

From

24-02-2022

Dr. A. Manikandan
HOD
Department of Chemistry
Bharath Institute of Science and Technology
Bharath Institute of Higher Education and Research
Chennai - 600073.

To

The Dean (Engineering)
Bharath Institute of Science and Technology
Bharath Institute of Higher Education and Research
Chennai - 600073.

Respected Sir,

Sub: Requisition letter for granting permission to organizing a Certificate Program in
Nanoscience -Reg.

I would like to request your support and permission to organize a Certificate Program in Nanoscience. It will be 30 hours session and tentatively scheduled to start from 27th February 2022. The resource person of the program is been planned to engage Dr. Ramesh L Gardas, IIT Madras, Chennai.

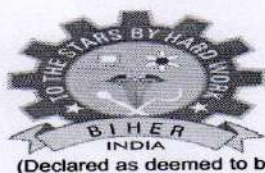
I kindly request your approval for organizing the same.

Thanking You

Yours Sincerely


(A. MANIKANDAN)

Dr. A. MANIKANDAN
M.Sc., M.Phil., M.Ed., M.Phil, Ph.D.,
Professor & Head
Department of Science & Humanities
Bharath Institute of Higher Education & Research
Chennai - 600 073. India



Bharath

INSTITUTE OF HIGHER EDUCATION AND RESEARCH

(Declared as deemed to be university under section 3 of UGC Act 1956, vide notification No.F.9-5/2000-U.3)

SCHOOL OF BASICS SCIENCES

24-02-2022


CIRCULAR

We are pleased to inform that the School of Basics Sciences is organizing a value added course "Certificate Program in Nanoscience" on 27th February 2022. The details of the program are:

- Resource person** : **Dr. Ramesh L. Gardas**
Professor
IIT Madras
- Convener** : **Dr. A. Manikandan**
HoD, Chemistry
- Coordinator** : **Dr. Paul Raj**
Associate Professor
Department of Chemistry

The classes will be held during Saturdays only. The interested students shall register their names for the programs. The best performer will be rewarded by issuing certificates.

All are invited to take active part in the program.


Convener

Dr. A. MANIKANDAN
M.Sc., M.Phil., M.Ed., M.Phil., Ph.D.,
Professor & Head
Department of Science & Humanities
Bharath Institute of Higher Education & Research
Chennai - 600 073, India



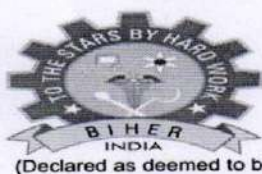
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SCHEDULE FOR CERTIFICATE COURSE

S.NO	TOPIC	DATE	TIME
1	Introduction To Nanostructures	05/03/2022	9.00A.M – 12.00 P.M
2	Nano-Scale Materials	12/03/2022	9.00A.M – 12.00 P.M
3	Electrochemical Nanotechnology	19/03/2022	9.00A.M – 12.00 P.M
4	Fabrication For Nanotechnology	26/03/2022	9.00A.M – 12.00 P.M
5	Fundamental Concepts In Nanoscience And Nanotechnology	02/04/2022	9.00A.M – 12.00 P.M
6	Nanoscience Literature For Earth And Environmental Science	09/04/2022	9.00A.M – 12.00 P.M
7	Nanominerals- Mineral Nanoparticles	23/04/2022	9.00A.M – 12.00 P.M
8	Nanoparticles In The Earth System: Fluxes, Rates, Transport, Transformation	30/04/2022	9.00A.M – 12.00 P.M
9	Nanotechnology, Nanomedicine; Ethical Aspects.	07/05/2022	9.00A.M – 12.00 P.M
10	Commercialization Of Nanotechnology	14/06/2022	9.00A.M – 12.00 P.M
		Total	30 hours



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NAME LIST OF THE STUDENTS ENROLLED FOR VALUE ADDED COURSE

ON "CERTIFICATE PROGRAM IN NANOSCIENCE"

Total No. of Students: 35

S. No.	DEPARTMENT	NAME
1	CHEMISTRY	THIRUKUMARAN K
2	CHEMISTRY	PRIYANKA S
3	CHEMISTRY	KOGUL K
4	CHEMISTRY	AASHIQ T P
5	CHEMISTRY	EGALA SRI VARSHA
6	CHEMISTRY	GUNJI AMRUTHA VARSHINI
7	CHEMISTRY	HARIHARAN D
8	PHYSICS	SABARINATHAN V
9	PHYSICS	AJAYDESOUZA V
10	PHYSICS	PACHAIYAPPAN P
11	PHYSICS	BRINDHA B
12	PHYSICS	LOGAPRIYA M
13	PHYSICS	KAKANI SHELICY JONES
14	PHYSICS	K MONIKA KUMARI
15	PHYSICS	K BHAVANI

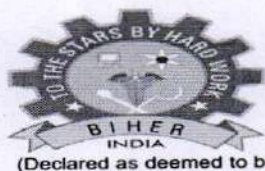


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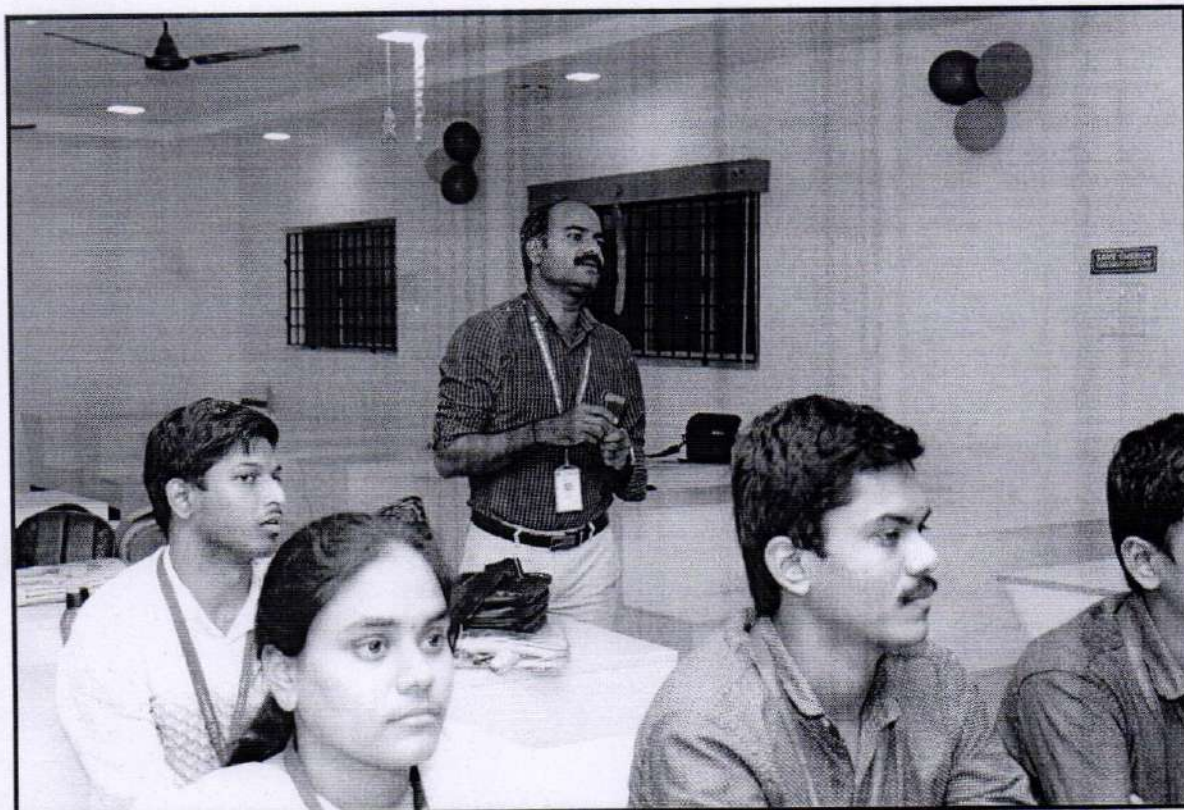
17	BIOTECHNOLOGY	AGAMUGILAN B
18	BIOTECHNOLOGY	YETTELLA CHENNA KESHAVA REDDY
19	BIOTECHNOLOGY	RAYALA UJWALA
20	BIOTECHNOLOGY	PAGADALA VIDYA
21	BIOTECHNOLOGY	C CHANDRIKA
22	BIOTECHNOLOGY	S FIZA SULTANA
23	BIOTECHNOLOGY	RAVU AKHITHA
24	BIOTECHNOLOGY	JAMMI SUBBARAO
25	MICROBIOLOGY	KALYANAPU VINEETHA
26	MICROBIOLOGY	KIRAN L
27	MICROBIOLOGY	KARAN L
28	MICROBIOLOGY	K SAIKIRAN REDDY
29	MICROBIOLOGY	KONDAPURAM PARVATHI
30	MICROBIOLOGY	KETHU POOJITHA
31	MICROBIOLOGY	PACHA SANTHI
32	MICROBIOLOGY	BHARATHI S
33	MICROBIOLOGY	KRISHNA SWAMY
34	MICROBIOLOGY	BOLNEDI TAGORE
35	MICROBIOLOGY	KEERTHANA S



