or before 4 PM, 08-02-2019.

**Venue of the Programme** : Conference Hall, MITS School of Biotechnology.

**Coordinator** : **Prof. Kabita Sahoo**  
Asst. Professor  
Department of Computer Science  
MITS School of Biotechnology

  
**DIRECTOR**  
Director  
MITS School of Biotechnology  
Bhubaneswar

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CE: For information					

## REGISTRATION FORM

Name.....

Course.....Yr(1/2/3)

Roll No.....

Institution.....

Address for Communication:

Mobile.....

Email.....

Signature

Application to be submitted online in the above format along with the scanned copy of the registration form.

Last Date of Registration: 08-02-2020

Email: kabitasahoo789@gmail.com

Address for Communication

**Prof. Kabita saho**  
Coordinator, Asst Professor  
Contact: +91-8908232258

Chief Patron

**Er. Sriram Panda**  
Chief Executive  
MITS Group

Patron

**Dr. G.K. Panda**  
Director  
MITS School of Biotechnology

Convenor

**Dr. Tapaswini Nayak**  
Head  
Dept. of Computer Science

Coordinator

**Prof. Kabita saho**  
Dept. of Computer Science

Advisory Committee

**Prof. Benu Madhab Rath**  
Dept. of Computer Science

**Dr.R R Mishra**

Dept. of Biotechnology

**Prof. NR Panda**

Dept. of Computer Science

## A TWO-WEEK ADD-ON PROGRAMME ON



## CYBER PHYSICAL SYSTEM

Programme Schedule

10-02-2020 to 27-02-2020



Organized By:

**मिट्स जैव प्रौद्योगिकी संस्थान**  
**MITS SCHOOL OF BIOTECHNOLOGY**

Venue:

2(P), Infocity, Patia  
Bhubaneswar-751024 (Odisha)  
Website: msb.ac.in  
Email: principal@msb.ac.in

## About College

Consistently ranking as the best institute in the eastern part of India, MITS School of Biotechnology (MSB) is a self financing professional organisation that was founded in 2003. The faculty consists of having qualification of PhD, M.Tech as well as experience in both Academics and industrial research, so as the student graduates, who are equally impressive mostly working in leading industries of Biotechnology, Pharma and IT. MSB is considered to be most selective, accepting, growing and proven institute under Utkal University. The institute is located at the prime location of Infocity, Bhubaneswar. This prestigious institute includes popular programs of Biotechnology, Applied Micro Biology and Computer Science.

## Courses Offered at MSB

BCA	- 3 Years
B.Sc Biotechnology	- 3 Years
M.Sc Biotechnology	- 2 Years
M.Sc App. Microbiology	- 2 Years

## About Programme

The proliferation of intelligent Cyber Physical Systems signifies a commitment to optimizing the performance of large-scale systems. By focusing on refining network functionality, autonomy, reliability, safety, and user-friendliness, these systems promise to revolutionize various industries. Their widespread adoption is expected to bring about increased efficiency and effectiveness in system operations.



## Objective of the Programme

The tasks at hand involve a multifaceted approach to bolstering the security of operational cyber-physical systems. First and foremost, there's a need to identify and promptly respond to any security concerns that may arise within these systems. This proactive stance ensures that potential vulnerabilities are addressed promptly.



Resource Person  
**Prof. R. Behera**  
Dept. of Computer Science  
MSB, Bhubaneswar

Date: 10-02-2020

### REGISTERED STUDENT LIST

Name of the Programme: Two Week Add-On program on CYBER PHYSICAL SYSTEM  
10-02-2020 to 27-02-2020

SN	Reg. No	Name of the Student	Year Branch	Signature
1	Y20CS01	ABHIJEET PRADHAN	BCA 2 <sup>nd</sup> Year	Abhijeet Pradhan
2	Y20CS02	ANKIT NAYAK	BCA 2 <sup>nd</sup> Year	Ankit Nayak
3	Y20CS03	ANKIT DAS	BCA 2 <sup>nd</sup> Year	Ankit Das
4	Y20CS04	ANKITA JEE	BCA 2 <sup>nd</sup> Year	Ankita Jee
5	Y20CS05	ARPITA MONALISA	BCA 2 <sup>nd</sup> Year	Arpita Singh
6	Y20CS06	BAIBHAB SINGH	BCA 2 <sup>nd</sup> Year	Baibhab Singh
7	Y20CS07	BIBHUTI BHUSAN MOHAPATRA	BCA 2 <sup>nd</sup> Year	Bibhuti Bhushan Mohapatra
8	Y20CS08	BINAYAK RAYSINGH	BCA 2 <sup>nd</sup> Year	Binayak Ray Singh
9	Y20CS09	BISWAJEET GOUDA	BCA 2 <sup>nd</sup> Year	Biswajeet Gouda
10	Y20CS10	CHANDAN MANSINGH	BCA 2 <sup>nd</sup> Year	C. Mansingh.
11	Y20CS11	CHIRANJEEB ROUT	BCA 2 <sup>nd</sup> Year	Chiranjeeb Rout
12	Y20CS12	DEBABRATA BEHERA	BCA 2 <sup>nd</sup> Year	Debabrata Behera
13	Y20CS13	DEBASISHA NAYAK	BCA 2 <sup>nd</sup> Year	Debasish Nayak
14	Y20CS14	DEEPAK KUMAR KASTA	BCA 2 <sup>nd</sup> Year	Deepak Kumar Kasta
15	Y20CS15	DEEPSHIKHA ROUT	BCA 2 <sup>nd</sup> Year	Deepshikha Rout
16	Y20CS16	DIBYA JYOTI ROUT	BCA 2 <sup>nd</sup> Year	Dibyajyoti Rout.
17	Y20CS17	GYANA RANJAN MOHAPATRA	BCA 2 <sup>nd</sup> Year	Gyanaranjan Mohapatra.
18	Y20CS18	GURUDEV SUBUDHI	BCA 2 <sup>nd</sup> Year	Gurudev Subudhi
19	Y20CS19	HIMANSHU S. MOHARANA	BCA 2 <sup>nd</sup> Year	Himanshu S. Moharana
20	Y20CS20	JHANTU KUMAR PATHAK	BCA 2 <sup>nd</sup> Year	Jhantu Kumar Pathak.
21	Y20CS21	KRITIK ROUT	BCA 2 <sup>nd</sup> Year	Kritik Rout.
22	Y20CS22	KUMAR PRATAP SINGH	BCA 2 <sup>nd</sup> Year	Kumar Pratap Rout



23	Y20CS23	K RAKESH GOCHHI	BCA 2 <sup>nd</sup> Year	K Rakesh Gochhi
24	Y20CS24	MANAS RANJAN KHILAR	BCA 2 <sup>nd</sup> Year	manas Ranjan Khilar
25	Y20CS25	MANGAL JYOTI NAYAK	BCA 2 <sup>nd</sup> Year	Mangal Jyoti Nayak
26	Y20CS26	MANOJ KUMAR PRADHAN	BCA 2 <sup>nd</sup> Year	Manoj k Pradhan
27	Y20CS27	NARAYAN DENGA	BCA 2 <sup>nd</sup> Year	Narayan Denga
28	Y20CS28	PRANAB KUMAR ROUT	BCA 2 <sup>nd</sup> Year	Pranab k Rout
29	Y20CS29	PRATYUSH KUMAR	BCA 2 <sup>nd</sup> Year	Pratyush kumar
30	Y20CS30	PAPPU MAHATO	BCA 2 <sup>nd</sup> Year	Pappu Mahato
31	Y20CS31	PANKAJ KUMAR SAHOO	BCA 2 <sup>nd</sup> Year	Pankaj saho
32	Y20CS32	RAHUL PRADHAN	BCA 2 <sup>nd</sup> Year	Rahul Pradhan
33	Y20CS33	RAJAT KUMAR SAHOO	BCA 2 <sup>nd</sup> Year	Rajat Kumar Sahoo
34	Y20CS34	RANJAN KUMAR MAHANTA	BCA 2 <sup>nd</sup> Year	Ranjun Kumar Mahanta
35	Y20CS35	RATI RANJAN MOHANTY	BCA 2 <sup>nd</sup> Year	Rafi Ranjan Mohanta
36	Y20CS36	SANJEET ROUTRAY	BCA 2 <sup>nd</sup> Year	Sanjeet Routray
37	Y20CS37	SATYA BRATA PATTAJOSHI MOHAPATRA	BCA 2 <sup>nd</sup> Year	Satyabrata Patfa- Joshi Mohapatra
38	Y20CS38	SAEED ANWAR KHAN	BCA 2 <sup>nd</sup> Year	Saeed Anwar Khan
39	Y20CS39	SATISH KUMAR PRADHAN	BCA 2 <sup>nd</sup> Year	Satish Kumar Pradhan
40	Y20CS40	SASWATI SWAIN	BCA 2 <sup>nd</sup> Year	Saswati Swain
41	Y20CS41	SHRABANI DIGAL	BCA 2 <sup>nd</sup> Year	Shrabani Digal
42	Y20CS42	SIBANANDA MUDULI	BCA 2 <sup>nd</sup> Year	Sibananda Muduli
43	Y20CS43	SIBACHIDANANDA PADHI	BCA 2 <sup>nd</sup> Year	Sibachidananda Padhi
44	Y20CS44	STHITAPRAJNA SARANGI	BCA 2 <sup>nd</sup> Year	Sthitaprajna Sarangi
45	Y20CS45	SONALI DAS	BCA 2 <sup>nd</sup> Year	Sonali Das
46	Y20CS46	SONALI NAYAK	BCA 2 <sup>nd</sup> Year	Sonali Nayak

47	Y20CS47	SOMANATH GOUDA	BCA 2 <sup>nd</sup> Year	Somanatha Gouda
48	Y20CS48	SOURAV KUMAR	BCA 2 <sup>nd</sup> Year	Sourav Kumar
49	Y20CS49	SONAM DAS	BCA 2 <sup>nd</sup> Year	Sonam Das
50	Y20CS50	SOUMYA RANJAN PRADHAN	BCA 2 <sup>nd</sup> Year	Soumya Ranjan Pradhan
51	Y20CS51	SUNIL KUMAR GOUDA	BCA 2 <sup>nd</sup> Year	
52	Y20CS52	TANUJA DANDAPAT	BCA 2 <sup>nd</sup> Year	Tanuja Dandapat
53	Y20CS53	TUSHAR KANTA SENAPATI	BCA 2 <sup>nd</sup> Year	Tushar kanta senapati
54	Y20CS54	UMAKANTA MAHANTA	BCA 2 <sup>nd</sup> Year	Umakanta Mahanta
55	Y20CS55	VIVEK KUMAR SINGH	BCA 2 <sup>nd</sup> Year	Vivek Kumar Singh
56	Y20CS56	VIVEKANAND SAHOO	BCA 2 <sup>nd</sup> Year	vivekanand saho

*K. Sahoo*  
COORDINATOR

*H. Singh*  
HOD

*G. K. Sahoo*  
DIRECTOR  
Director  
MITS School of Biotechnology  
Bhubaneswar

### COURSE SCHEDULE

Name of the Program: A Two Week Add-On Programme on **CYBER PHYSICAL SYSTEM**  
10-02-2020 to 27-02-2020

SN	Date	Topic	Resource Person
1	10-02-2020	Introduction to Cyber Physical Systems	Prof R. Behera
2	11-02-2020	Simulation of Dynamical Systems	Prof R. Behera
3	12-02-2020	Image Processing & Computer Vision	Prof R. Behera
4	13-02-2020	Image Processing & Computer Vision	Prof R. Behera
5	14-02-2020	Vehicular Ad-Hoc Networks (VANETs)	Prof R. Behera
6	15-02-2020	Vehicular Ad-Hoc Networks (VANETs)	Prof R. Behera
7	17-02-2020	Edge & Fog Computing	Prof R. Behera
8	18-02-2020	Cyber Physical System Modelling and Simulation Lab	Prof R. Behera
9	19-02-2020	Cyber Physical System Modelling and Simulation Lab	Prof R. Behera
10	20-02-2020	Vehicular Ad-Hoc Networks (VANETs) Lab	Prof R. Behera
11	22-02-2020	Vehicular Ad-Hoc Networks (VANETs) Lab	Prof R. Behera
12	24-02-2020	Security in CPS	Prof R. Behera
13	25-02-2020	Hands On Session	Prof R. Behera
14	26-02-2020	Hands On Session	Prof R. Behera
15	27-02-2020	Hands On Session	Prof R. Behera

*K. Saha*  
COORDINATOR

*[Signature]*  
HOD

*[Signature]*  
DIRECTOR  
MITS School of Biotechnology  
Bhubaneswar



## PROGRAM REPORT

28-02-2020

**Name of the Event:** A Two Week Add-On Programme on **CYBER PHYSICAL SYSTEM**

**Date:** 10-02-2020 to 27-02-2020

**Resource Person:** **Prof. R. Behera**

Assoc. Professor, Department of Computer Science,  
MSB, Bhubaneswar.

Contact Number: 7008018094

**Coordinator:** **Prof. Kabita Sahoo**

Asst. Professor, Department of Computer Science,  
MSB, Bhubaneswar.

**Number of students attended:** 56

**Venue:** Conference Hall, MITS School of Biotechnology.

MITS school of Biotechnology, Bhubaneswar, organized a two week add-on program on **CYBER PHYSICAL SYSTEM** for BCA second year students. **Prof. R. Behera** was the resource person for the said event. The growing use of these smart Cyber Physical Systems aims to heighten the implementation of large-scale systems by optimizing the functionality, autonomy, reliability, safety, and usability of these networks. Totally 56 students were participated in this training program and after the completion of the program they were able to understand the following objectives and learning outcomes.

### Objectives:

1. Identify and respond to security concerns relating to operational cyber physical systems.
2. Coordinate among key stakeholders for matters dealing with the security of operational cyber-physical systems.
3. Promote stakeholder awareness and education relating to cyber physical systems security.

### Learning Outcomes:

1. Apply the fundamental principles of cyber-physical systems.
2. Explain the need and purpose of securing cyber-physical systems.
3. Identify common weaknesses in cyber physical-systems.

- Evaluate the security of cyber-physical systems by applying pertinent recognized standards.



A Two Week Add-On Program on **CYBER PHYSICAL SYSTEM**,  
10-02-2020 To 27-02-2020, Prof. R. Behera.

This course was very useful to the students and their feedback is positive. The management and Professor (Dr.) G. K. Panda director of MSB thanked the resource person and participants for making the programme successful.

*K. S. Saha*  
COORDINATOR

*H. Mohanty*  
HOD

*G. K. Panda*  
DIRECTOR  
Director  
MITS School of Biotechnology  
Bhubaneswar



मिट्स जैव प्रौद्योगिकी संस्थान  
**MITS SCHOOL OF BIOTECHNOLOGY**  
2(P), INFOCITY, PATIA, BHUBANESWAR-751024



## *Certificate*

The MITS School of Biotechnology hereby certifies that

**ANKIT NAYAK**  
BCA-2nd Year

has successfully completed  
A Two Week Add-On Programme On  
**CYBER PHYSICAL SYSTEM**  
10-02-2020 To 27-02-2020

*K. S. Sahoo*

COORDINATOR

*[Signature]*

DIRECTOR



मिट्स जैव प्रौद्योगिकी संस्थान  
**MITS SCHOOL OF BIOTECHNOLOGY**

2(P), INFOCITY, PATIA, BHUBANESWAR-751024



## *Certificate*

The MITS School of Biotechnology hereby certifies that

**ANKIT DAS**  
BCA-2nd Year

has successfully completed  
A Two Week Add-On Programme On  
**CYBER PHYSICAL SYSTEM**  
10-02-2020 To 27-02-2020

*K. Sahoo*

COORDINATOR

*[Signature]*

DIRECTOR



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**MITS SCHOOL OF BIOTECHNOLOGY**  
2(P), INFOCITY, PATIA, BHUBANESWAR-751024



## *Certificate*

The MITS School of Biotechnology hereby certifies that

**BINAYAK RAYSINGH**  
BCA-2nd Year

has successfully completed  
A Two Week Add-On Programme On  
**CYBER PHYSICAL SYSTEM**  
10-02-2020 To 27-02-2020

*K. Bahoo*  
\_\_\_\_\_  
COORDINATOR

*[Signature]*  
\_\_\_\_\_  
DIRECTOR





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**MITS SCHOOL OF BIOTECHNOLOGY**

2(P), INFOCITY, PATIA, BHUBANESWAR-751024



## Certificate

The MITS School of Biotechnology hereby certifies that

**BISWAJEET GOUDA**

BCA-2nd Year

has successfully completed  
A Two Week Add-On Programme On  
CYBER PHYSICAL SYSTEM  
10-02-2020 To 27-02-2020

*K. Sahoo*

COORDINATOR

*Opal*

DIRECTOR



मिट्स जैव प्रौद्योगिकी संस्थान  
**MITS SCHOOL OF BIOTECHNOLOGY**  
2(P), INFOCITY, PATIA, BHUBANESWAR-751024



## *Certificate*

The MITS School of Biotechnology hereby certifies that

**CHANDAN MANSINGH**  
BCA-2nd Year

has successfully completed  
**A Two Week Add-On Programme On**  
**CYBER PHYSICAL SYSTEM**  
**10-02-2020 To 27-02-2020**

*K. Sahoo*

COORDINATOR

DIRECTOR



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**MITS SCHOOL OF BIOTECHNOLOGY**

2(P), INFOCITY, PATIA, BHUBANESWAR-751024



## *Certificate*

The MITS School of Biotechnology hereby certifies that

**KRITIK ROUT**  
BCA-2nd Year

has successfully completed  
A Two Week Add-On Programme On  
**CYBER PHYSICAL SYSTEM**  
10-02-2020 To 27-02-2020

*K. Sahoo*

COORDINATOR

*C. P. S.*

DIRECTOR



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**MITS SCHOOL OF BIOTECHNOLOGY**

2(P), INFOCITY, PATIA, BHUBANESWAR-751024



## *Certificate*

The MITS School of Biotechnology hereby certifies that

**NARAYAN DENGA**  
BCA-2nd Year

has successfully completed  
A Two Week Add-On Programme On  
**CYBER PHYSICAL SYSTEM**  
10-02-2020 To 27-02-2020

*K. Sahoo*  
\_\_\_\_\_  
COORDINATOR

*C. S. Sahoo*  
\_\_\_\_\_  
DIRECTOR



मिड्स जैव प्रौद्योगिकी संस्थान  
**MITS SCHOOL OF BIOTECHNOLOGY**  
2(P), INFOCITY, PATIA, BHUBANESWAR-751024



## *Certificate*

The MITS School of Biotechnology hereby certifies that

**RAHUL PRADHAN**  
BCA-2nd Year

has successfully completed  
A Two Week Add-On Programme On  
**CYBER PHYSICAL SYSTEM**  
10-02-2020 To 27-02-2020

*K. Sahoo*  
\_\_\_\_\_  
COORDINATOR

*C. S. Sahoo*  
\_\_\_\_\_  
DIRECTOR



मिट्स जैव प्रौद्योगिकी संस्थान  
**MITS SCHOOL OF BIOTECHNOLOGY**

2(P), INFOCITY, PATIA, BHUBANESWAR-751024



## *Certificate*

The MITS School of Biotechnology hereby certifies that

**SASWATI MOHANTY**

BCA-2nd Year

has successfully completed  
A Two Week Add-On Programme On  
**CYBER PHYSICAL SYSTEM**  
10-02-2020 To 27-02-2020

*K. Sahoo*

COORDINATOR

*Ceyra*

DIRECTOR



मिट्स जैव प्रौद्योगिकी संस्थान  
**MITS SCHOOL OF BIOTECHNOLOGY**  
2(P), INFOCITY, PATIA, BHUBANESWAR-751024



## *Certificate*

The MITS School of Biotechnology hereby certifies that

**SONALI DAS**  
BCA-2nd Year

has successfully completed  
A Two Week Add-On Programme On  
**CYBER PHYSICAL SYSTEM**  
10-02-2020 To 27-02-2020

*Ko Sahoo*

COORDINATOR

*Geeta*

DIRECTOR



# मिटस जैव प्रौद्योगिकी संस्थान MITS SCHOOL OF BIOTECHNOLOGY

Date: 25-07-2019

## CIRCULAR

It is hereby informed to all final/pre-final year students of BSc-Biotechnology that the Department of Biotechnology of this institute is conducting a Two Week Add-On Program on **THE BIOLOGICAL IMPACT OF PESTICIDES AND FERTILIZERS** from **05-08-2019** to **22-08-2019**. Interested students shall register their names at the office of the coordinator on or before 4 PM, 30-07-2019.




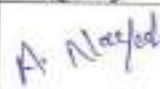
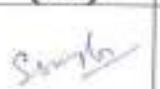

**Venue of the Programme** : Conference Hall, MITS School of Biotechnology.

**Coordinator** : **Dr. Smaranika Sahu**  
Asst. Professor  
Department of Biotechnology  
MITS School of Biotechnology

  
**DIRECTOR**

Director  
MITS School of Biotechnology  
Bhubaneswar

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## REGISTRATION FORM

Name.....

Course.....Yr(1/2/3)

Roll No.....

Institution.....

Address for Communication:

Mobile.....

Email.....

Signature

Application to be submitted online in the above format along with the scanned copy of the registration form.

Last Date of Registration: 03.08.2019

Address for Communication

**Dr. Smaranika Sahu**  
Coordinator, Asst Professor  
Contact: +91-7863177859

Chief Patron  
**Er. Sriram Panda**  
Chief Executive  
MITS Group

Patron  
**Dr. G.K. Panda**  
Director  
MITS School of Biotechnology

Convenor  
**Dr. Rashmi Ranjan Mishra**  
Head  
Dept. of Biotechnology

Coordinator  
**Dr. Smaranika Sahu**  
Asst Professor  
Dept. of Biotechnology

Advisory Committee  
**Dr. Mousumi Mishra**  
Dept. of Biotechnology  
**Mr. S. Satrusallya**  
Dept. of Chemistry

**Dr. Swati Mishra**  
Dept. of Biotechnology

**A TWO-WEEK ADD-ON  
PROGRAM  
ON**



**THE BIOLOGICAL IMPACT OF  
PESTICIDES AND FERTILIZERS**

Programme Schedule  
05-08-2019 To 22-08-2019



Organized By:

**मिट्स जैव प्रौद्योगिकी संस्थान**  
**MITS SCHOOL OF BIOTECHNOLOGY**

Venue:

2(P), Infocity, Patia  
Bhubaneswar-751024 (Odisha)  
Website: [msb.ac.in](http://msb.ac.in)  
Email: [principal@msb.ac.in](mailto:principal@msb.ac.in)

## About College

Consistently ranking as the best institute in the eastern part of India, MITS School of Biotechnology (MSB) is a self financing professional organisation that was founded in 2003. The faculty consists of having qualification of PhD, M.Tech as well as experience in both Academics and Industrial research, so as the student graduates, who are equally impressive mostly working in leading industries of Biotechnology, Pharma and IT. MSB is considered to be most selective, accepting, growing and proven institute under Utkal University. The institute is located at the prime location of Infocity, Bhubaneswar. This prestigious institute includes popular programs of Biotechnology, Applied Micro Biology and Computer Science.

## Courses Offered at MSB

BCA	- 3 Years
B.Sc Biotechnology	- 3 Years
M.Sc Biotechnology	- 2 Years
M.Sc App. Microbiology	- 2 Years

## About Programme

Pesticides present in the environment leads to their entry in the bio system which accumulates in the organisms. Bioaccumulation and bio magnification of pesticides has led to lethal and sub lethal effects in animals and human. Alternatives ways for crop protection chemicals can be used like organic farming, change in diet, development in food technology, and genetically engineered organisms and use of pesticides should be more regulated and made safe by testing, by risk assessment, and by licensing.



## Objective of the Programme

The main objective of the program is use of safe farming practices should be achieved by educating farmers and users, which can only help in the protection of ecosystem, agriculture, fisheries and aquaculture and use of pesticides should be more regulated and made safe by testing, by risk assessment, and by licensing.



Resource Person

**Dr. M Mishra**

Asst. Prof Department of Biotechnology  
MSB, Bhubaneswar



# मिटस जैव प्रौद्योगिकी संस्थान MITS SCHOOL OF BIOTECHNOLOGY

Date: 04-08-2019

## REGISTERED STUDENT LIST

Name of the Programme: A Two-Week Add-On Program on **BIOLOGICAL IMPACT OF PESTICIDES AND FERTILIZERS**  
05-08-2019 to 22-08-2019

SN	Reg. No	Name of the Student	Year Branch	Signature
1	Y19UB01	A.DIVYA	3rdYear BSc-BT	A.Divya
2	Y19UB02	ABHISEK GANGDEB	3rdYear BSc-BT	Abhisek Gangdeb
3	Y19UB03	ALISHA LENKA	3rdYear BSc-BT	Alisha Lenka
4	Y19UB04	ALISHA MOHANTY	3rdYear BSc-BT	Alisha Mohanty
5	Y19UB05	AMLAN PATI	3rdYear BSc-BT	Amlan Pati
6	Y19UB06	AMRIT ROUT	3rdYear BSc-BT	Amrit Rout
7	Y19UB07	ANTIM AKASH MISHRA	3rdYear BSc-BT	Antim Akash Mishra
8	Y19UB08	ARADHANA SATAPATHY	3rdYear BSc-BT	Aradhana satapaty
9	Y19UB09	ARUPARNA HOTA	3rdYear BSc-BT	ARUPARNA Hota
10	Y19UB10	ASHUTOSH PANIGRAHI	3rdYear BSc-BT	Ashutosh Panigrahi
11	Y19UB11	AVINISH SINGH	3rdYear BSc-BT	AVINISH SINGH
12	Y19UB12	B. SRUTHI SRI SPANDANA	3rdYear BSc-BT	B. Sruthi Sri Spandana
13	Y19UB13	DEBASMITA BEHERA	3rdYear BSc-BT	Debasmita Behera
14	Y19UB14	DEBOPAM RATH	3rdYear BSc-BT	DeBOPam Rath
15	Y19UB15	GARIMA BISWAKARMA	3rdYear BSc-BT	Garima Biswakarma
16	Y19UB16	IPSITA SINGH	3rdYear BSc-BT	IPSITA SINGH
17	Y19UB17	JYOTI OJHA	3rdYear BSc-BT	Jyoti ojha
18	Y19UB18	KUSUM KALYANI	3rdYear BSc-BT	Kusum Kalyani
19	Y19UB19	LAGNA CHOUDHURY	3rdYear BSc-BT	Lagna Choudhury
20	Y19UB20	MEHUL	3rdYear BSc-BT	Mehul
21	Y19UB21	MOHAMMED JUNDAL MAJID	3rdYear BSc-BT	Mohammed Jundal Majid
22	Y19UB22	NIKITA TIWARY	3rdYear BSc-BT	Nikita Tiwary
23	Y19UB23	P. RUTUPARNA	3rdYear BSc-BT	P. Rutuparna
24	Y19UB24	PRAJJWAL MISHRA	3rdYear BSc-BT	Prajwal Mishra
25	Y19UB25	PRAVA KUMARI	3rdYear BSc-BT	Prava Kumari
26	Y19UB26	PREETIMAI GAHAN	3rdYear BSc-BT	Preetimai Gahan
27	Y19UB27	PRITIPADMA DAS	3rdYear BSc-BT	Pritipadma das
28	Y19UB28	PRIYA JAISWAL	3rdYear BSc-BT	Priya Jaiswal
29	Y19UB29	RAJ JAISWAL	3rdYear BSc-BT	RAJ JAISWAL
30	Y19UB30	RAJAT KUMAR MEHER	3rdYear BSc-BT	RAJAT KUMAR MEHER