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Students are attending the Certificate Course in NanoScience



Bharath
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(Declared as Deemed - to - be - University under section 3 of UGC Act 1956)



SCHOOL OF BASIC SCIENCES

*A Certificate course in
"NANOSCIENCE"*

Certificate of Appreciation

This is to certify that *Brindha B.*
..... *Physics*
.....attended the certificate course in Nanoscience held during 05/03/2022 to
14/05/2022 organized by School of Basic Sciences, Bharath Institute of Higher Education and
Research, Selaiyur, Chennai-600073.

ATU
(CONVENER)

Rambhar
(RESOURCE PERSON)

Paul Jay
(COORDINATOR)



Bharath

INSTITUTE OF HIGHER EDUCATION AND RESEARCH

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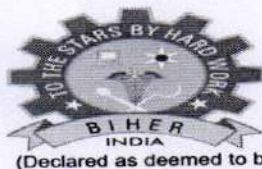
FEEDBACK FORM

<u>Criteria</u>	<u>Strongly Agree</u> <u>(3)</u>	<u>Agree</u> <u>(2)</u>	<u>Disagree</u> <u>(1)</u>
Training was relevant to my needs	✓		
Materials provided were helpful	✓		
Length of training program was sufficient	✓		
Content was well organized		✓	
Questions were engaged	✓		
Instructions were clear and understandable	✓		
Training met my expectations	✓		
The presentations were effective	✓		

S. Gopi Chand.
Chemistry

Arju

Dr. A. MANIKANDAN
M.Sc., M.Phil., M.Ed., M.Phil, Ph.D.,
Professor & Head
Department of Science & Humanities
Bharath Institute of Higher Education & Research
Chennai - 600 073, India



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The presentations were effective	✓		

Kiran.

Microbiology.

Artu

Dr. A. MANIKANDAN
M.Sc., M.Phil., M.Ed., M.Phil, Ph.D.,
Professor & Head
Department of Science & Humanities
Bharath Institute of Higher Education & Research
Chennai - 600 073, India

28-02-2022

From

Dr. A. Manikandan
HOD
Department of Chemistry
Bharath Institute of Science and Technology
Bharath Institute of Higher Education and Research
Chennai - 600073.

To

The Dean (Engineering)
Bharath Institute of Science and Technology
Bharath Institute of Higher Education and Research
Chennai - 600073.

Respected Sir,

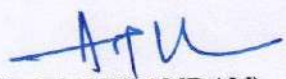
Sub: Requisition letter for granting permission to organizing a Certificate Program on
Introduction to Molecular Biology -Reg.

I would like to request your support and permission to organize a Certificate Program on
Introduction to Molecular Biology. It will be 30 hours session and tentatively scheduled to
start from 31st March 2022. The resource person of the program is been planned to engage
Dr. S. Mirunalini, Department of Biochemistry and Biotechnology, Annamalai University,
Chidambaram.

I kindly request your approval for organizing the same.

Thanking You

Yours Sincerely


(A. MANIKANDAN)
Dr. A. MANIKANDAN
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SCHOOL OF BASICS SCIENCES

24-03-2022


CIRCULAR

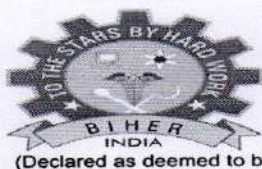
We are pleased to inform that the School of Basics Sciences is organizing a value added course "Introduction to Molecular Biology" on 31st March 2022. The details of the program are:

- Resource person : Dr. S. Mirunalini
Professor
Annamalai University
- Convener : Dr. A.Manikandan
Professor
- Coordinator : Dr. Kalaiyarasu
Associate Professor
Department of Microbiology

The classes will be held during Saturdays only. The interested students shall register their names for the programs. The best performer will be rewarded by issuing certificates.

All are invited to take active part in the program.


Convener
Dr. A. MANIKANDAN
M.Sc., M.Phil., M.Ed., M.Phil., Ph.D.,
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Chennai - 600 073, India



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SCHEDULE FOR CERTIFICATE COURSE ON INTRODUCTION TO MOLECULAR BIOLOGY

S.NO	TOPIC	DATE	TIME
1	Introduction to Molecular Biology	02/04/2022	1.00P.M. - 4.00P.M
2	Environmental Molecular Biology	09/04/2022	1.00P.M. - 4.00P.M
3	Pathogenicity and Virulence	16/04/2022	1.00P.M. - 4.00P.M
4	Biotechnology and Synthetic Biology	23/04/2022	1.00P.M. - 4.00P.M
5	Microbiomes	30/04/2022	1.00P.M. - 4.00P.M
6	Food Microbiology	07/05/2022	1.00P.M. - 4.00P.M
7	Current Research Topics in Applied Microbiology and Microbial Biotechnology	14/05/2022	1.00P.M. - 4.00P.M
8	Microorganisms in Industry and Environment	21/05/2022	1.00P.M. - 4.00P.M
9	A keystone microbial enzyme for nitrogen control of soil carbon storage	28/05/2022	1.00P.M. - 4.00P.M
10	Microfactories — Microbial Production of Chemicals and Pharmaceuticals	04/06/2022	1.00P.M. - 4.00P.M
		Total	30 hours



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NAME LIST OF THE STUDENTS ENROLLED FOR VALUE ADDED COURSE

ON "INTRODUCTION TO MOLECULAR BIOLOGY"

Total No. of Students: 60

S. No.	DEPARTMENT	NAME
1	MICROBIOLOGY	RAVI SRI SAI NANDINI
2	MICROBIOLOGY	ASHLINE BEATRICE ALEXANDER
3	MICROBIOLOGY	AYELIN BEATRICE ALEXANDER
4	MICROBIOLOGY	GUDDU SINGH
5	MICROBIOLOGY	VALLURI SAI PRASANNA
6	MICROBIOLOGY	KAMMARY SHASHANK CHARY
7	MICROBIOLOGY	GUNAVANTH B
8	MICROBIOLOGY	PRASANTH P
9	MICROBIOLOGY	KONDAVETI HEM CHANDRA
10	MICROBIOLOGY	ASIF R
11	MICROBIOLOGY	NALLAPASETTI BALRAJ
12	MICROBIOLOGY	SARADARAMAN S
13	MICROBIOLOGY	KARAMREDDY SUNAYANI
14	MICROBIOLOGY	BESWIN VERSHID R V
15	MICROBIOLOGY	MANAV J