Pg 1 of 2

31	Y19UB31	RITUPARNA SATAPATHY	3rdYear BSc-BT	Rituparna Satapathy
32	Y19UB32	S. JYOTSNA	3rdYear BSc-BT	S. Jyotsna
33	Y19UB33	SAMBIT KUMAR SUNDARAY	3rdYear BSc-BT	Sambit Kumar Sundaray
34	Y19UB34	SANDEEP KUMAR DAS	3rdYear BSc-BT	Sandeep Kumar Das
35	Y19UB35	SANKALP KUMAR PADHI	3rdYear BSc-BT	Sankalp Kumar Padhi
36	Y19UB36	SANTOSH KUMAR PARIDA	3rdYear BSc-BT	Santosh Kumar Parida
37	Y19UB37	SHAKSHI SINGH	3rdYear BSc-BT	SHAKSHI SINGH
38	Y19UB38	SHEEN SHEKINATH AIND	3rdYear BSc-BT	Sheen Shekinath Aind
39	Y19UB39	SHREEYA MISHRA	3rdYear BSc-BT	Shreeya Mishra
40	Y19UB40	SHUBHRAJEET JENA	3rdYear BSc-BT	Shubhrajeeet Jena
41	Y19UB41	SMARANIKA MAHANTA	3rdYear BSc-BT	Smaranika Mahanta
42	Y19UB42	SOUMYA NIBEDIT SAHOO	3rdYear BSc-BT	Soumya Nibedit Sahoo
43	Y19UB43	SOURAV PATTNAIK	3rdYear BSc-BT	Sourav Pattnaik
44	Y19UB44	SUBHANGI NAYAK	3rdYear BSc-BT	Subhangi Nayak
45	Y19UB45	SUKANYA DAS	3rdYear BSc-BT	Sukanya Das
46	Y19UB46	SUKANYA KHAMARI	3rdYear BSc-BT	Sukanya Khamari
47	Y19UB47	SWAPNA RANI PRADHAN	3rdYear BSc-BT	Swapna Rani Pradhan
48	Y19UB48	TANUSHREE BEHERA	3rdYear BSc-BT	Tanushree Behera
49	Y19UB49	SNIGDHA MADHABA MAHARANA	3rdYear BSc-BT	Snigdha Madhaba Maharana
50	Y19UB50	TAPAS RANJAN PATRA	3rdYear BSc-BT	Tapas Ranjan Patra

Smaranika Sahu  
COORDINATOR

  
HOD

  
DIRECTOR  
Director  
MITS School of Biotechnology  
Bhubaneswar

## REGISTERED STUDENT LIST

Name of the Programme: A Two-Week Add-On Program on **BIOLOGICAL IMPACT OF PESTICIDES AND FERTILIZERS**  
05-08-2019 to 22-08-2019

SN	Reg. No	Name of the Student	Year Branch	Signature
51	Y19UB51	A.V.S NIKITA	3rdYear BSc-BT	A.V.S Nikita
52	Y19UB52	AHALYA BIRUA	3rdYear BSc-BT	Ahalya Birua
53	Y19UB53	AJAYKUMAR JENA	3rdYear BSc-BT	Ajay Kumar Jena
54	Y19UB54	ARPITA PATTNAIK	3rdYear BSc-BT	Arpita Pattnaik
55	Y19UB55	ASUAMIT MAHARANA	3rdYear BSc-BT	Asuamit Maharana
56	Y19UB56	BARSHA SAHOO	3rdYear BSc-BT	Barsha Sahoo
57	Y19UB57	BIKRAM BARIK	3rdYear BSc-BT	Bikram Barik
58	Y19UB58	BISWAJIT PANIGRAHI	3rdYear BSc-BT	Biswajit Panigrahi
59	Y19UB59	CHANDRAMANI PATEL	3rdYear BSc-BT	Chandramani Patel
60	Y19UB60	CHINMAY RAY	3rdYear BSc-BT	Chinmay Ray
61	Y19UB61	GIRISH PRASAD DASH	3rdYear BSc-BT	Girish Prasad Dash
62	Y19UB62	HARISH CHANDRA SHAW	3rdYear BSc-BT	Harish chandra shaw
63	Y19UB63	IPSITA ROSALIN PANDA	3rdYear BSc-BT	Ipsita Rosalin Panda
64	Y19UB64	ISHA SHARMA	3rdYear BSc-BT	Isha Sharma
65	Y19UB65	JAGRUTI MISHRA	3rdYear BSc-BT	Jagruti Mishra
66	Y19UB66	K.K.SHILPA	3rdYear BSc-BT	K.K.Shilpa
67	Y19UB67	KUMUDINEE KUMARI MAHTO	3rdYear BSc-BT	Kumudinee kumari Mahto
68	Y19UB68	LUINA PRIYADARSHINI PRADHAN	3rdYear BSc-BT	L.P. Pradhan
69	Y19UB69	MANASMITA MAHANTA	3rdYear BSc-BT	Manasmita Mahanta
70	Y19UB70	MOUSUMI PARIDA	3rdYear BSc-BT	Mousumi Parida
71	Y19UB71	MUMPI GIRI	3rdYear BSc-BT	Mumpi Giri
72	Y19UB72	PALLABI DANDAPAT	3rdYear BSc-BT	Pallabi Dandapat
73	Y19UB73	PALLAVI MOHANTY	3rdYear BSc-BT	Pallavi Mohanty
74	Y19UB74	PRAGYAN KUMARI PANIGRAHI	3rdYear BSc-BT	Pragyan Kumari Panigrahi
75	Y19UB75	PRAGYAN PARAMITA	3rdYear BSc-BT	Pragyan paramita
76	Y19UB76	PRAGYAN PARAMITA BEHERA	3rdYear BSc-BT	P.P. Behera

77	Y19UB77	PRASTITI MOHANTY	3rdYear BSc-BT	Prastiti Mohanty
78	Y19UB78	PRATIVA PRIYADARSHINI	3rdYear BSc-BT	Prativa Priyadarshini
79	Y19UB79	PRATYUSH RANJAN NAHAK	3rdYear BSc-BT	Pratyush Ranjan Nahak
80	Y19UB80	PRERANA PANDA	3rdYear BSc-BT	Prerana Panda
81	Y19UB81	PRIYANKA SWAIN	3rdYear BSc-BT	Priyanka Swain
82	Y19UB82	PRIYANKA TRIPATHY	3rdYear BSc-BT	Priyanka Tripathy
83	Y19UB83	RAJNANDINI SWAIN	3rdYear BSc-BT	Rajnandini Swain
84	Y19UB84	RATIKA DASH	3rdYear BSc-BT	Ratika Dash
85	Y19UB85	RIYA RAJ	3rdYear BSc-BT	Riya Raj
86	Y19UB86	RUDRANK MAHARANA	3rdYear BSc-BT	Rudrank Maharana
87	Y19UB87	RUPARNA SATAPATHY	3rdYear BSc-BT	Ruparna Satpathy
88	Y19UB88	SAIKH MOHAMMED AWESH AZAM	3rdYear BSc-BT	Saim M. A. Azam
89	Y19UB89	SAMBIT NAYAK	3rdYear BSc-BT	Sambit Nayak
90	Y19UB90	SANGEETA PRIYADARSINI	3rdYear BSc-BT	Sangeeta Priyadarshini
91	Y19UB91	SANJANA MOHANTY	3rdYear BSc-BT	Sanjana Mohanty
92	Y19UB92	SANJANA PATI	3rdYear BSc-BT	Sanjana Pati
93	Y19UB93	SANKALP DAS	3rdYear BSc-BT	Sankalp Das
94	Y19UB94	SASWAT DAS	3rdYear BSc-BT	Saswat Das
95	Y19UB95	SASWATI ROUT	3rdYear BSc-BT	Saswati Rout
96	Y19UB96	SHANU DEY	3rdYear BSc-BT	Shanu Dey
97	Y19UB97	SHILPITA KUILA	3rdYear BSc-BT	Shilpita Kuila
98	Y19UB98	SHILWY KUHARI	3rdYear BSc-BT	Shilwy Kuhari
99	Y19UB99	SHIVANWESHA TRIPATHY	3rdYear BSc-BT	Shivanwesh Tripathy
100	Y19UB100	SHWETA KUMARI ROWLO	3rdYear BSc-BT	Sweta Kumari Rowlo
101	Y19UB101	SNIGDHA SUBHADARSHINI SAHOO	3rdYear BSc-BT	Snigdha Subhadarshini Sahoo
102	Y19UB102	SONALI PRIYADARSHINI SWAIN	3rdYear BSc-BT	Sonali P. Swain
103	Y19UB103	SOOSRI SUNANDA SWAIN	3rdYear BSc-BT	Soosri Sunanda Swain
104	Y19UB104	SOUMYA RANJAN MISHRA	3rdYear BSc-BT	Soumya P. Mishra
105	Y19UB105	SOUMYA SRUTI PRUSTY	3rdYear BSc-BT	Soumya Sruti Prusty
106	Y19UB106	SOURAV PRADHAN	3rdYear BSc-BT	Sourav Pradhan
107	Y19UB107	SUBHALAXMI CHOUDHURI	3rdYear BSc-BT	Subhalaxmi Choudhuri
108	Y19UB108	SUBHASMITA JENA	3rdYear BSc-BT	Subhasmita Jena
109	Y19UB109	SUBHASMITA PRIDARSINI PATTNAIK	3rdYear BSc-BT	Subhasmita P. Pattanaik
110	Y19UB110	SUMAN PATEL	3rdYear BSc-BT	Suman Patel
111	Y19UB111	SUVECHHA MISHRA	3rdYear BSc-BT	Suvechha Mishra
112	Y19UB112	SWETA SUCHARITA DAS	3rdYear BSc-BT	Sweta Sucharita Das
113	Y19UB113	TAMANNA MOHAPATRA	3rdYear BSc-BT	Tamanna Mohapatra

emaranika lahu  
COORDINATOR

  
HOD

Pg 2 of 3

  
DIRECTOR  
Director

MITS School of Biotechnology  
Bhubaneswar

## COURSE SCHEDULE

Name of the Program: A Two Week Add-On Program on **THE BIOLOGICAL IMPACT OF PESTICIDES AND FERTILIZERS**  
05-08-2019 to 22-08-2019

SN	Date	Topic	Resource Person
1	05-08-2019	Introduction to pesticides and Fertilizers	Dr. Mousumi Mishra
2	06-08-2019	Types of fertilizers	Dr. Mousumi Mishra
3	07-08-2019	Types of pesticides	Dr. Mousumi Mishra
4	08-08-2019	Needs of chemical to plant	Dr. Mousumi Mishra
5	09-08-2019	Needs for an effective fertilizers	Dr. Mousumi Mishra
6	10-08-2019	Classification of fertilizers	Dr. Mousumi Mishra
7	12-08-2019	Potassic fertilizer	Dr. Mousumi Mishra
8	13-08-2019	Phosphatic fertilizer	Dr. Mousumi Mishra
9	14-08-2019	Range of micronutrient concentrations for normal plant growth	Dr. Mousumi Mishra
10	16-08-2019	Harmful effects on the nature and environment	Dr. Mousumi Mishra
11	17-08-2019	Advantages of pesticides and Fertilizers	Dr. Mousumi Mishra
12	19-08-2019	Hands On Session	Dr. Mousumi Mishra
13	20-08-2019	Hands On Session	Dr. Mousumi Mishra
14	22-08-2019	Hands On Session	Dr. Mousumi Mishra

S. Sahu  
COORDINATOR

  
HOD

  
DIRECTOR  
MITS School of Biotechnology  
Bhubaneswar



**Name of the Event:** A Two Week Add-On Program on **THE BIOLOGICAL IMPACT OF PESTICIDES AND FERTILIZERS**

**Date:** 05-08-2019 To 22-08-2019

**Resource Person:** **Dr. Mousumi Mishra**  
Asst. Professor,  
Dept. of Biotechnology, MSB, Bhubaneswar.  
Contact Number: 9937026755

**Coordinator:** **Dr. Smaranika Sahu**  
Asst. Professor,  
Dept. of Biotechnology,  
MSB, Bhubaneswar

**Number of students attended:** 113

**Venue:** Conference Hall, MITS School of Biotechnology.

MITS school of Biotechnology, Bhubaneswar, organized a two week add-on program on **THE BIOLOGICAL IMPACT OF PESTICIDES AND FERTILIZERS** for BSc-Biotechnology students by the resource person **Dr. Mousumi Mishra**. Pesticides present in the environment leads to their entry in the bio system which accumulates in the organisms. Bioaccumulation and bio magnification of pesticides has led to lethal and sub lethal effects in animals and human. Totally 113 students participated in this training program and after the completion of the program they were able to understand the following objectives and learning outcomes.

#### **Objectives:**

1. Use of safe farming practices should be achieved by educating farmers and users, which can only help in the protection of ecosystem, agriculture, fisheries and aquaculture.
2. Use of pesticides should be more regulated and made safe by testing, by risk assessment, and by licensing.
3. Learn and use about bio fertilizers for value added Products

#### **Learning Outcomes:**

1. The use of pesticides has increased crop production more than twofold to fulfill the need of the rapidly growing human population.



2. Pesticides persistence is observed in terrestrial and aquatic (freshwater and marine) ecosystems.
3. Alternatives ways for crop protection chemicals can be used like organic farming, change in diet, development in food technology, and genetically engineered organisms
4. Use of pesticides should be more regulated and made safe by testing, by risk assessment, and by licensing
5. Use of bio fertilizers should be achieved by educating farmers and users.



A Two Week Add-On Program on **THE BIOLOGICAL IMPACT OF PESTICIDES AND FERTILIZERS**, 05-08-2019 To 22-08-2019, Dr. Mousumi Mishra.

This course was very useful to the students of BSc-Biotechnology and their feedback is positive. The management and Professor (Dr.) G. K. Panda, Director of MSB thanked to the resource person and participants for making the programme successful.