Bharath

MICROBIOLOGY		KALLURU GIRI
INSTITUTE OF HIGHER EDUCATION AND RESEARCH		
<small>(Declared as deemed to be university under section 3 of UGC Act 1956 vide notification No.F.9-5/2006-U.3)</small>		
16	MICROBIOLOGY	SRIDHAR V
17	MICROBIOLOGY	
18	MICROBIOLOGY	LOKESH KUMAR R
19	MICROBIOLOGY	SHAIK AYAZ
20	MICROBIOLOGY	SIKHAKOLLI S V DATTA PAVAN KUMAR
21	MICROBIOLOGY	BOMMU BHASKARA PRASAD REDDY
22	MICROBIOLOGY	MUNDRU LAKSHMI SOWJANYA
23	MICROBIOLOGY	KANCHAMREDDY VISWASREE
24	MICROBIOLOGY	KOLLA BABA SATISH
25	MICROBIOLOGY	KOTIPALLI RUSHENDRA MURALI KRISHNA
26	MICROBIOLOGY	MASANI MIDHUN KUMAR
27	MICROBIOLOGY	MALLIDI DIVYA SAI RAJYA LAKSHMI
28	MICROBIOLOGY	RANGU BHARATH KUMAR
29	MICROBIOLOGY	KOTHACHERUVU SAI PRATHIMA
30	MICROBIOLOGY	MATAM DHARSHAN
31	MICROBIOLOGY	PRAVEEN KUMAR GNC
32	MICROBIOLOGY	VIJAYARANGAN M
33	MICROBIOLOGY	REVVU HIMAKARTHIK
34	MICROBIOLOGY	GOVIND JANAKI SAI
35	MICROBIOLOGY	TEEGALA DURGA SAI KUMAR
36	MICROBIOLOGY	KATTA KARTHIK
37	CHEMISTRY	MUPPIDI SAI VENKATA REDDY
38	CHEMISTRY	DANDU SAI SRAVAN VARMA



Shri

YERRAMSETTI GANDHI LAKSHMI
SATYA SAI
INSTITUTE OF HIGHER EDUCATION AND RESEARCH
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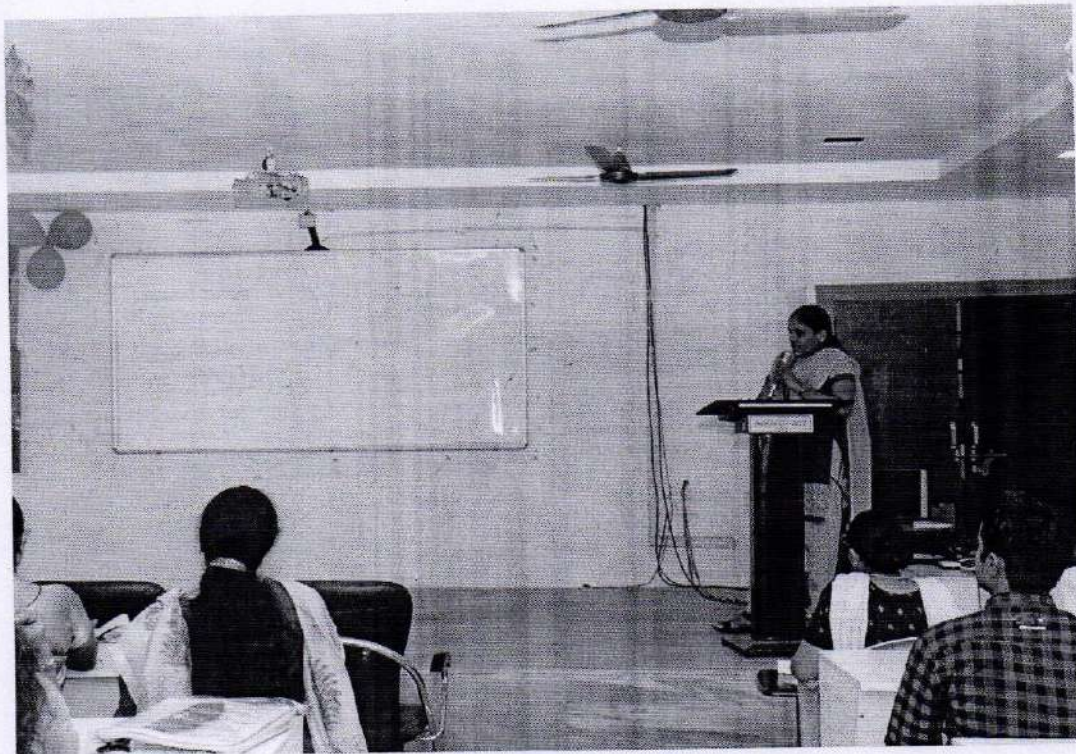
40	CHEMISTRY	THULLURI ASHOK KUMAR
41	CHEMISTRY	ARPIT KUMAR KOURAV
42	CHEMISTRY	SANA GOPI CHAND
43	CHEMISTRY	KALNETE VENKAT SAI
44	PHYSICS	MOHAMMED NEHA TABASSUM AZHARUDDIN
45	PHYSICS	SUREDDY VENKATA SAI KARTHIK REDDY
46	PHYSICS	MOHAMMAD TAJ ALI
47	PHYSICS	GIDDALURI NAVEEN BABU
48	PHYSICS	CHINNA LAKSHMAMMA GARI NARENDRA REDDY
49	PHYSICS	VASANTHALA HASWITH
50	PHYSICS	JAMES L
51	PHYSICS	GURRAM SAI PRADEEP
52	BIOTECHNOLOGY	DEVPROTIM MUKHER JEE
53	BIOTECHNOLOGY	MULA MADHU
54	BIOTECHNOLOGY	GOWDA RISHI
55	BIOTECHNOLOGY	MOLLI SURYA PRAKASH
56	BIOTECHNOLOGY	SANEPALLI RAMMOHAN REDDY
57	BIOTECHNOLOGY	PALEPU SAI BALAJI
58	BIOTECHNOLOGY	PEDDAPATI SRAVANI
59	BIOTECHNOLOGY	KURAPATI BALA AJAY
60	BIOTECHNOLOGY	KURAPATI BLA VIJAY



Bharath

INSTITUTE OF HIGHER EDUCATION AND RESEARCH

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Students are attending the Certificate Course on Introduction to Molecular Biology



Bharath
INSTITUTE OF HIGHER EDUCATION AND RESEARCH
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SCHOOL OF BASIC SCIENCES

A Certificate course on

“INTRODUCTION TO MOLECULAR BIOLOGY”

Certificate of Appreciation

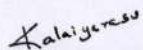
This is to certify thatMULA MADHU.....

.....BIOTECHNOLOGY.....

.....attended the certificate course on *Introduction to Molecular Biology* held during
02/04/2022 to 04/06/2022 organized by School of Basic Sciences, Bharath Institute of Higher
Education and Research, Selaiyur, Chennai-600073.


(CONVENER)


(RESOURCE PERSON)


(COORDINATOR)



Bharath

INSTITUTE OF HIGHER EDUCATION AND RESEARCH

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FEEDBACK FORM

<u>Criteria</u>	<u>Strongly Agree</u> <u>(3)</u>	<u>Agree</u> <u>(2)</u>	<u>Disagree</u> <u>(1)</u>
Training was relevant to my needs	✓		
Materials provided were helpful	✓		
Length of training program was sufficient	✓		
Content was well organized	✓		
Questions were engaged	✓		
Instructions were clear and understandable	✓		
Training met my expectations	✓		
The presentations were effective	✓		

ASIF R.
MICRO BIOLOGY.