S. Sahu.  
COORDINATOR

*R. Panda*  
HOD

*G. K. Panda*  
DIRECTOR

Director  
MITS School of Biotechnology  
Bhubaneswar



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**MITS SCHOOL OF BIOTECHNOLOGY**

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## *Certificate*

The MITS School of Biotechnology hereby certifies that

**JYOTI OJHA**  
B.Sc-BT-3rd Year

has successfully completed  
A Two Week Add-On Programme On  
**THE BIOLOGICAL IMPACT OF PESTICIDES AND FERTILIZERS**  
05-08-2019 To 22-08-2019

*S. Sahu*

COORDINATOR

DIRECTOR



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## *Certificate*

The MITS School of Biotechnology hereby certifies that

**PRAVA KUMARI**  
B.Sc-BT-3rd Year

has successfully completed  
A Two Week Add-On Programme On  
**THE BIOLOGICAL IMPACT OF PESTICIDES AND FERTILIZERS**  
05-08-2019 To 22-08-2019

*L. Babu*  
\_\_\_\_\_  
**COORDINATOR**

*[Signature]*  
\_\_\_\_\_  
**DIRECTOR**



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## *Certificate*

The MITS School of Biotechnology hereby certifies that

**PRIYA JAISWAL**  
B.Sc-BT-3rd Year

has successfully completed  
A Two Week Add-On Programme On  
**THE BIOLOGICAL IMPACT OF PESTICIDES AND FERTILIZERS**  
05-08-2019 To 22-08-2019

*S. Sahu*  
\_\_\_\_\_  
**COORDINATOR**

*[Signature]*  
\_\_\_\_\_  
**DIRECTOR**



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## *Certificate*

The MITS School of Biotechnology hereby certifies that

**RAJ JAISWAL**  
B.Sc-BT-3rd Year

has successfully completed  
**A Two Week Add-On Programme On**  
**THE BIOLOGICAL IMPACT OF PESTICIDES AND FERTILIZERS**  
**05-08-2019 To 22-08-2019**

*S. Sahu*  
\_\_\_\_\_  
**COORDINATOR**

*[Signature]*  
\_\_\_\_\_  
**DIRECTOR**



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## *Certificate*

The MITS School of Biotechnology hereby certifies that

**SUKANYA DAS**  
B.Sc-BT-3rd Year

has successfully completed  
A Two Week Add-On Programme On  
**THE BIOLOGICAL IMPACT OF PESTICIDES AND FERTILIZERS**  
05-08-2019 To 22-08-2019

*B. Sahu*  
\_\_\_\_\_  
**COORDINATOR**

*[Signature]*  
\_\_\_\_\_  
**DIRECTOR**



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## *Certificate*

The MITS School of Biotechnology hereby certifies that

**TAPAS RANJAN PATRA**  
B.Sc-BT-3rd Year

**has successfully completed**  
**A Two Week Add-On Programme On**  
**THE BIOLOGICAL IMPACT OF PESTICIDES AND FERTILIZERS**  
**05-08-2019 To 22-08-2019**

*B. Saha*

COORDINATOR

DIRECTOR



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**MITS SCHOOL OF BIOTECHNOLOGY**  
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## *Certificate*

The MITS School of Biotechnology hereby certifies that

**BARSHA SAHOO**  
B.Sc-BT-3rd Year

has successfully completed  
A Two Week Add-On Programme On  
**THE BIOLOGICAL IMPACT OF PESTICIDES AND FERTILIZERS**  
05-08-2019 To 22-08-2019

*S. Lalun*  
\_\_\_\_\_  
COORDINATOR

*Cey*  
\_\_\_\_\_  
DIRECTOR





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## *Certificate*

The MITS School of Biotechnology hereby certifies that

**ARPITA PATTNAIK**  
B.Sc-BT-3rd Year

**has successfully completed**  
**A Two Week Add-On Programme On**  
**THE BIOLOGICAL IMPACT OF PESTICIDES AND FERTILIZERS**  
**05-08-2019 To 22-08-2019**

*B. Sahu*

COORDINATOR

*Ceyts*

DIRECTOR



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**MITS SCHOOL OF BIOTECHNOLOGY**  
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## *Certificate*

The MITS School of Biotechnology hereby certifies that

**ISHA SHARMA**  
B.Sc-BT-3rd Year

**has successfully completed  
A Two Week Add-On Programme On  
THE BIOLOGICAL IMPACT OF PESTICIDES AND FERTILIZERS  
05-08-2019 To 22-08-2019**

  
\_\_\_\_\_  
**COORDINATOR**

  
\_\_\_\_\_  
**DIRECTOR**



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## *Certificate*

The MITS School of Biotechnology hereby certifies that

**CHINMAY RAY**  
B.Sc-BT-3rd Year

**has successfully completed**  
**A Two Week Add-On Programme On**  
**THE BIOLOGICAL IMPACT OF PESTICIDES AND FERTILIZERS**  
**05-08-2019 To 22-08-2019**

*S. Laha*

COORDINATOR

DIRECTOR



# मिटस जैव प्रौद्योगिकी संस्थान MITS SCHOOL OF BIOTECHNOLOGY

Date: 22-11-2019

## CIRCULAR




It is hereby informed to all final/pre-final year students of BSc-Biotechnology that the Department of Biotechnology of this institute is conducting a Two Weeks Add-On Program on **FOOD SPOILAGE MICROBES** from **02-12-2019** to **18-12-2019**. Interested students shall register their names at the office of the coordinator on or before 4 PM, 27-11-2019.

**Venue of the Programme** : Conference Hall, MITS School of Biotechnology.

**Coordinator** : **Dr. Smaranika Sahu**  
Asst. Professor  
Department of Biotechnology  
MITS School of Biotechnology

  
**DIRECTOR**  
Director  
MITS School of Biotechnology  
Bhubaneswar

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			A. Nayak	S. Singh	A. Das
CE: For information					

## REGISTRATION FORM

Name.....

Course.....Yr(1/2/3)

Roll No.....

Institution.....

Address for Communication:

Mobile.....

Email.....

Signature

Application to be submitted online in the above format along with the scanned copy of the registration form.

Last Date of Registration: 27-11-2019

Email: smaranikasahu1@gmail.com

Address for Communication

**Dr. Smaranika Sahu**

Coordinator, Asst Professor

Contact: +91-8763177859

Chief Patron

**Er. Sriram Panda**

Chief Executive  
MITS Group

Patron

**Dr. G.K. Panda**

Director  
MITS School of Biotechnology

Convenor

**Dr. Rashmi Ranjan Mishra**

Head  
Dept. of Biotechnology

Coordinator

**Dr. Smaranika Sahu**

Asst Professor  
Dept. of Biotechnology

Advisory Committee

**Dr. Manisha Patnaik**

Dept. of Biotechnology

**Mr. S. Satrusallya**

Dept. of Chemistry

**Dr. Swati Mishra**

Dept. of Biotechnology

**A TWO-WEEK ADD-ON  
PROGRAM  
ON**



**FOOD SPOILAGE  
MICROBES**

Program Schedule

02-12-2019 to 18-12-2019



Organized By:

**मिट्स जैव प्रौद्योगिकी संस्थान  
MITS SCHOOL OF BIOTECHNOLOGY**

Venue:

2(P), Infocity, Patia  
Bhubaneswar-751024 (Odisha)

Website: [msb.ac.in](http://msb.ac.in)

Email: [principal@msb.ac.in](mailto:principal@msb.ac.in)

## About College

Consistently ranking as the best institute in the eastern part of India, MITS School of Biotechnology (MSB) is a self financing professional organisation that was founded in 2003. The faculty consists of having qualification of PhD, M.Tech as well as experience in both Academics and industrial research, so as the student graduates, who are equally impressive mostly working in leading industries of Biotechnology, Pharma and IT. MSB is considered to be most selective, accepting, growing and proven institute under Utkal University. The institute is located at the prime location of Infocity, Bhubaneswar. This prestigious institute includes popular programs of Biotechnology, Applied Micro Biology and Computer Science.

## Courses Offered at MSB

BCA	- 3 Years
B.Sc Biotechnology	- 3 Years
M.Sc Biotechnology	- 2 Years
M.Sc App. Microbiology	- 2 Years

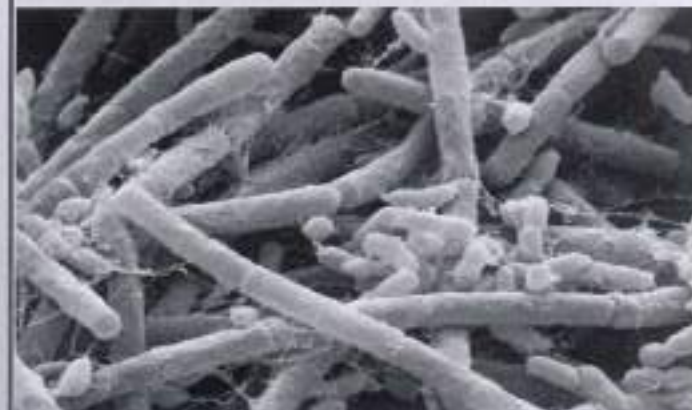
## About Programme

This programme focused on understanding the microbial agents responsible for food spoilage and how to identify, prevent, and control them. Participants will delve into the world of microorganisms and their role in causing food deterioration. Analyze and Interpret Food Quality: Participants will develop skills to assess the quality of food products, detect spoilage signs, and understand the implications of food spoilage on consumer health.



## Objective of the Programme

**Identify Common Food Spoilage Microorganisms:** Participants will learn to identify the most prevalent microorganisms responsible for food spoilage, such as bacteria, yeasts, molds, and enzymes.  
**Understand Factors Leading to Food Spoilage:** Participants will explore the various factors, including temperature, humidity, pH, and packaging, that contribute to food spoilage by these microorganisms.



Resource Person

**Dr. Mousumi Mishra**

Asst. Prof.

Department of Biotechnology MSB,  
Bhubaneswar

## REGISTERED STUDENT LIST

Name of the Programme: Two Week Add-On program on FOOD SPOILAGE MICROBES  
02-12-2019 to 18-12-2019

SN	Reg. No	Name of the Student	Year Branch	Signature
1	Y19UB01	A KIRTI	2nd Year BSc-BT	A.Kirti
2	Y19UB02	ABHIJIT PANDA	2nd Year BSc-BT	Abhijit Panda
3	Y19UB03	ABHIJITA KHAMARI	2nd Year BSc-BT	Abhijita Khamari
4	Y19UB04	ABHINANDA MISHRA	2nd Year BSc-BT	Abhinanda Mishra
5	Y19UB05	DEBASHREE MAJHI	2nd Year BSc-BT	Debashree Majhi
6	Y19UB06	AISHWARYA MISHRA	2nd Year BSc-BT	Aishwarya Mishra
7	Y19UB07	AKANSKHYA DHAL	2nd Year BSc-BT	Akanskhya Dhal
8	Y19UB08	ALFIYA BEGUM	2nd Year BSc-BT	Alfiya Begum
9	Y19UB09	ALOK KU. SWAIN	2nd Year BSc-BT	Alok Mohanty
10	Y19UB10	AMISHA A. NAYAK	2nd Year BSc-BT	Amisha A. Nayak
11	Y19UB11	AMRITA PANIGRAHI	2nd Year BSc-BT	Amrita Panigrahi
12	Y19UB12	ANANTA P. SAHOO	2nd Year BSc-BT	Ananta P. Sahoo
13	Y19UB13	ANINDITA DAS	2nd Year BSc-BT	Anindita das
14	Y19UB14	ANKIT BISWAS	2nd Year BSc-BT	Ankit Biswas
15	Y19UB15	ANTKITA SINGH	2nd Year BSc-BT	Ankit Biswas
16	Y19UB16	APARNA DARJEE	2nd Year BSc-BT	Aparna Darjee
17	Y19UB17	ARCHANA CHOUDHURY	2nd Year BSc-BT	Archana Choudhury
18	Y19UB18	ARPITA PRIYADARSINI	2nd Year BSc-BT	Arpita Priyadarshini
19	Y19UB19	ASWASINI MOHANTY	2nd Year BSc-BT	Aswasini Mohanty
20	Y19UB20	AVINAB MOHARANA	2nd Year BSc-BT	Avinab Moharana
21	Y19UB21	BAISNABI SAHOO	2nd Year BSc-BT	Baisnabi Sahoo
22	Y19UB22	BANABIHARI PATTANAIK	2nd Year BSc-BT	Banabihari Pattanaik
23	Y19UB23	BARSHA RANI PANIGRAHI	2nd Year BSc-BT	Barsha Rani Panigrahi
24	Y19UB24	BIBHUDUTTA PRADHAN	2nd Year BSc-BT	Bibhudutta Pradhan
25	Y19UB25	DEEPALI MAHANTA	2nd Year BSc-BT	deepali mahanta
26	Y19UB26	DEEPSIKHA BEHERA	2nd Year BSc-BT	DEEPSIKHA BEHERA
27	Y19UB27	DEEPSIKHA PANIGRAHI	2nd Year BSc-BT	Deepshikha Panigrahi
28	Y19UB28	DIBYA CHRACHHAN	2nd Year BSc-BT	Dibya Chhachhan
29	Y19UB29	DIBYAJYORI DAS	2nd Year BSc-BT	Dibyajyori Das
30	Y19UB30	DIPALI SAHOO	2nd Year BSc-BT	Dipali Sahoo
31	Y19UB31	GOKUL M	2nd Year BSc-BT	Gokul M