Dr. A. MANKANDAN
M.Sc., M.Phil., M.Ed., M.Phil., Ph.D.,
Professor & Head
Department of Science & Humanities
Bharath Institute of Higher Education & Research
Chennai - 600 073, India



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FEEDBACK FORM

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*Manar
Microbiology*

Arju
Dr. A. MANIKANDAN
M.Sc., M.Phil., M.Ed., M.Phil, Ph.D.,
Professor & Head
Department of Science & Humanities
Bharath Institute of Higher Education & Research
Chennai - 600 073, India



Bharath UNIVERSITY

பாரத பல்கலைக் கல்வி நிறுவனம்

BHARATH INSTITUTE OF HIGHER EDUCATION AND RESEARCH

(Declared as Deemed to be University, vide U of the U.G. Act, 1956)



NAAC



BHARATH INSTITUTE OF HIGHER EDUCATION AND RESEARCH

[Declared as Deemed to be University under section 3 of U.G. Act, 1956]

CHENNAI - 73

Ref: BIHER/BIST/MIBT/2021_

Date:30.09.2021

Circular

Department of Microbiology and Biotechnology, School of Basic Sciences is planned to conduct a value added course on Certificate course on Molecular Techniques and their applications. This value added course commences form 09.10.2021 to 28.11.2021 with duration of 30 hours (2 hours per day).

It is important for higher education institution to supplement the curriculum to make student better prepared to meet industry demands as well as develop their own interests and aptitudes.

Eligibility: Course is open for UG students of Department of Microbiology and Biotechnology, School of Basic Sciences.

Registration: The registration form which is available in the university website should be duly filled by the participants and to be submitted to coordinator at least 5 days before the commencement of course.

Contact

Dr. V.JanakiDevi.

Associate Professor / Department of Microbiology & Biotechnology,
School of Basic Sciences,

Course Coordinator

Bharath Institute of Higher Education and Research,

Email : microjanu@yahoo.co.in

HOD

Dr. VASUKIDEVI RAMACHANDRAN, M.Sc., Ph.D.,
Professor and Head,
Department of Microbiology and Biotechnology,
Faculty of Arts and Science,
Bharath Institute of Higher Education and Research,
Chennai - 73.

**BHARATH INSTITUE OF HIGHER EDUCATION & RESEARCH
DEPARTMENT OF MICROBIOLOGY AND BIOTECHNOLOGY
SCHOOL OF BASIC SCIENCES**

Name List of the Students

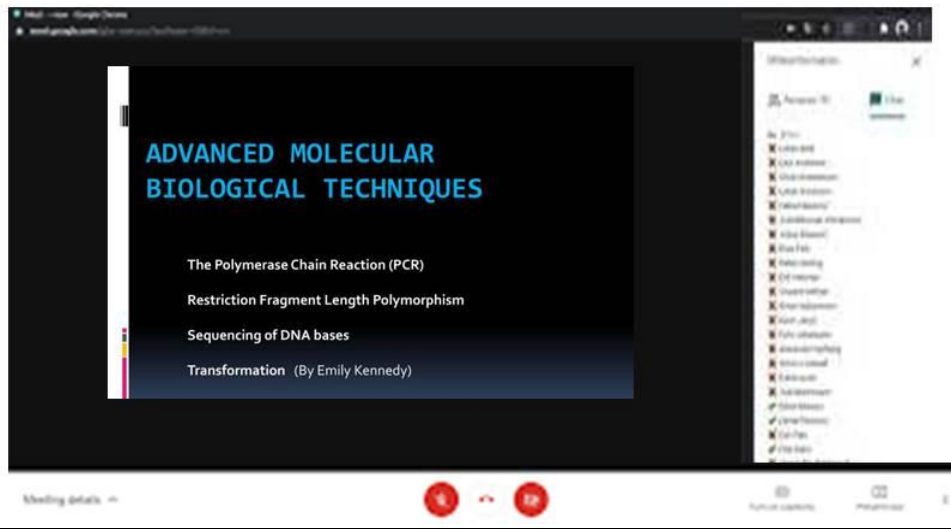
Certificate Course on Molecular Techniques and their applications

S.NO	REG.N0	NAME OF THE CANDIDATE
1	U21BS001	ABINAYA M
2	U21BS003	DHANUSH N
3	U21BS004	DIVYA A
4	U21BS005	ISHWARYA R
5	U21BS006	JAYA REKHA M
6	U21BS007	JAYASURIYA V A
7	U21BS009	JISHNU PRADEEP
8	U21BS010	LOKESH M
9	U21BS011	MALINI D
10	U21BS012	MEGAVARSHINI M
11	U21BS013	NISHA LAKSHMI B
12	U21BS014	NITHYASREE P N
13	U21BS015	PAMARTHI DURGA CHENNA KESAVA RAO
14	U21BS017	ROKHIA KATHUN W
15	U21BS018	SANDHIYA T
16	U21BS019	TAMILSELVAN S
17	U21BS020	VAISHNAVI B
18	U21BS021	CHANAKYA HAZARIKA
19	U21BS022	KALGINATHAN L
20	U21BS023	PURUSOTHAMAN D
21	U21BS024	THANGADURAI D
22	U21BS025	VIGNESH K
23	U21BS026	ARUNKUMAR B
24	U21BS027	MALVIKA SINHA
25	U21BS028	THANDRA KEERTHI
26	U21BS029	NIKHIL
27	U21BS030	SRIMANTHULA MAHIRTHANA
28	U21BS031	GITANJALI SHARMA
29	U21BS032	NETHAJI D
30	U21MI001	AKASH K
31	U21MI002	BHARATH G
32	U21MI003	BHARATH H
33	U21MI004	CATHERIN JENITA S
34	U21MI005	DEVI G
35	U21MI006	DIVYA P
36	U21MI008	GIRINATH S P
37	U21MI009	HARINI G
38	U21MI010	KAMALA LAKSHMI S

39	U21MI011	KAVIYARASU S
40	U21MI012	KEERTHIKA S
41	U21MI013	MEGANATHAN K
42	U21MI014	PAVITHRA R
43	U21MI015	RAJESH V
44	U21MI016	RAKSHITHA S
45	U21MI017	SALMAN BASHA H
46	U21MI018	SAMUVEL B
47	U21MI019	SANDHYA.J
48	U21MI020	SELVA PRIYA M
49	U21MI021	SHERLIN D
50	U21MI022	SHERLY KARUNYA N
51	U21MI034	D. YAMINI
52	U21MI025	SUMITHRA L
53	U21MI026	SUNDAR P
54	U21MI027	SUTHISH A
55	U21MI028	SWAPNA BISWAS
56	U21MI029	URJITHA P J
57	U21MI030	VASANTH VEDHAMANICKAM T
58	U21MI031	VINDHYA E
59	U21MI032	VINITHA S
60	U21MI033	VINSTAN INFAN A

Value Added Course

Certificate Course on Molecular Techniques and their applications





Bharath UNIVERSITY
பாரதி பல்கலைக்கழகம்
BHARATH INSTITUTE OF HIGHER EDUCATION AND RESEARCH
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BHARATH INSTITUTE OF HIGHER EDUCATION AND RESEARCH
[Declared as Deemed-to-be-University under section 3 of UGC Act, 1956]
CHENNAI – 73.

Topic : Certificate Course on Molecular Techniques and their applications

Type of course: Value Added Course

School of Basic sciences

Pre Requisites: +2 Biology

Course Duration: 30 hours

Intended Audience: Basic science students

Industries Applicable to: Schedules, project plans, manage resources and keep track of time of basic science project

Coordinator: Dr.V. JanakiDevi

Objective:

- Learn to handle the equipments in molecular lab
- Learn the applications of various molecular techniques
- Learn the quantitative determination of the molecular compounds
- Learn to find a way to separate out the individual molecules from the crude cell extracts
- Learn to detect and identify the mutation in genetic molecules
- Learn to study the sequence of molecules using invivo and invitro techniques.