32	Y19UB32	GYANENDRA K	2nd Year BSc-BT	Gyanendra K.
33	Y19UB33	GYANENDRA PADHI	2nd Year BSc-BT	GYANENDRA PADHI
34	Y19UB34	HARAPRIYA SAHOO	2nd Year BSc-BT	HARAPRIYA SAHOO
35	Y19UB35	HIMANSHU S SAHU	2nd Year BSc-BT	Himanshu S Sahu
36	Y19UB36	JITENDRA K SAHOO	2nd Year BSc-BT	Jitendra K Sahoo
37	Y19UB37	KRITI	2nd Year BSc-BT	Kriti
38	Y19UB38	KUMAR ANKUSH MOHANTY	2nd Year BSc-BT	KUMAR ANKUSH MOHANTY
39	Y19UB39	MAHIMA PATRA	2nd Year BSc-BT	Mahima Patra
40	Y19UB40	MANISHA MOHAPATRA	2nd Year BSc-BT	Manisha Mohapatra
41	Y19UB41	MITALI M. MOHANTY	2nd Year BSc-BT	Mitali M. Mohanty
42	Y19UB42	MONALI MALLICK	2nd Year BSc-BT	Monali Mallik
43	Y19UB43	KALPANA SINGH	2nd Year BSc-BT	Kalpana Singh
44	Y19UB44	MOUSHUMI BAJPAYEE	2nd Year BSc-BT	moushumi baiPayee
45	Y19UB45	NARGISH PARWEN	2nd Year BSc-BT	Nargish Parween
46	Y19UB46	SWAGATIKA MISHRA	2nd Year BSc-BT	Swagatika Mishra
47	Y19UB47	NIHARIKA SINGH	2nd Year BSc-BT	Niharika Singh
48	Y19UB48	NIKITA JEE	2nd Year BSc-BT	Nikita Jee
49	Y19UB49	NISCHAY K DEY	2nd Year BSc-BT	Nischay K DEY
50	Y19UB50	OM SRI R PARIDA	2nd Year BSc-BT	Om Sri R Parida
51	Y19UB51	OMKAR MISHRA	2nd Year BSc-BT	omkar mishra
52	Y19UB52	PALLICITY P DORA	2nd Year BSc-BT	Pallicity P Dora
53	Y19UB53	PIYUSH K BEHERA	2nd Year BSc-BT	Piyush K Behera
54	Y19UB54	POOJA RAY	2nd Year BSc-BT	Pooja Ray
55	Y19UB55	POONAM KACCHAP	2nd Year BSc-BT	Poonam Kacchap
56	Y19UB56	PRAJNA PARAMITA	2nd Year BSc-BT	Prajna Paramita
57	Y19UB57	PRATIKSHA SAHU	2nd Year BSc-BT	Pratiksha Sahu
58	Y19UB58	PRATYASHA PATI	2nd Year BSc-BT	Pratyasha Pati
59	Y19UB59	PREETIMAYEE JENA	2nd Year BSc-BT	Preetimayee Jena
60	Y19UB60	PRIYA	2nd Year BSc-BT	Priya
61	Y19UB61	PRIYA KUMARI	2nd Year BSc-BT	Priya Kumari
62	Y19UB62	PRIYADARSHINI BARIK	2nd Year BSc-BT	Priyadarshini Barik
63	Y19UB63	PRIYAMBADA PRADHAN	2nd Year BSc-BT	Priyambada Pradhan
64	Y19UB64	PRIYANKA BHUYAN	2nd Year BSc-BT	Priyanka Bhuyan
65	Y19UB65	PRIYANKA P PARIDA	2nd Year BSc-BT	Priyanka P Parida.



66	Y19UB66	PUSPITA NAYAK	2nd Year BSc-BT	Puspita Nayak
67	Y19UB67	RASHMI R SWAIN	2nd Year BSc-BT	Rashmi R Swain
68	Y19UB68	RITIKA BEURA	2nd Year BSc-BT	Ritika Beura
69	Y19UB69	RUPALI PATI	2nd Year BSc-BT	Rupali pati
70	Y19UB70	SABYASACHI PANDA	2nd Year BSc-BT	Sabyasachi Panda
71	Y19UB71	SAGARIKA SAHOO	2nd Year BSc-BT	Sagarika Sahoo
72	Y19UB72	SAI SANKALP PAUL	2nd Year BSc-BT	Sai Sankalp Paul
73	Y19UB73	SAMAYA KAR	2nd Year BSc-BT	Samaya Kar
74	Y19UB74	SAMEEKSHA JENA	2nd Year BSc-BT	SAMEEKSHA JENA
75	Y19UB75	SAMIKHYA BEHERA	2nd Year BSc-BT	Samikhya Behera
76	Y19UB76	SANDIP JANA	2nd Year BSc-BT	Sandip Jana
77	Y19UB77	SANJANA SATAPATHY	2nd Year BSc-BT	Sanjana Satapathy
78	Y19UB78	SARMISTHA DHAL	2nd Year BSc-BT	Sarmistha Dhal
79	Y19UB79	SASMITA PANIGRAHI	2nd Year BSc-BT	Sasmita Panigrahi
80	Y19UB80	SATWA S MOHANTY	2nd Year BSc-BT	Satwa S Mohanty
81	Y19UB81	SHARON S TOPNO	2nd Year BSc-BT	Sharon Stopno
82	Y19UB82	SHIBANI CHOUDHURY	2nd Year BSc-BT	Shibani Choudhury
83	Y19UB83	SHIREEN BEGUM	2nd Year BSc-BT	Shireen Begum
84	Y19UB84	SHRDHANJALI BEHERA	2nd Year BSc-BT	Shrdhanjal Behera
85	Y19UB85	SHRUTI S PRADHAN	2nd Year BSc-BT	Shruti S Pradhan
86	Y19UB86	SUBHAM DAS	2nd Year BSc-BT	Subham Das
87	Y19UB87	SUBHANKAR KIRTANYA	2nd Year BSc-BT	Subhankar Kirtanya
88	Y19UB88	SIPRA PRIYADARSHINI	2nd Year BSc-BT	Sipra priyadarshini
89	Y19UB89	SIVA P. RAIGURU	2nd Year BSc-BT	Siva P. Raiguru
90	Y19UB90	SOHAN K SAHOO	2nd Year BSc-BT	Sohan K Sahoo
91	Y19UB91	SOMOSHREE PAUL	2nd Year BSc-BT	Somoshree Paul
92	Y19UB92	SONALI PRIYADARSHINI	2nd Year BSc-BT	Sonali Priyadarshini
93	Y19UB93	SOUMYA R SAHOO	2nd Year BSc-BT	Soumya R Sahoo
94	Y19UB94	SUBHASHREE NAYAK	2nd Year BSc-BT	Subhashree Nayak
95	Y19UB95	SUCHITRA DASH	2nd Year BSc-BT	Suchitra Dash
96	Y19UB96	SUDHA KUMARI	2nd Year BSc-BT	Sudha Kumari
97	Y19UB97	SUJIT K GOCHHI	2nd Year BSc-BT	Sujit K Gochhi
98	Y19UB98	SUNSHAINA SAMUEL	2nd Year BSc-BT	Sunshaina Samuel
99	Y19UB99	SURYA P DIXIT	2nd Year BSc-BT	Surya P Dixit
100	Y19UB100	SUSRIYA SAMMANWITA	2nd Year BSc-BT	Susriya Sammanwita

101	Y19UB101	SWADHIN K PATEL	2nd Year BSc-BT	Swadhink Patel
102	Y19UB102	SWATISHREE SAHOO	2nd Year BSc-BT	Swatishree Sahoo
103	Y19UB103	TANISHA MOHANTA	2nd Year BSc-BT	Tanisha Mohanta
104	Y19UB104	TANUSHREE PRADHAN	2nd Year BSc-BT	Tanushree Pradhan
105	Y19UB105	TAPASA D MAHAPATRA	2nd Year BSc-BT	Tapasa D Mahapatra
106	Y19UB106	TRUPTI T MOHAPATRA	2nd Year BSc-BT	Trupti T Mohapatra
107	Y19UB107	UPASANA SAHU	2nd Year BSc-BT	UPASANA SAHU
108	Y19UB108	SONALI PRIYADARSHINI	2nd Year BSc-BT	Sonali Priyadarshini
109	Y19UB109	PRAGNYA SAHU	2nd Year BSc-BT	Pragnya Sahu
110	Y19UB110	RHYTHM KARIR	2nd Year BSc-BT	Rhythm Karir

*S. Sam*  
COORDINATOR

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DIRECTOR  
Director  
MITS School of Biotechnology  
Bhubaneswar



# मिंटस जैव प्रौद्योगिकी संस्थान MITS SCHOOL OF BIOTECHNOLOGY


## COURSE SCHEDULE

Name of the Program: A Two Week Add-On Program on FOOD SPOILAGE MICROBES  
02-12-2019 to 18-12-2019

SN	Date	Topic	Resource Person
1	02-12-2019	Introduction to Food Spoilage	Dr. Mousumi Mishra
2	03-12-2018	Types of Food Spoilage Microorganisms	Dr. Mousumi Mishra
3	04-12-2018	Factors Leading to Food Spoilage	Dr. Mousumi Mishra
4	05-12-2018	Microbial Metabolism	Dr. Mousumi Mishra
5	06-12-2018	Practical Session - Microbial Sampling	Dr. Mousumi Mishra
6	07-12-2018	Food Preservation Techniques	Dr. Mousumi Mishra
7	09-12-2018	Preventing Cross- Contamination	Dr. Mousumi Mishra
8	10-12-2018	Food Safety Regulations	Dr. Mousumi Mishra
9	11-12-2018	Detection of Spoilage	Dr. Mousumi Mishra
10	12-12-2018	Case Studies and Real-World Applications	Dr. Mousumi Mishra
11	13-12-2018	Food Quality Assessment	Dr. Mousumi Mishra
12	14-12-2018	Conclusion and discussion	Dr. Mousumi Mishra
13	16-12-2018	Hands On Session	Dr. Mousumi Mishra
14	17-12-2018	Hands On Session	Dr. Mousumi Mishra
15	18-12-2018	Hands On Session	Dr. Mousumi Mishra

  
COORDINATOR

  
HOD

  
DIRECTOR  
Director  
MITS School of Biotechnology  
Bhubaneswar



## PROGRAM REPORT

19-12-2019

**Name of the Event:** A Two Week Add-On Program on **FOOD SPOILAGE MICROBES**

**Date:** 02-12-2019 to 18-12-2019

**Resource Person:** **Dr. Mousumi Mishra**

Lecturer,  
Dept. of Biotechnology, MSB, Bhubaneswar.  
Contact Number: 9937026755

**Coordinator:** **Dr. Smaranika Sahu**

Asst. Professor,  
Dept. of Biotechnology,  
MSB, Bhubaneswar

**Number of students attended:** 110

**Venue:** Conference Hall, MITS School of Biotechnology.

MITS school of Biotechnology, Bhubaneswar, organized a two week add-on program on **FOOD SPOILAGE MICROBES** for BSc-Biotechnology students by the resource person **Dr. Mousumi Mishra**. This programme focused on understanding the microbial agents responsible for food spoilage and how to identify, prevent, and control them. Participants will delve into the world of microorganisms and their role in causing food deterioration. Totally 110 students participated in this training program and after the completion of the program they were able to understand the following objectives and learning outcomes.

### Objectives:

1. **Identify Common Food Spoilage Microorganisms:** Participants will learn to identify the most prevalent microorganisms responsible for food spoilage, such as bacteria, yeasts, molds, and enzymes.
2. **Understand Factors Leading to Food Spoilage:** Participants will explore the various factors, including temperature, humidity, pH, and packaging, that contribute to food spoilage by these microorganisms.
3. **Analyze and Interpret Food Quality:** Participants will develop skills to assess the quality of food products, detect spoilage signs, and understand the implications of food spoilage on consumer health.

## Learning Outcomes:

1. Knowledge of Food Spoilage Microbes: Participants will be able to identify common microorganisms responsible for food spoilage and understand their characteristics.
2. Factors Leading to Food Spoilage: Participants will comprehend the factors that create conditions for microbial growth and spoilage in food products.
3. Prevention and Control Skills: Participants will acquire skills to prevent food spoilage through appropriate food handling, storage, and preservation techniques.
4. Food Quality Assessment: Participants will be capable of evaluating food quality and recognizing spoilage signs, thus making informed decisions about food consumption.
5. Adherence to Food Safety Standards: Participants will be aware of and able to apply food safety regulations and practices to ensure the production of safe food products.



A Two Week Add-On Program on **FOOD SPOILAGE MICROBES**,  
02-12-2019 to 18-12-2019, Dr. Mousumi Mishra.

This course was very useful to the students of BSc-Biotechnology and their feedback is positive. The management and Professor (Dr.) G. K. Panda, Director of MSB thanked to the resource person and participants for making the programme successful.