Outcomes:

- Students ability to allows precise isolation, quality and quantity measurement of molecules from crude cell extract.
- Students ability to works on a variety of samples such as plant tissue, animal tissue, microbial cells as well as human fluid samples.
- Students ability to determine an mutation in genetic molecules like DNA using molecular markers.
- Student ability to work on genetic disease diagnosis using advanced molecular techniques.

COURSE OUTLINE:

This course guides students through fundamental concepts of Certificate Course on Molecular techniques and their applications. Concepts and skills needed to benefits in profit and non-profit organisation

Training courses are through and succinct; structured to maximize learning by adopting an approach of explanation, demonstration, and practice teaching. Students are given hands on access to Certificate Course on Molecular Techniques and their applications.

This course provides the knowledge, understanding and practical experience need to forge a rewarding career in research and development in the pharmaceutical, bioscience or healthcare sectors.

- DNA - Introduction - Isolation of chromosomal DNA from bacteria, plant and animals - Types of isolation techniques - Agarose Gel electrophoresis - Determination of DNA using qualitative and quantitative analysis. Isolation of plasmid DNA - Quantification methods.
- RNA - Introduction - Types of RNA - Isolation of RNA from bacteria, plant and animals - Types of isolation techniques - Agarose Gel electrophoresis - Determination of RNA using qualitative and quantitative analysis.
- PCR analysis - Primer Design - Annealing Temp setting - PCR Cocktail preparation - Types and Applications - Interpretation of PCR analysis - RT PCR - Gene expression studies. DNA sequencing.
- Protein analysis - Isolation - Quantification - SDS PAGE - 2D Gel Electrophoresis - Blotting Techniques.
- Applications of molecular techniques - Disease diagnosis - Identification of strains - Molecular markers and their applications.

The concepts in this course will be taught using a combination of lecture, discussion, and dialogue around techniques, with emphasis on active learning. In this course, students explore technical management with a practical, hands-on approach through the training.



BHARATH INSTITUTE OF HIGHER EDUCATION AND RESEARCH

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CHENNAI – 73.

Value Added Course: Certificate course on Chromatographical Techniques

Course Code: BIHER/BIST/MIBT/SPL/2021

Course Duration: 30 Hrs Content of Syllabus

S.No	Syllabus details	No. of lecture Hours	Date	Time	Lecture Name
1	DNA - Introduction - Isolation of chromosomal DNA from bacteria, plant and animals	2 Hrs	09.10.2021	10.00 am-12.00 pm	Dr.V.Janaki devi
2	Types of isolation techniques - Agarose Gel electrophoresis - Determination of DNA using qualitative and quantitative analysis.	2 Hrs	10.10.2021	10.00 am-12.00 pm	Dr.V.Janaki devi
3	Isolation of plasmid DNA - Quantification methods.	2 Hrs	16.10.2021	10.00 am-12.00 pm	Dr.V.Janaki devi
4	RNA - Introduction - Types of RNA - Isolation of RNA from bacteria, plant and animals	2 Hrs	17.10.2021	10.00 am-12.00 pm	Dr.V.Janaki devi
5	RNA - Types of isolation techniques - Agarose Gel electrophoresis	2 Hrs	23.10.2021	10.00 am-12.00 pm	Dr.V.Janaki devi
6	Determination of RNA using qualitative and quantitative analysis.	2 Hrs	24.10.2021	10.00 am-12.00 pm	Dr.V.Janaki devi
7	PCR analysis - Primer Design - Annealing Temp setting - PCR Cocktail preparation	2 Hrs	30.10.2021	10.00 am-12.00 pm	Dr.V.Janaki devi
8	Types and Applications - Interpretation of PCR analysis	2 Hrs	31.10.2021	10.00 am-12.00 pm	Dr.V.Janaki devi
9	RT PCR - Gene expression studies	2 Hrs	06.11.2021	10.00 am-12.00 pm	Dr.V.Janaki devi
10	DNA sequencing	2 Hrs	07.11.2021	10.00 am-12.00 pm	Dr.V.Janaki devi
11	Protein analysis - Isolation - Quantification - SDS PAGE	2 Hrs	13.11.2021	10.00 am-12.00 pm	Dr.V.Janaki devi
12	2D Gel Electrophoresis - Blotting Techniques – Introduction	2 Hrs	14.11.2021	10.00 am-12.00 pm	Dr.V.Janaki devi
13	Blotting Techniques, types and applications	2 Hrs	20.11.2021	10.00 am-12.00 pm	Dr.V.Janaki devi
14	Applications of molecular techniques - Disease diagnosis	2 Hrs	21.11.2021	10.00 am-12.00 pm	Dr.V.Janaki devi
15	Identification of strains	1 Hrs	27.11.2021	10.00 am-11.00 pm	Dr.V.Janaki devi
16	Molecular markers and their applications	1 Hrs	28.11.2021	11.00 am-12.00 pm	Dr.V.Janaki devi

Value Added Course

Certificate Course on Molecular Techniques and their applications

 Bharath UNIVERSITY ಬಹುಶಿಕ್ಷಣ ಮತ್ತು ಸಂಶೋಧನೆ UNIVERSITY OF HIGHER EDUCATION AND RESEARCH (Declared as Deemed-to-be-University, U's 3 of the UGC Act, 1956) 	 BIHER
BHARATHINSTITUTE OF SCIENCE AND TECHNOLOGY	
School of Basic Sciences	
<u>CERTIFICATE OF PARTICIPATION</u>	
This is to certify that SUMITHRA L from BIHER has participated in Value Added Course on "Certificate Course on Molecular Techniques and their applications", Presented by Dr. V. JanakiDevi , Associate Professor, Organized by School of Basic Sciences, BIHER, in association with M/S Protein from October 09, 2021 to November 28, 2021 .	
 Co-ordinator 	 HOD Dr. VISUNDH RAMACHANDRAN, Ph.D. Professor and Head, Department of Microbiology and Biotechnology, Bharath Institute of Higher Education and Research, Chennai - 73.

S.no	Email Address	Name of the Participant	Name of the College / Industry	Designation	Department	Phone number	Rating for the certificate course	Feed back
1	abi066114@gmail.com	ABINAYA M	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	8667641884	5	Verymuch informative. Trainer explained in a detailed manner
2	9566214226dha@gmail.com	DHANUSH N	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9043474227	4	Good
3	info@kavihairenterprises.com	DIVYA A	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9789060586	4	Excellent
4	ishwaryaishwarya431@gmail.com	ISHWARYA R	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9361209819	5	Excellent
5	preethamunusamy72043@gmail.com	JAYA REKHA M	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	7695993798	4	Good
6	ajasuriya1246@gmail.com	JAYASURIYA V A	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9345393870	4	Good
7	bpradeep2010@yahoo.co.in	JISHNU PRADEEP	Bharath Institute of Higher Education and Research,	Student	Department of Microbiology and Biotechnology	7200102629	4	Good

			Chennai.					
8	lokeshlokesh89931@gmail.com	LOKESH M	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9600913422	4	Good
9	malini730560@gmail.com	MALINI D	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	7305605620	4	Very useful
10	varshinimahesh0104@gmail.com	MEGAVARSHINI M	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9841644151	5	Informative webinar
11	shanbharathiraj@gmail.com	NISHA LAKSHMI B	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9444029830	5	Valuable Webinar
12	nithyasree469@gmail.com	NITHYASREE P N	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	7200770746	4	Valuable Webinar
13	chennapamarthi143@gmail.com	PAMARTHI DURGA CHENNA KESAVA RAO	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	8639696926	3	Need time management
14	kathunrokhia@gmail.com	ROKHIA KATHUN W	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9884441448	3	Okay
15	murugavelmurugave10106@gmail.com	SANDHIYA T	Bharath Institute of Higher Education and	Student	Department of Microbiology and Biotechnology	8438642006	4	Good

			Research, Chennai.					
16	tamilop1212@gmail.com	TAMILSELVA N S	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9360815023	3	Not bad
17	navibvaishu@gmail.com	VAISHNAVI B	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9994179801	5	Good
18	chanakyahazarika151@gmail.com	CHANAKYA HAZARIKA	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	8472910655	4	Excellent
19	kalkinathan11@gmail.com	KALGINATH AN L	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	7010837472	4	Good
20	purusothdevaraj12@gmail.com	PURUSOTHA MAN D	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9176776106	5	Good
21	manimanimanid58@gmail.com	THANGADUR AI D	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9150910239	4	Good
22	v331908@gmail.com	VIGNESH K	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	6382562533	5	Excellent
23	arunsweet8825@gmail.com	ARUNKUMAR B	Bharath Institute of Higher Education	Student	Department of Microbiology and Biotechnology	7401240188	5	Valuable Webinar

			and Research, Chennai.					
24	sinhamalvika03@gmail.com	MALVIKA SINHA	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	8002197042	4	Informative weninar
25	thandra78@gmail.com	THANDRA KEERTHI	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9282147433	4	Informative weninar
26	nikhilravirala@gmail.com	NIKHIL	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9550281138	5	Very good
27	srimanthulamahirthana04@gmail.com	SRIMANTHUL A MAHIRTHAN A	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9951093496	5	The lecturer gave a detailed explanataion
28	sharmagitanajali7801@gmail.com	GITANJALI SHARMA	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	8009805388	4	Good
29	nethajidhansekaran2002@gmail.com	NETHAJI D	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9842212019	3	Not bad
30	akashk090204@gmail.com	AKASH K	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9500078585	5	Good
31	johnnydepp1336@gmail.com	BHARATH G	Bharath Institute of Higher	Student	Department of Microbiology and	7305831336	4	Nice

			Education and Research, Chennai.		Biotechnology			
32	bharathkeerthi157@gmail.com	BHARATH H	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9176774474	4	Good
33	catherinjenita15@gmail.com	CATHERIN JENITA S	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9677072019	4	very informative
34	devig682004@gmail.com	DEVI G	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9943673705	4	Useful
35	divyajoe1619@gmail.com	DIVYA P	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9003189831	4	Good
36	girinathknight42@gmail.com	GIRINATH S P	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9787267775	4	Informative weninar
37	Gangaganga12467@gmail.com	HARINI G	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	7395867476	5	Useful
38	skamala1025@gmail.com	KAMALA LAKSHMI S	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9962987890	5	Good
39	Kaviyarasukaviyara	KAVIYARAS U S	Bharath Institute of	Student	Department of Microbiology	9384216351	5	Nice

	su 958@gmail.com		Higher Education and Research, Chennai.		and Biotechnology			
40	keerthukutty230@gmail.com	KEERTHIKA S	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9940462003	4	Informative weninar
41	megakarath172@gmail.com	MEGANATHA N K	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9500048448	4	Useful
42	pavipavithra9903@gmail.com	PAVITHRA R	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	8939438547	4	Nice topics
43	rajesh.v0526@gmail.com	RAJESH V	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	7358252123	4	Very useful study material
44	rakshithasrinivasan892@gmail.com	RAKSHITHA S	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	7904680422	5	Good
45	salmanbasha0703@gmail.com	SALMAN BASHA H	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	7448748475	4	Good
46	Sam2309vj@gmail.com	SAMUVEL B	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	7708337726	5	Informative weninar

47	sandhya8629@gmail.com	SANDHYA.J	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	8122558108	4	Good
48	Priya2003sm06gmail	SELVA PRIYA M	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	8807469493	5	Good
49	ssherlin39@gmail.com	SHERLIN D	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	6380183584	5	Valuable Webinar
50	sherlucherub10@gmail.com	SHERLY KARUNYAN	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9360763714	5	very informative
51	microyamini@gmail.com	D.YAMINI	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	7010923798	5	Excellent
52	sumi10122003@gmail.com	SUMITHRA L`	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9176279843	3	Good
53	Kanniyamalpalani@gmail.com	SUNDAR P	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9080119876	3	Good
54	Suthishs042@gmail.com	SUTHISH A	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	730577343	4	Informative weninar

55	swapna041102@gmail.com	SWAPNA BISWAS	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9140640343	5	Useful
56	urjitha754@gmail.com	URJITHA P J	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	7200136274	4	Thanks for organizing such a nice webinar
57	vasanthvedhamanicammicro19@gmail.com	VASANTH VEDHAMANI CKAM T	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9043082613	3	Good
58	evindhya18@gmail.com	VINDHYA E	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	7401169174	4	Good
59	vinivintha882@gmail.com	VINITHA S	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9941420385	4	Good
60	girinathknight42@gmail.com	VINSTAN INFAN A	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9176028905	5	Informative webinar



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BHARATH INSTITUTE OF HIGHER EDUCATION AND RESEARCH
CHENNAI - 73

Ref:BIHER-BIST/MIBT/SPL/2021

Date: 22.11.2021

Permission Letter

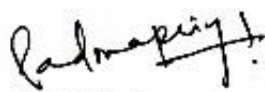
From
Dr. V. Padmapriya,
Associate Professor,
Department of Microbiology and Biotechnology,
School of Basic Sciences,
Bharath Institute of Higher Education and Research,
Selaiyur, Chennai

To
The HOD,
Department of Microbiology and Biotechnology,
School of Basic Sciences,
Bharath Institute of Higher Education and Research,
Selaiyur, Chennai


Respected Sir,

SUB: Permission to conduct Value Added Course-Reg

I wish to inform you that, as it is decided to conduct the Value Added Course to supplement the curriculum to make students better prepared to meet industry demands as well as develop their own interests and aptitudes. The eligibility of this course is open for UG students from departments of School of Basic Sciences in association with Biozone Research Technologies Pvt Ltd., Chennai-117. So please permit us to conduct the value added course on Certificate Course on Toxicological Techniques from 20.12.2021-11.01.2022.


Co-Ordinator

Thanking you


HOD

Dr. VASUKIDEVI RAMACHANDRAN, M.Sc., Ph.D.,
Professor and Head,
Department of Microbiology and Biotechnology,
Faculty of Arts and Science,
Bharath Institute of Higher Education and Research,
Chennai - 73.



Bharath UNIVERSITY

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(Declared as Deemed to be University under section 3 of U.G. Act, 1956)

CHENNAI - 73

Ref: BIHER-BIST/MIBT/SPL/2021

Date: 13.12.2021

CIRCULAR

The school of Basic Sciences is planned to conduct a Value added Course on **Certificate Course on Toxicological Techniques** for the benefit of B.Sc students. This value added course is commences from 20.12.2021 to 11.01.2022 with duration of 30 hours (two hours per day).

It is important for higher education institutions to supplement the curriculum to make students better prepared to meet industry demands as well as develop their own interests and aptitudes.

Eligibility: Course is open for UG students for Department School of Basic Sciences.

Registration: The registration form which is available in the university website should be duly filled by the participants and to be submitted to the Coordinator at least 5 days before the commencement of course.

Contact:

Dr.V.Padmapriya
Associative Professor/ School of Basic Sciences
Course coordinator
Bharath Institute of Higher Education and Research
Email id: padmapriyav@gmail.com

HOD

Dr.VASUKIDEVI RAMACHANDRAN, M.Sc., Ph.D.,
Professor and Head,
Department of Microbiology and Biotechnology,
Faculty of Arts and Science,
Bharath Institute of Higher Education and Research,
Chennai - 73.



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BHARATH INSTITUTE OF HIGHER EDUCATION AND RESEARCH
(Declared as Deemed-to-be-University under section 3 of UGC Act, 1956)
CHENNAI – 73.