*S. Laha*  
COORDINATOR

*Dr. M. Mishra*  
HOD

*G. K. Panda*  
DIRECTOR



मिड्स जैव प्रौद्योगिकी संस्थान  
**MITS SCHOOL OF BIOTECHNOLOGY**  
2(P), INFOCITY, PATIA, BHUBANESWAR-751024



## *Certificate*

The MITS School of Biotechnology hereby certifies that

**ABHIJIT PANDA**  
B.Sc-BT-2nd Year

has successfully completed  
A Two Week Add-On Programme On  
**FOOD SPOILAGE MICROBES**  
02-12-2019 To 18-12-2019

*S. Sahu*  
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**COORDINATOR**

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**DIRECTOR**



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**MITS SCHOOL OF BIOTECHNOLOGY**  
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## *Certificate*

The MITS School of Biotechnology hereby certifies that

**A KIRTI**  
B.Sc-BT-2nd Year

has successfully completed  
A Two Week Add-On Programme On  
**FOOD SPOILAGE MICROBES**  
02-12-2019 To 18-12-2019

*L. Sahu*

COORDINATOR

*Cge*

DIRECTOR



मिट्स जैव प्रौद्योगिकी संस्थान  
**MITS SCHOOL OF BIOTECHNOLOGY**

2(P), INFOCITY, PATIA, BHUBANESWAR-751024



## *Certificate*

The MITS School of Biotechnology hereby certifies that

**ALOK KUMAR SWAIN**  
B.Sc-BT-2nd Year

has successfully completed  
A Two Week Add-On Programme On  
**FOOD SPOILAGE MICROBES**  
02-12-2019 To 18-12-2019

*S. Sahen*  
\_\_\_\_\_  
**COORDINATOR**

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\_\_\_\_\_  
**DIRECTOR**





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**MITS SCHOOL OF BIOTECHNOLOGY**  
2(P), INFOCITY, PATIA, BHUBANESWAR-751024



## *Certificate*

The MITS School of Biotechnology hereby certifies that

**ANKIT BISWAS**  
B.Sc-BT-2nd Year

has successfully completed  
A Two Week Add-On Programme On  
**FOOD SPOILAGE MICROBES**  
02-12-2019 To 18-12-2019

*S. Sahu*  
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COORDINATOR

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DIRECTOR



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**MITS SCHOOL OF BIOTECHNOLOGY**  
2(P), INFOCITY, PATIA, BHUBANESWAR-751024



## *Certificate*

The MITS School of Biotechnology hereby certifies that

**DIPALI SAHOO**  
B.Sc-BT-2nd Year

has successfully completed  
A Two Week Add-On Programme On  
**FOOD SPOILAGE MICROBES**  
02-12-2019 To 18-12-2019

*L. Sahu*  
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COORDINATOR

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\_\_\_\_\_  
DIRECTOR



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**MITS SCHOOL OF BIOTECHNOLOGY**  
2(P), INFOCITY, PATIA, BHUBANESWAR-751024



## *Certificate*

The MITS School of Biotechnology hereby certifies that

**MAHIMA PATRA**  
B.Sc-BT-2nd Year

has successfully completed  
A Two Week Add-On Programme On  
**FOOD SPOILAGE MICROBES**  
02-12-2019 To 18-12-2019

*L. Laha*  
\_\_\_\_\_  
**COORDINATOR**

*[Signature]*  
\_\_\_\_\_  
**DIRECTOR**



मिड्स जैव प्रौद्योगिकी संस्थान  
**MITS SCHOOL OF BIOTECHNOLOGY**

2(P), INFOCITY, PATIA, BHUBANESWAR-751024

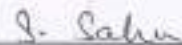


# Certificate

The MITS School of Biotechnology hereby certifies that

**KALPANA SINGH**  
B.Sc-BT-2nd Year

has successfully completed  
A Two Week Add-On Programme On  
**FOOD SPOILAGE MICROBES**  
02-12-2019 To 18-12-2019

  
COORDINATOR

  
DIRECTOR



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**MITS SCHOOL OF BIOTECHNOLOGY**  
2(P), INFOCITY, PATIA, BHUBANESWAR-751024



## *Certificate*

The MITS School of Biotechnology hereby certifies that

**NIKITA JEE**  
B.Sc-BT-2nd Year

has successfully completed  
A Two Week Add-On Programme On  
**FOOD SPOILAGE MICROBES**  
02-12-2019 To 18-12-2019

*B. Sahu*  
\_\_\_\_\_  
**COORDINATOR**

*[Signature]*  
\_\_\_\_\_  
**DIRECTOR**



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**MITS SCHOOL OF BIOTECHNOLOGY**

2(P), INFOCITY, PATIA, BHUBANESWAR-751024



## *Certificate*

The MITS School of Biotechnology hereby certifies that

**POOJA RAY**  
B.Sc-BT-2nd Year

has successfully completed  
A Two Week Add-On Programme On  
**FOOD SPOILAGE MICROBES**  
02-12-2019 To 18-12-2019

*L. Sahu*  
\_\_\_\_\_  
COORDINATOR

*[Signature]*  
\_\_\_\_\_  
DIRECTOR



मिड्स जैव प्रौद्योगिकी संस्थान  
**MITS SCHOOL OF BIOTECHNOLOGY**  
2(P), INFOCITY, PATIA, BHUBANESWAR-751024



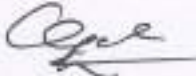
## *Certificate*

The MITS School of Biotechnology hereby certifies that

**SUBHAM DAS**  
B.Sc-BT-2nd Year

has successfully completed  
A Two Week Add-On Programme On  
**FOOD SPOILAGE MICROBES**  
02-12-2019 To 18-12-2019

  
COORDINATOR

  
DIRECTOR



Date: 23-08-2019

## CIRCULAR

It is hereby informed to all final/pre-final year students of MSc-Biotechnology that the Department of Biotechnology of this institute is conducting a Two Week Add-On Programme on **GENE MANIPULATION FOR ADVANCEMENT** from **02-09-2019** to **19-09-2019**. Interested students shall register their names at the office of the coordinator on or before 4 PM, 28-08-2019.





**Venue of the Programme** : Conference Hall, MITS School of Biotechnology.

**Coordinator** : **Dr. Mousumi Mishra**  
Asst. Professor  
Department of Biotechnology  
MITS School of Biotechnology

  
**DIRECTOR**

Director  
MITS School of Biotechnology  
Bhubaneswar

Copy to:

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			A. N. Nayak		Anil
CE: For information					



## REGISTRATION FORM

Name.....

Course.....Yr(1/2/3)

Roll No.....

Institution.....

Address for Communication:

Mobile.....

Email.....

Signature

Application to be submitted online in the above format along with the scanned copy of the registration form.

Last Date of Registration: 30.08.2019

Address for Communication

**Dr. Mousumi Mishra**

Coordinator, Asst Professor

Contact: +91-9937026755

Chief Patron

**Er. Sriram Panda**

Chief Executive  
MITS Group

Patron

**Dr. G.K. Panda**

Director  
MITS School of Biotechnology

Convenor

**Dr. Rashmi Ranjan Mishra**

Head  
Dept. of Biotechnology

Coordinator

**Dr. Mousumi Mishra**

Asst Professor  
Dept. of Biotechnology

Advisory Committee

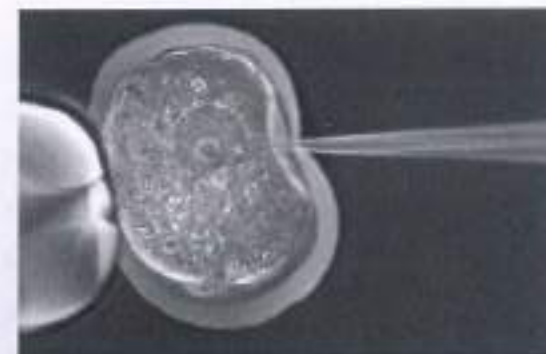
**Dr. Swati mishra**

Dept. of Biotechnology

**Mr. S. Satrusallya**

Dept. of Chemistry

**A TWO-WEEK ADD-ON  
PROGRAM  
ON**



**GENE MANIPULATION FOR  
ADVANCEMENT**

Program Schedule

02-09-2019 To 19-09-2019



Organized By:

**मिटस जैव प्रौद्योगिकी संस्थान  
MITS SCHOOL OF BIOTECHNOLOGY**

Venue:

2(P), Infocity, Patia  
Bhubaneswar-751024 (Odisha)  
Website: [msb.ac.in](http://msb.ac.in)  
Email: [principal@msb.ac.in](mailto:principal@msb.ac.in)

## About College

Consistently ranking as the best institute in the eastern part of India, MITS School of Biotechnology (MSB) is a self financing professional organisation that was founded in 2003. The faculty consists of having qualification of PhD, M.Tech as well as experience in both Academics and industrial research, so as the student graduates, who are equally impressive mostly working in leading industries of Biotechnology, Pharma and IT. MSB is considered to be most selective, accepting, growing and proven institute under Utkal University. The institute is located at the prime location of Infocity, Bhubaneswar. This prestigious institute includes popular programs of Biotechnology, Applied Micro Biology and Computer Science.

## Courses Offered at MSB

BCA	- 3 Years
B.Sc Biotechnology	- 3 Years
M.Sc Biotechnology	- 2 Years
M.Sc App. Microbiology	- 2 Years

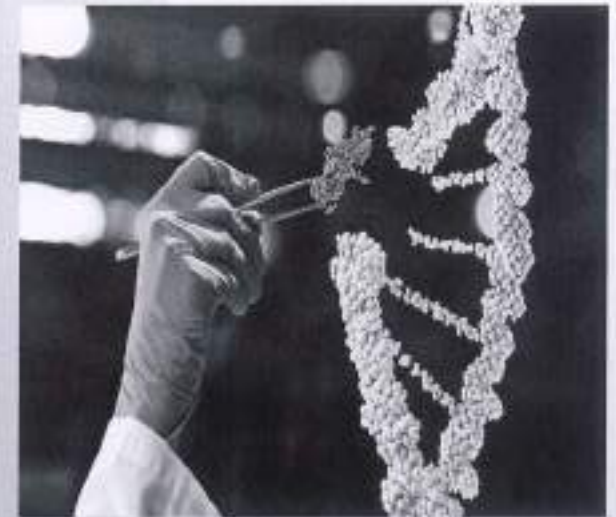
## About Programme

Process of inserting new genetic information into existing cells in order to modify a specific organism for the purpose of changing its characteristics. Transgenic trees have been suggested as a way to confer resistance to pathogens in wild populations. Gene transfer through viral vectors has been proposed as a means of controlling invasive species as well as vaccinating threatened fauna from disease.



## Objective of the Programme

The Plants, animals or microorganisms that have been changed through genetic engineering are termed genetically modified organisms or GMOs. Organisms are genetically engineered to discover the functions of certain genes. This could be the effect on the phenotype of the organism, where the gene is expressed or what other genes it interacts with.



Resource Person

**Dr. M Patnaik**

Asst. Prof Department of Biotechnology

MSB, Bhubaneswar

Date: 01-09-2019

### REGISTERED STUDENT LIST

Name of the Programme: A Two-Week Add-On Program on GENE MANIPULATION FOR  
ADVANCEMENT  
02-09-2019 to 19-09-2019

SN	Reg. No	Name of the Student	Year Branch	Signature
1	Y19PB01	ADITYA GOUDA	M.Sc-BT	Aditya Gouda
2	Y19PB02	ALOK CHANDRA SUBUDHI	M.Sc-BT	Alok Chandra Subudhi
3	Y19PB03	ANIL KUMAR PANDA	M.Sc-BT	Anil Kumar Panda
4	Y19PB04	ANKITA PATTNAIK	M.Sc-BT	Ankita Pattnaik
5	Y19PB05	ANKITA SATPATHY	M.Sc-BT	Ankita satpathy
6	Y19PB06	ANWESHA JENA	M.Sc-BT	Anwesha Jena
7	Y19PB07	ARPITA PATRO	M.Sc-BT	Arpita Patro
8	Y19PB08	AYESHA AFRIN	M.Sc-BT	Ayesha Afrin
9	Y19PB09	BAISHALI MAHAPATRA	M.Sc-BT	Baishali Mahapatra
10	Y19PB10	BHOLANATHA DAS	M.Sc-BT	Bholanatha Das
11	Y19PB11	BIKASH KUMAR SAHOO	M.Sc-BT	Bikash Kumar Sahoo
12	Y19PB12	BINAPANI GIRI	M.Sc-BT	Binapani Giri
13	Y19PB13	DEBASMITA DAS	M.Sc-BT	Debasmita Das
14	Y19PB14	GAURAB NANDI	M.Sc-BT	Gaurab Nandi
15	Y19PB15	GYANA RANJAN SAHOO	M.Sc-BT	Gyana Ranjan saho
16	Y19PB16	IPSITA SUBUDHI	M.Sc-BT	Ipsita Subudhi
17	Y19PB17	JAGAN KUMAR BEURIA	M.Sc-BT	Jagan Kumar BEURIA
18	Y19PB18	KUNTULU ANKITA	M.Sc-BT	Kuntulu Ankita
19	Y19PB19	LICKY PRIYADARSHINI	M.Sc-BT	Licky priyadarshini
20	Y19PB20	LILIMA SETHI	M.Sc-BT	Lilima Sethi
21	Y19PB21	MANISHA JENA	M.Sc-BT	Manisha Jena
22	Y19PB22	MANISHA NANDAN	M.Sc-BT	Manisha Nandan
23	Y19PB23	NIKITA ROUTRAY	M.Sc-BT	NIKITA Routray
24	Y19PB24	NIRLIPTA DHAL	M.Sc-BT	NIRLIPTA Dhal

25	Y19PB25	PALLAVI GHOSE	M.Sc-BT	Pallavi Ghose
26	Y19PB26	PRAGNYASINI ROUT	M.Sc-BT	Pragnyashini Rout
27	Y19PB27	PRITISHREE RAY	M.Sc-BT	Pritishree Ray
28	Y19PB28	PRIYA MAHATO	M.Sc-BT	Priya Mahato
29	Y19PB29	PRIYANKA BARIK	M.Sc-BT	Priyanka Barik
30	Y19PB30	PRIYANKA ROUT	M.Sc-BT	Priyanka Rout
31	Y19PB31	RAZIA PARVEEN	M.Sc-BT	Razia Parveen
32	Y19PB32	RITU BARAL	M.Sc-BT	Ritu Baral
33	Y19PB33	RITUPURBA DASH	M.Sc-BT	Ritupurba Dash
34	Y19PB34	SAMUKA SAHU	M.Sc-BT	Samuka Sahoo
35	Y19PB35	SAPLIN MISHRA	M.Sc-BT	Saplin Mishra
36	Y19PB36	SAYANTAN SARKAR	M.Sc-BT	Sayantana Sarkar
37	Y19PB37	SAYANTANI GUHA	M.Sc-BT	SAYANTANI GUHA
38	Y19PB38	SHAILJA KUMARI SRIVASTAVA	M.Sc-BT	shailja kumari srivastava
39	Y19PB39	SHEETAL PRADHAN	M.Sc-BT	Sheetal Pradhan
40	Y19PB40	SHILA PATEL	M.Sc-BT	Shila Patel
41	Y19PB41	SILPA MOHANTY	M.Sc-BT	SILPA MOHANTY
42	Y19PB42	SUBHALAXMI BISOI	M.Sc-BT	Subhalaxmi Bisoi
43	Y19PB43	SUBHASHREE PARIDA	M.Sc-BT	Subhashree Parida
44	Y19PB44	SUSHREE SMITAPRANGYA SAMAL	M.Sc-BT	sushree smitaprangya samal
45	Y19PB45	SUSHREE SMRUTISNIGDHA SAHOO	M.Sc-BT	SUSHREE SMRUTISNIGDHA SAHOO
46	Y19PB46	SWAGATIKA TRIPATHY	M.Sc-BT	Swagatika Tripathy
47	Y19PB47	SWAPNARANI SETHI	M.Sc-BT	Swapnarani Sethi
48	Y19PB48	SWETALEENA MISHRA	M.Sc-BT	Swapnarani Sethi
49	Y19PB49	TANIMA SINGH	M.Sc-BT	Tanima Singh
50	Y19PB50	TANUSHREE BEHERA	M.Sc-BT	Tanushree Behera

*Mishra*  
COORDINATOR

*Dutta*  
HOD

*Ceja*  
DIRECTOR  
Director  
MITS School of Biotechnology  
Bhubaneswar

Date: 02-09-2019

### REGISTERED STUDENT LIST

Name of the Programme: A Two-Week Add-On Program on GENE MANIPULATION FOR ADVANCEMENT

02-09-2019 to 19-09-2019

SN	Reg. No	Name of the Student	Year Branch	Signature
51	Y19PB51	AMRITA SUBHALAXMI MOHANTY	2 <sup>nd</sup> Year MSC-BT	Amrita Subhalaxmi Mohanty
52	Y19PB52	DEEPSHIKHA KAR	2 <sup>nd</sup> Year MSC-BT	Deepshikha Kar
53	Y19PB53	DIPTIMAYEE MALLIK	2 <sup>nd</sup> Year MSC-BT	Diptimayee Mallik
54	Y19PB54	INDIRA PRIYADARSHINI DASH	2 <sup>nd</sup> Year MSC-BT	Indira Priyadarshini Dash
55	Y19PB55	LIPSA RANI PATTNAYAK	2 <sup>nd</sup> Year MSC-BT	Lipsa Rani Pattnayak
56	Y19PB56	MADHUCHHANDA PRADHAN	2 <sup>nd</sup> Year MSC-BT	Madhuchhanda Pradhan
57	Y19PB57	PRAKASH KUMAR PRUSTI	2 <sup>nd</sup> Year MSC-BT	Prakash Kumar Prusti
58	Y19PB58	PRANGYA PARAMITA SAHU	2 <sup>nd</sup> Year MSC-BT	Prangya Paramita Sahu

  
COORDINATOR

  
HOD

  
DIRECTOR  
Director  
MITS School of Biotechnology  
Bhubaneswar



## COURSE SCHEDULE

Name of the Program: A Two Week Add-On Program on **GENE MANIPULATION FOR ADVANCEMENT**  
02-09-2019 to 19-09-2019

SN	Date	Topic	Resource Person
1	02-09-2019	Introduction to gene manipulation	Dr. Manisha Pattnaik
2	03-09-2019	Gene addition.	Dr. Manisha Pattnaik
3	04-09-2019	Gene replacement.	Dr. Manisha Pattnaik
4	06-09-2019	Gene editing	Dr. Manisha Pattnaik
5	07-09-2019	Genetic modification of immune cells.	Dr. Manisha Pattnaik
6	08-09-2019	Gene inhibition	Dr. Manisha Pattnaik
7	09-09-2019	Gene isolation and clonning	Dr. Manisha Pattnaik
8	10-09-2019	Cloning vectors	Dr. Manisha Pattnaik
9	11-09-2019	Inserting DNA into Genome host	Dr. Manisha Pattnaik
10	12-09-2019	Purpose of gene manipulation	Dr. Manisha Pattnaik
11	13-09-2019	Micromanipulation	Dr. Manisha Pattnaik
12	14-09-2019	Applications of gene manipulation	Dr. Manisha Pattnaik
13	16-09-2019	Hands On Session	Dr. Manisha Pattnaik
14	17-09-2019	Hands On Session	Dr. Manisha Pattnaik
15	19-09-2019	Hands On Session	Dr. Manisha Pattnaik

  
COORDINATOR

  
HOD

  
DIRECTOR  
MITS School of Biotechnology  
Bhubaneswar



**Name of the Event:** A Two Week Add-On Program on **GENE MANIPULATION FOR ADVANCEMENT**

**Date:** 02-09-2019 To 19-09-2019

**Resource Person:** **Dr. Manisha Pattnaik**  
Asst. Professor,  
Dept. of Biotechnology, MSB, Bhubaneswar.  
Contact Number: 9861075040

**Coordinator:** **Dr. Mousumi Mishra**  
Asst. Professor,  
Dept. of Biotechnology, MSB, Bhubaneswar  
MSB, Bhubaneswar

**Number of students attended:** 58

**Venue:** Conference Hall, MITS School of Biotechnology.

MITS school of Biotechnology, Bhubaneswar, organized a two week add-on program on **GENE MANIPULATION FOR ADVANCEMENT** for MSc-Biotechnology students by the resource person **Dr. Manisha Pattnaik**. Process of inserting new genetic information into existing cells in order to modify a specific organism for the purpose of changing its characteristics. Totally 58 students participated in this training program and after the completion of the program they were able to understand the following objectives and learning outcomes.

### **Objectives:**

1. Plants, animals or microorganisms that have been changed through genetic engineering are termed genetically modified organisms or GMOs.
2. Organisms are genetically engineered to discover the functions of certain genes. This could be the effect on the phenotype of the organism, where the gene is expressed or what other genes it interacts with.

### **Learning Outcomes:**

1. Genetic engineering has potential applications in conservation and natural area management
1. Gene transfer through viral vectors has been proposed as a means of controlling invasive species as well as vaccinating threatened fauna from disease.
2. Transgenic trees have been suggested as a way to confer resistance to pathogens in wild populations.



**A Two Week Add-On Program on GENE MANIPULATION FOR ADVANCEMENT,  
02-09-2019 To 19-09-2019, Dr. Manisha Pattnaik.**

This course was very useful to the students of MSc-Biotechnology and their feedback is positive. The management and Professor (Dr.) G. K. Panda, Director of MSB thanked to the resource person and participants for making the programme successful.

  
**COORDINATOR**

  
**HOD**

  
**DIRECTOR**  
- Director  
MITS School of Biotechnology  
Bhubaneswar





मिट्स जैव प्रौद्योगिकी संस्थान  
**MITS SCHOOL OF BIOTECHNOLOGY**

2(P), INFOCITY, PATIA, BHUBANESWAR-751024



# *Certificate*

The MITS School of Biotechnology hereby certifies that

**ADITYA GOUDA**  
MSC-BT-2nd Year

has successfully completed  
A Two Week Add-On Programme On  
**GENE MANIPULATION FOR ADVANCEMENT**  
02-09-2019 To 19-09-2019

COORDINATOR

DIRECTOR



मिट्स जैव प्रौद्योगिकी संस्थान  
**MITS SCHOOL OF BIOTECHNOLOGY**  
2(P), INFOCITY, PATIA, BHUBANESWAR-751024



## *Certificate*

The MITS School of Biotechnology hereby certifies that

**ANIL KUMAR PANDA**  
MSC-BT-2nd Year

has successfully completed  
A Two Week Add-On Programme On  
**GENE MANIPULATION FOR ADVANCEMENT**  
02-09-2019 To 19-09-2019

*Meishra*

COORDINATOR

*Das*

DIRECTOR



मिड्स जैव प्रौद्योगिकी संस्थान  
**MITS SCHOOL OF BIOTECHNOLOGY**  
2(P), INFOCITY, PATIA, BHUBANESWAR-751024



# Certificate

The MITS School of Biotechnology hereby certifies that

**ANWESHA JENA**  
MSC-BT-2nd Year

has successfully completed  
A Two Week Add-On Programme On  
**GENE MANIPULATION FOR ADVANCEMENT**  
02-09-2019 To 19-09-2019

COORDINATOR

DIRECTOR



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**MITS SCHOOL OF BIOTECHNOLOGY**  
2(P), INFOCITY, PATIA, BHUBANESWAR-751024



## *Certificate*

The MITS School of Biotechnology hereby certifies that

**BINAPANI GIRI**  
MSC-BT-2nd Year

has successfully completed  
A Two Week Add-On Programme On  
**GENE MANIPULATION FOR ADVANCEMENT**  
02-09-2019 To 19-09-2019

*Meenakshi*

COORDINATOR

*Chandra*

DIRECTOR



मिट्स जैव प्रौद्योगिकी संस्थान  
**MITS SCHOOL OF BIOTECHNOLOGY**  
2(P), INFOCITY, PATIA, BHUBANESWAR-751024



## *Certificate*

The MITS School of Biotechnology hereby certifies that

**LILIMA SETHI**  
MSC-BT-2nd Year

has successfully completed  
A Two Week Add-On Programme On  
**GENE MANIPULATION FOR ADVANCEMENT**  
02-09-2019 To 19-09-2019

COORDINATOR

DIRECTOR



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**MITS SCHOOL OF BIOTECHNOLOGY**  
2(P), INFOCITY, PATIA, BHUBANESWAR-751024



## *Certificate*

The MITS School of Biotechnology hereby certifies that

**MANISHA JENA**  
MSC-BT-2nd Year

has successfully completed  
A Two Week Add-On Programme On  
**GENE MANIPULATION FOR ADVANCEMENT**  
02-09-2019 To 19-09-2019

COORDINATOR

DIRECTOR



मिट्स जैव प्रौद्योगिकी संस्थान  
**MITS SCHOOL OF BIOTECHNOLOGY**

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## *Certificate*

The MITS School of Biotechnology hereby certifies that

**NIKITA ROUTRAY**  
MSC-BT-2nd Year

has successfully completed  
A Two Week Add-On Programme On  
**GENE MANIPULATION FOR ADVANCEMENT**  
02-09-2019 To 19-09-2019

COORDINATOR

DIRECTOR



मिट्स जैव प्रौद्योगिकी संस्थान  
**MITS SCHOOL OF BIOTECHNOLOGY**

2(P), INFOCITY, PATIA, BHUBANESWAR-751024



## *Certificate*

The MITS School of Biotechnology hereby certifies that

**PALLAVI GHOSE**  
MSC-BT-2nd Year

has successfully completed  
A Two Week Add-On Programme On  
**GENE MANIPULATION FOR ADVANCEMENT**  
02-09-2019 To 19-09-2019

COORDINATOR

DIRECTOR





मिट्स जैव प्रौद्योगिकी संस्थान  
**MITS SCHOOL OF BIOTECHNOLOGY**

2(P), INFOCITY, PATIA, BHUBANESWAR-751024



## *Certificate*

The MITS School of Biotechnology hereby certifies that

**PRIYANKA ROUT**  
MSC-BT-2nd Year

has successfully completed  
A Two Week Add-On Programme On  
**GENE MANIPULATION FOR ADVANCEMENT**  
02-09-2019 To 19-09-2019

COORDINATOR

DIRECTOR



मिट्स जैव प्रौद्योगिकी संस्थान  
**MITS SCHOOL OF BIOTECHNOLOGY**  
2(P), INFOCITY, PATIA, BHUBANESWAR-751024



## *Certificate*

The MITS School of Biotechnology hereby certifies that

**SHILA PATEL**  
MSC-BT-2nd Year

has successfully completed  
A Two Week Add-On Programme On  
**GENE MANIPULATION FOR ADVANCEMENT**  
02-09-2019 To 19-09-2019

COORDINATOR

DIRECTOR



Date: 26-08-2019

## CIRCULAR

It is hereby informed to all final/pre-final year students of MSc-Applied Microbiology that the Department of Biotechnology of this institute is conducting a Two Week Add-On Program on **MICROBIAL QUALITY CONTROL ON DRINKING WATER AND FOOD** from **06-09-2019** to **23-09-2019**. Interested students shall register their names at the office of the coordinator on or before 4 PM, 02-09-2019.




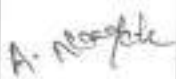

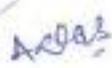
**Venue of the Programme** : Conference Hall, MITS School of Biotechnology.

**Coordinator** : **Dr. Mousumi Mishra**  
Asst. Professor  
Department of Biotechnology  
MITS School of Biotechnology

  
**DIRECTOR**

MITS School of Biotechnology  
Bhubaneswar

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## REGISTRATION FORM

Name.....

Course.....Yr(1/2/3)

Roll No.....

Institution.....

Address for Communication:

Mobile.....

Email.....

Signature

Application to be submitted online in the above format along with the scanned copy of the registration form.

Last Date of Registration: 04.09.2019

Address for Communication

**Dr. Mousumi Mishra**  
Coordinator, Asst Professor  
Contact: +91-9937026755

Chief Patron

**Er. Sriram Panda**  
Chief Executive  
MITS Group

Patron

**Dr. G.K. Panda**  
Director  
MITS School of Biotechnology

Convenor

**Dr. Rashmi Ranjan Mishra**  
Head  
Dept. of Biotechnology

Coordinator

**Dr. Mousumi Mishra**  
Asst Professor  
Dept. of Biotechnology

Advisory Committee

**Dr. Manisha patnaik**  
Dept. of Biotechnology

**Prof. Siddhartha Parida**  
Dept. of Biotechnology

**Ms. Monalisha Pradhan**  
Dept. of Biotechnology

**A TWO-WEEK ADD-ON  
PROGRAM  
ON**



**MICROBIAL QUALITY  
CONTROL ON DRINKING  
WATER & FOOD**

Program Schedule

06-09-2019 To 23-09-2019



Organized By:

**मिड्स जैव प्रौद्योगिकी संस्थान**  
**MITS SCHOOL OF BIOTECHNOLOGY**

Venue:

2(P), Infocity, Patia  
Bhubaneswar-751024 (Odisha)  
Website: [msb.ac.in](http://msb.ac.in)  
Email: [principal@msb.ac.in](mailto:principal@msb.ac.in)

## About College

Consistently ranking as the best institute in the eastern part of India, MITS School of Biotechnology (MSB) is a self financing professional organisation that was founded in 2003. The faculty consists of having qualification of PhD, M.Tech as well as experience in both Academics and industrial research, so as the student graduates, who are equally impressive mostly working in leading industries of Biotechnology, Pharma and IT. MSB is considered to be most selective, accepting, growing and proven institute under Utkal University. The institute is located at the prime location of Infocity, Bhubaneswar. This prestigious institute includes popular programs of Biotechnology, Applied Micro Biology and Computer Science.