Ref:BIHER-BIST/MIBT/SPL/2021

Date: 22.11.2021

Permission Letter

From

Dr. V. Padmapriya,
Associate Professor,
Department of Microbiology and Biotechnology,
School of Basic Sciences,
Bharath Institute of Higher Education and Research,
Selaiyur, Chennai

To

The HOD,
Department of Microbiology and Biotechnology,
School of Basic Sciences,
Bharath Institute of Higher Education and Research,
Selaiyur, Chennai

Respected Sir,

SUB: Permission to conduct Value Added Course-Reg

I wish to inform you that, as it is decided to conduct the Value Added Course to supplement the curriculum to make students better prepared to meet industry demands as well as develop their own interests and aptitudes. The eligibility of this course is open for UG students from departments of School of Basic Sciences in association with Biozone Research Technologies Pvt Ltd., Chennai-117. So please permit us to conduct the value added course on Certificate Course on Toxicological Techniques from 20.12.2021-11.01.2022.

Thanking you

Co-Ordinator

HOD



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CHENNAI – 73.

Ref: BIHER-BIST/MIBT/SPL/2021

Date: 13.12.2021

CIRCULAR

The school of Basic Sciences is planned to conduct a Value added Course on **Certificate Course on Toxicological Techniques** for the benefit of B.Sc students. This value added course is commences from 20.12.2021 to 11.01.2022 with duration of 30 hours (two hours per day).

It is important for higher education institutions to supplement the curriculum to make students better prepared to meet industry demands as well as develop their own interests and aptitudes.

Eligibility: Course is open for UG students for Department School of Basic Sciences.

Registration: The registration form which is available in the university website should be duly filled by the participants and to be submitted to the Coordinator at least 5 days before the commencement of course.

Contact:

Dr. V.Padmapriya
Associative Professor/ School of Basic Sciences
Course coordinator
Bharath Institute of Higher Education and Research
Email id: padmapriyav@gmail.com

HOD

BHARATH INSTITUTE OF HIGHER EDUCATION & RESEARCH
DEPARTMENT OF MICROBIOLOGY AND BIOTECHNOLOGY
SCHOOL OF BASIC SCIENCES

Name List of the Students

Certificate Course on Toxicological techniques

S.NO	REG.NO	NAME OF THE CANDIDATE
1	U21BS001	ABINAYA. M
2	U21BS003	N.DHANUSH
3	U21BS004	A.DIVYA
4	U21BS005	R. ISHWARYA
5	U21BS006	JAYA REKHA
6	U21BS007	JAYA SURIYA V A
7	U21BS009	JISHNU PRADEEP
8	U21BS010	M.LOKESH
9	U21BS011	MALINI. D
10	U21BS012	M. MEGAVARSHINI
11	U21BS013	B. NISHA LAKSHMI
12	U21BS014	NITHYASREE P N
13	U21BS015	DURGA CHENNAKESAVA RAO. PAMARTHI
14	U21BS017	W.ROKHIA KATHUN
15	U21BS018	SANDHIYA.T
16	U21BS019	TAMIL SELVAN.S
17	U21BS020	B VAISHNAVI
18	U21BS021	CHANAKYA HAZARIKA
19	U21BS022	L. KALGINATHAN
20	U21BS023	PURUSOTHAMAN

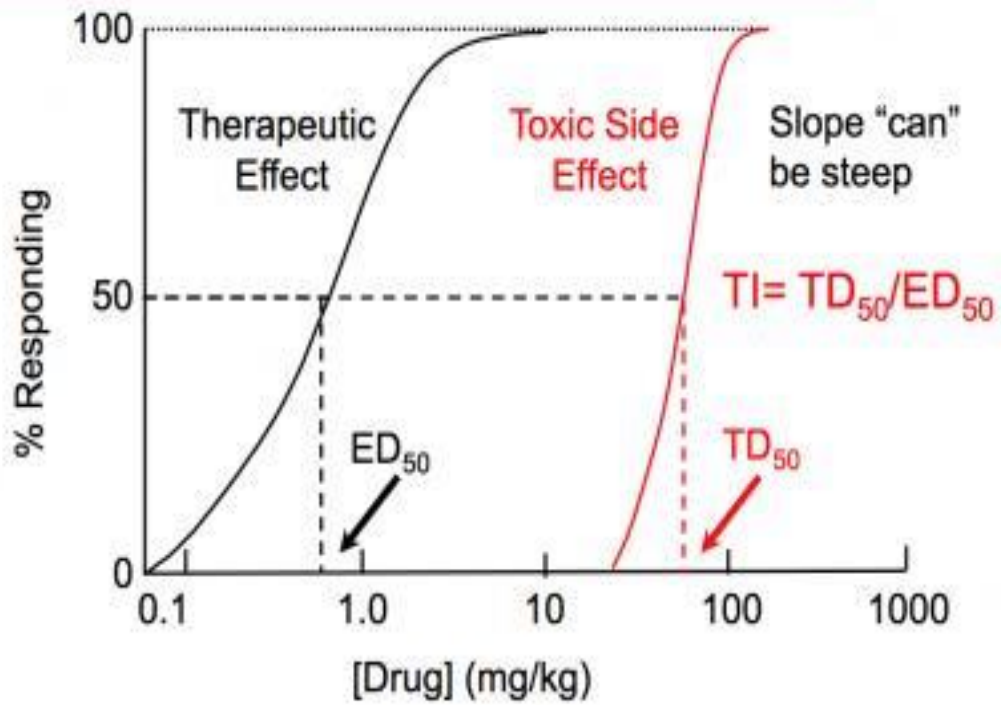
21	U21BS024	D. THANGADURAI
22	U21BS025	VIGNESH K
23	U21BS026	ARUNKUMAR. B
24	U21BS027	MALVIKA SINHA
25	U21BS028	THANDRA KEERTHI
26	U21BS029	RAVIRALA NIKHIL
27	U21BS030	SRIMANTHULA MAHIRTHANA
28	U21BS031	GITANJALI SHARMA
29	U21BS032	D.NETHAJI
30	U21BS033	L. ASHWANI
31	U21BS034	SRINATH.B
32	U21MI001	AKASH K
33	U21MI002	G.BHARATH
34	U21MI003	H.BHARATH
35	U21MI004	CATHERIN JENITA
36	U21MI005	DEVI GOPAL
37	U21MI006	P.DIVYA
38	U21MI007	S K EZHILARASI
39	U21MI008	S. P. GIRINATH
40	U21MI009	HARINI. G
41	U21MI010	KAMALA LAKSHMI S
42	U21MI011	S. KAVIYARASU
43	U21MI012	KEERTHIKA S
44	U21MI013	K.MEGANATHAN

45	U21MI014	PAVITHRA R
46	U21MI015	RAJESH V
47	U21MI016	RAKSHITHA.S
48	U21MI017	SALMAN BASHA .H
49	U21MI018	SAMUVEL B
50	U21MI019	SANDHYA.J
51	U21MI020	M. SELVAPRIYA
52	U21MI021	D.SHERLIN
53	U21MI022	SHERLY KARUNYA
54	U21MI024	SUBHASHREE P.M.
55	U21MI025	L. SUMITHRA
56	U21MI026	SUNDAR.P
57	U21MI027	A.SUTHISH
58	U21MI028	SWAPNA BISWAS
59	U21MI029	P. J. URJITHA
60	U21MI030	T.VASANTH VEDHAMANICKAM
61	U21MI031	VINDHYA.E
62	U21MI032	VINITHA.S

Value Added Course

Certificate course on Toxicological Techniques

Drug Safety - Therapeutic Index





Bharath UNIVERSITY
பாரதி பஸ்கஸைக்கழகம்
BHARATH INSTITUTE OF HIGHER EDUCATION AND RESEARCH
(Declared as Deemed-to-be-University, u/s 3 of the UGC Act, 1956)



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CHENNAI – 73.