## Courses Offered at MSB

BCA	- 3 Years
B.Sc Biotechnology	- 3 Years
M.Sc Biotechnology	- 2 Years
M.Sc App. Microbiology	- 2 Years

## About Programme

The provision of reliable, safe drinking water requires water utilities to take a holistic approach to the management of drinking water supplies. A holistic approach considers risks from all potential contaminants (microbiological, chemical and radiological) in a supply and allows the development of risk management strategies that prioritize risks and minimize potential impacts on human health.



## Objective of the Programme

The main objective of the program is to learn the treatment optimization to minimize nutrients entering into the system. To understand the managing water age and managing impacts of water temperature. To maintain an effective disinfectant residual and maintaining pH within  $\pm 0.2$  units. For keeping the distribution system clean and maintaining positive pressure



Resource Person

**Dr. Swati Mishra**

Asst. Prof Department of Biotechnology  
MSB, Bhubaneswar

## REGISTERED STUDENT LIST

Name of the Programme: A Two-Week Add-On Program on MICROBIAL QUALITY CONTROL ON DRINKING WATER & FOOD  
06-09-2019 to 23-09-2019

SN	Reg. No	Name of the Student	Year Branch	Signature
1	Y19PA01	ABHILIPSA PARHI	M.Sc-AMB	Abhilipsa Parhi
2	Y19PA02	ABHIPSA SAMAL	M.Sc-AMB	Abhipsa Samal
3	Y19PA03	ABHISEK MAITY	M.Sc-AMB	Abhisek Maity
4	Y19PA04	ADARSHAMAYEE MOHANTY	M.Sc-AMB	Adarshamayee Mohanty
5	Y19PA05	ANUCHHAYA PATRA	M.Sc-AMB	Anuchhaya Patra
6	Y19PA06	BHAVNA PRASAD	M.Sc-AMB	Bhavna Prasad
7	Y19PA07	DEBASHISH SAHOO	M.Sc-AMB	Debashish Sahoo
8	Y19PA08	DIPTIMAYEE JALLY	M.Sc-AMB	Diptimayee Jally
9	Y19PA09	EVANJALI PRADHAN	M.Sc-AMB	Evanjali Pradhan
10	Y19PA10	JAGANNATH ROUT	M.Sc-AMB	Jagannath Rout
11	Y19PA11	JYOTI PRAKASH DAS	M.Sc-AMB	Jyoti Prakash Das
12	Y19PA12	MANASI JENA	M.Sc-AMB	Manasi Jena
13	Y19PA13	MANISHA SAHOO	M.Sc-AMB	Manisha Sahoo
14	Y19PA14	MOUSUMI SATAPATHY	M.Sc-AMB	Mousumi Satapathy
15	Y19PA15	POOJA BEHERA	M.Sc-AMB	Pooja Behera
16	Y19PA16	PRIYANKA PATRA	M.Sc-AMB	Priyanka Patra
17	Y19PA17	RAJESH KUMAR RATH	M.Sc-AMB	Rajesh Kumar Rath
18	Y19PA18	RASMITA PADHI	M.Sc-AMB	Rasmita Padhi
19	Y19PA19	SAMEER SOURAV MISHRA	M.Sc-AMB	Sameer Sourav Mishra
20	Y19PA20	SAMIKSHYA MEHER	M.Sc-AMB	Samikshya Meher
21	Y19PA21	SANCHARI GUHA	M.Sc-AMB	Sanchari Guha
22	Y19PA22	SASMITA MEHER	M.Sc-AMB	Sasmita Meher
23	Y19PA23	SOMYASHREE PATTANAIK	M.Sc-AMB	Somyashree Pattanaik
24	Y19PA24	SOUMEN MAJI	M.Sc-AMB	Soumen Maji
25	Y19PA25	SRADHANJALI MAHARATHI	M.Sc-AMB	Shradhanjali Maharathi
26	Y19PA26	SUBHASHREE DAS	M.Sc-AMB	Subhashree Das
27	Y19PA27	SUBRATA PARAI	M.Sc-AMB	Subrata Parai
28	Y19PA28	SUNITA JETHY	M.Sc-AMB	Sunita Jethy
29	Y19PA29	SUNITA SAHOO	M.Sc-AMB	Sunita Sahoo
30	Y19PA30	SUSMITA BISWAL	M.Sc-AMB	Susmita Biswal

  
COORDINATOR

  
HOD

  
DIRECTOR



## COURSE SCHEDULE

**Name of the Program:** A Two Week Add-On Program on **MICROBIAL QUALITY CONTROL ON DRINKING WATER AND FOOD**  
**06-09-2019 To 23-09-2019**

SN	Date	Topic	Resource Person
1	06-09-2019	Source Water Monitoring	Dr. Swati Mishra
2	07-09-2019	Pathogenic Microorganisms	Dr. Swati Mishra
3	09-09-2019	Quantitative microbial risk Assessment	Dr. Swati Mishra
4	10-09-2019	Natural Organic Matter	Dr. Swati Mishra
5	11-09-2019	Turbidity and Biological stability of drinking water distribution systems	Dr. Swati Mishra
6	12-09-2019	Source water protection and management	Dr. Swati Mishra
7	13-09-2019	Drinking Water treatment processes	Dr. Swati Mishra
8	14-09-2019	Selection and optimization of treatment processes	Dr. Swati Mishra
9	16-09-2019	Assessing water treatment processes	Dr. Swati Mishra
10	18-09-2019	Communication and public education	Dr. Swati Mishra
11	19-09-2019	Verification Monitoring	Dr. Swati Mishra
12	20-09-2019	Distribution system operation and management	Dr. Swati Mishra
13	21-09-2019	Hands on Session	Dr. Swati Mishra
14	23-09-2019	Hands on Session	Dr. Swati Mishra

  
COORDINATOR

  
HOD

  
DIRECTOR  
Director  
MITS School of Biotechnology  
Bhubaneswar



## PROGRAM REPORT

24-09-2019

**Name of the Event:** A Two Week Add-On Programme on **MICROBIAL QUALITY CONTROL ON DRINKING WATER AND FOOD**

**Date:** 06-09-2019 To 23-09-2019

**Resource Person:** **Dr. Swati Mishra**  
Asst. Professor,  
Dept. of Biotechnology, MSB, Bhubaneswar.  
Contact Number: 6371834356

**Coordinator:** **Dr. Mousumi Mishra**  
Asst. Professor,  
Dept. of Biotechnology,  
MSB, Bhubaneswar

**Number of students attended:** 30

**Venue:** Conference Hall, MITS School of Biotechnology.

MITS school of Biotechnology, Bhubaneswar, organized a two week add-on program on **MICROBIAL QUALITY CONTROL ON DRINKING WATER AND FOOD** for MSc-Applied Microbiology students by the resource person **Dr. Swati Mishra**. The provision of reliable, safe drinking water requires water utilities to take a holistic approach to the management of drinking water supplies. A holistic approach considers risks from all potential contaminants (microbiological, chemical and radiological) in a supply and allows the development of risk management strategies that prioritize risks and minimize potential impacts on human health. Totally 31 students participated in this training program and after the completion of the program they were able to understand the following objectives and learning outcomes.

### Objectives:

1. Learn the treatment optimization to minimize nutrients entering into the system
2. To understand the managing water age
3. managing impacts of water temperature
4. maintaining an effective disinfectant residual
5. maintaining pH within  $\pm 0.2$  units
6. keeping the distribution system clean
7. maintaining positive pressure



### Learning Outcomes:

1. The type and concentration of pathogens in the source water (including short-term water quality degradation).
2. The physical and chemical qualities of the source water, in particular the concentration and character of NOM.
3. The variability of the raw water quality, which may require seasonal adjustments of the treatment process to ensure optimal treatment performance at all times
4. Other practical or operational considerations



A Two Week Add-On Program on **MICROBIAL QUALITY CONTROL ON DRINKING WATER & FOOD**, 06-09-2019 To 23-09-2019, Dr. Swati Mishra.

This course was very useful to the students of MSc-Applied microbiology and their feedback is positive. The management and Professor (Dr.) G. K. Panda, Director of MSB thanked to the resource person and participants for making the programme successful.

  
COORDINATOR

  
HOD  
Pg 2 of 2

  
DIRECTOR  
Director  
MITS School of Biotechnology  
Bhubaneswar



मिट्स जैव प्रौद्योगिकी संस्थान  
**MITS SCHOOL OF BIOTECHNOLOGY**  
2(P), INFOCITY, PATIA, BHUBANESWAR-751024



## *Certificate*

The MITS School of Biotechnology hereby certifies that

**MANASI JENA**  
MSC-AMB-2nd Year

has successfully completed  
A Two Week Add-On Programme On  
**MICROBIAL QUALITY CONTROL ON DRINKING WATER AND FOOD**  
06-09-2019 To 23-09-2019

COORDINATOR

DIRECTOR



मिट्स जैव प्रौद्योगिकी संस्थान  
**MITS SCHOOL OF BIOTECHNOLOGY**

2(P), INFOCITY, PATIA, BHUBANESWAR-751024



## *Certificate*

The MITS School of Biotechnology hereby certifies that

**POOJA BEHERA**  
MSC-AMB-2nd Year

has successfully completed  
A Two Week Add-On Programme On  
**MICROBIAL QUALITY CONTROL ON DRINKING WATER AND FOOD**  
06-09-2019 To 23-09-2019

COORDINATOR

DIRECTOR



मिट्स जैव प्रौद्योगिकी संस्थान  
**MITS SCHOOL OF BIOTECHNOLOGY**  
2(P), INFOCITY, PATIA, BHUBANESWAR-751024



## *Certificate*

The MITS School of Biotechnology hereby certifies that

**PRIYANKA PATRA**  
MSC-AMB-2nd Year

has successfully completed  
A Two Week Add-On Programme On  
**MICROBIAL QUALITY CONTROL ON DRINKING WATER AND FOOD**  
06-09-2019 To 23-09-2019

*Mishra*

COORDINATOR

*ceja*

DIRECTOR



मिड्स जैव प्रौद्योगिकी संस्थान  
**MITS SCHOOL OF BIOTECHNOLOGY**  
2(P), INFOCITY, PATIA, BHUBANESWAR-751024



## *Certificate*

The MITS School of Biotechnology hereby certifies that

**RASMITA PADHI**  
MSC-AMB-2nd Year

has successfully completed  
A Two Week Add-On Programme On  
**MICROBIAL QUALITY CONTROL ON DRINKING WATER AND FOOD**  
06-09-2019 To 23-09-2019

*Mishra*

COORDINATOR

*Das*

DIRECTOR



मिट्स जैव प्रौद्योगिकी संस्थान  
**MITS SCHOOL OF BIOTECHNOLOGY**

2(P), INFOCITY, PATIA, BHUBANESWAR-751024



## *Certificate*

The MITS School of Biotechnology hereby certifies that

**SASMITA MEHER**  
MSC-AMB-2nd Year

has successfully completed  
A Two Week Add-On Programme On  
**MICROBIAL QUALITY CONTROL ON DRINKING WATER AND FOOD**  
06-09-2019 To 23-09-2019

COORDINATOR

DIRECTOR



मिट्स जैव प्रौद्योगिकी संस्थान  
**MITS SCHOOL OF BIOTECHNOLOGY**

2(P), INFOCITY, PATIA, BHUBANESWAR-751024



## *Certificate*

The MITS School of Biotechnology hereby certifies that

**JYOTI PRAKASH DAS**  
MSC-AMB-2nd Year

has successfully completed  
A Two Week Add-On Programme On  
**MICROBIAL QUALITY CONTROL ON DRINKING WATER AND FOOD**  
06-09-2019 To 23-09-2019

COORDINATOR

DIRECTOR



मिड्स जैव प्रौद्योगिकी संस्थान  
**MITS SCHOOL OF BIOTECHNOLOGY**

2(P), INFOCITY, PATIA, BHUBANESWAR-751024



## *Certificate*

The MITS School of Biotechnology hereby certifies that

**SUNITA JETHY**  
MSC-AMB-2nd Year

has successfully completed  
A Two Week Add-On Programme On  
**MICROBIAL QUALITY CONTROL ON DRINKING WATER AND FOOD**  
06-09-2019 To 23-09-2019

COORDINATOR

DIRECTOR





मिट्स जैव प्रौद्योगिकी संस्थान  
**MITS SCHOOL OF BIOTECHNOLOGY**

2(P), INFOCITY, PATIA, BHUBANESWAR-751024



## *Certificate*

The MITS School of Biotechnology hereby certifies that

**SUSMITA BISWAL**  
MSC-AMB-2nd Year

has successfully completed  
A Two Week Add-On Programme On  
**MICROBIAL QUALITY CONTROL ON DRINKING WATER AND FOOD**  
06-09-2019 To 23-09-2019

COORDINATOR

DIRECTOR



मिट्स जैव प्रौद्योगिकी संस्थान  
**MITS SCHOOL OF BIOTECHNOLOGY**  
2(P), INFOCITY, PATIA, BHUBANESWAR-751024



## *Certificate*

The MITS School of Biotechnology hereby certifies that

**SUBHASHREE DAS**  
MSC-AMB-2nd Year

has successfully completed  
A Two Week Add-On Programme On  
**MICROBIAL QUALITY CONTROL ON DRINKING WATER AND FOOD**  
06-09-2019 To 23-09-2019

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**MITS SCHOOL OF BIOTECHNOLOGY**

2(P), INFOCITY, PATIA, BHUBANESWAR-751024



## Certificate

The MITS School of Biotechnology hereby certifies that

**MOUSUMI SATAPATHY**  
MSC-AMB-2nd Year

has successfully completed  
A Two Week Add-On Programme On  
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