Topic : Certificate course on Toxicology

Type of course: Value Added Course

School of Basic sciences

Pre Requisites: +2 Biology

Course Duration: 30 hours

Intended Audience: Basic science students

Industries Applicable to: Schedules, project plans, manage resources and keep track of time of basic science project

Coordinator: Dr. V. Padmapriya

Objective:

1. To provide diagnostic testing for heavy metal content (lead and copper) in serum, urine and blood samples.
2. Learn to conduct and provide in vitro and in vivo scientific data on toxicological and pharmacological effects of selected plants or herbal extracts.
3. Learn to establish toxicology testing using other animal models.
4. Learn to provide educators with a presentation and text on essential toxicology from which they can select material appropriate for local requirements
5. Learn to explain fundamental ideas in toxicology clearly so that students can understand the hazards and risks associated with chemicals
6. Learn to point out the relationship between dose and effect
7. Learn to point out that natural substances may be highly poisonous and manmade substances may be of low toxicity

Outcomes:

- Students ability to explain how substances move through our environment, Toxicology/ Critical care Medicine
- Students ability to explain how effective exposure depends on physiological route of exposure, Managing Patients on Mechanical Ventilators
- Students ability to explain how toxic effects depend upon how the body reacts with chemicals.
- Student ability to work on pesticides, plastics, food particles, and drugs
- Student ability to know the Significance of Hemodialysis, Echocardiography & Ultrasonography in practical Critical Care.

COURSE OUTLINE:

This course guides students through fundamental concepts of Certificate Course on Toxicological Techniques. Concepts and skills needed to benefits in profit and non-profit organisation

Training courses are through and succinct; structured to maximize learning by adopting an approach of explanation, demonstration, and practice teaching. Students are given hands on access to Certificate Course on Toxicological Techniques.

This course provides the knowledge, understanding and practical experience need to forge a rewarding career in research and development in the pharmaceutical, bioscience or healthcare sectors, develop.

- Clinic Entrance and Competency Exams—No class meeting. Assessment exam of previous material in basic science courses -- biochemistry, signal transduction, genetic transcription, nutrition, cell physiology, systemic physiology.
- The instructor will present fundamental pharmacokinetic and pharmacodynamic topics of pharmacology and toxicology—efficacy, effectiveness, potency, biological half-life, bypass of 1st-pass hepatic metabolism, agonist/antagonist bioactivity, affinity and protein receptors, clearance, therapeutic index.
- The instructor will present detoxification pathways and mechanisms—Cytochrome P450 enzyme system, induction, Biotransformation Phase I,

Biotransformation Phase II, bioconjugating agents, drug-drug and drug-herb interactions, elimination pathways, and bioaccumulation.

- The instructor will present applications and examples in toxicology—acetaminophen, ethyl alcohol, polyaromatic hydrocarbons, induced deficiencies, genomic and metabolic impact. The instructor will lead a discussion in chiropractic and holistic perspective to managing toxic exposure.
- The instructor will present applications of pharmacology and toxicology—environmental toxins, metal toxicities, chelation chemistry and therapies. Instructor will post the take-home midterm exam to the Canvas site.
- Midterm Examination due. The instructor will present applications of pharmacology and toxicology—personal care products, phthalates, xenobiotics, nutritional supplementation and interactions, vitamins and minerals, and endocrine disruptors.
- The instructor will present pharmacological applications—hypoglycemic drugs, metformin, glitazones, and sulfonylureas. Instructor will lead discussion of holistic management of prediabetic state and metabolic syndrome.
- The instructor will present pharmacological applications—anxiolytic drugs, benzodiazepines, antidepressant drugs, SSRIs/SNRIs, MAOIs and serotonin syndrome. 9th Week: The instructor will present pharmacological applications—pain medications, NSAIDs, opioids, neurogenic analgesic drugs, salicylism, eicosanoid chemistry, cox-2 inhibitors, respiratory burst and inflammatory response



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CHENNAI – 73.

Value Added Course: Certificate course on Toxicological Techniques
Course Code: BIHER/BIST/MIBT/SPL/2021
Course Duration: 30 Hrs Content of Syllabus

S. No	Syllabus details	No. of lecture Hours	Date	Time	Lecture Name
1	Biochemistry, signal transduction, genetic transcription, nutrition, cell physiology, systemic physiology.	2 Hrs	20.12.2022	10.00 am-12.00 pm	Dr. V. Padmapriya
2	Fundamental pharmacokinetic and pharmacodynamic topics of pharmacology	2 Hrs	21.12.2022	10.00 am-12.00 pm	Dr. V. Padmapriya
3	Cytochrome P450 enzyme system, induction, Biotransformation Phase I, Biotransformation Phase II.	2 Hrs	22.12.2022	10.00 am-12.00 pm	Dr. V. Padmapriya
4	Bio conjugating agents, drug-drug and drug-herb interactions, elimination pathways, and bioaccumulation	2 Hrs	23.12.2022	10.00 am-12.00 pm	Dr. V. Padmapriya
5	Acetaminophen, ethyl alcohol, polyaromatic hydrocarbons, induced deficiencies, genomic and metabolic impact.	2 Hrs	27.12.2022	10.00 am-12.00 pm	Dr. V. Padmapriya
6	Chiropractic and holistic perspective to managing toxic exposure.	2 Hrs	28.12.2022	10.00 am-12.00 pm	Dr. V. Padmapriya
7	Applications of pharmacology and toxicology— environmental toxins, metal toxicities, chelation chemistry and therapies	2 Hrs	29.12.2022	10.00 am-12.00 pm	Dr. V. Padmapriya
8	Instructor will post the take-home midterm exam to the Canvas site.	2 Hrs	30.12.2022	10.00 am-12.00 pm	Dr. V. Padmapriya
9	Toxicology-efficacy, effectiveness, potency, biological half-life	2 Hrs	03.01.2022	10.00 am-12.00 pm	Dr. V. Padmapriya
10	Pharmacological applications—hypoglycemic drugs, metformin, glitazones, and sulfonylureas.	2 Hrs	04.01.2022	10.00 am-12.00 pm	Dr. V. Padmapriya
11	Instructor will lead discussion of holistic management of prediabetic state and metabolic syndrome.	2 Hrs	05.01.2022	10.00 am-12.00 pm	Dr. V. Padmapriya

12	Pharmacological applications—anxiolytic drugs, benzodiazepines, antidepressant drugs, SSRIs/SNRIs,	2 Hrs	06.01.2022	10.00 am-12.00 pm	Dr. V. Padmapriya
13	MAOIs and serotonin syndrome. 9th Week: The instructor will present pharmacological applications—pain medications, NSAIDs,	2 Hrs	07.01.2022	10.00 am-12.00 pm	Dr. V. Padmapriya
14	opioids, neurogenic analgesic drugs, salicylism, eicosanoid chemistry, cox-2 inhibitors,	2 Hrs	10.01.2022	10.00 am-12.00 pm	Dr. V. Padmapriya
15	Respiratory burst and inflammatory response	2 Hrs	11.01.2022	10.00 am-12.00 pm	Dr. V. Padmapriya



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BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY



School of Basic Sciences

CERTIFICATE OF PARTICIPATION

This is to certify that **KALKINATHAN .L** from BIHER has participated in Value added course on “**Certificate Course on Toxicological techniques**”, conducted by School of Basic Science , BIHER, in association with Biozone Research Technologies PVT Ltd.,Chennai-117. from December 20,2021 to January 11,2022.




Dr. V. Padmapriya
Course Co-ordinator

Dr. R. Vasukidevi
Convenor




Dr. A. Muthukumaravel
Dean - Arts and Science

S.no	Email Address	Name of the Participant	Name of the College / Industry	Designation	Department	Phone number	Rating for the certificate course	Feedback
1	ravuaia770@gmail.com	RAVIRALA NIKHIL	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	6385911411	5	Excellent
2	kla148@gmail.com	L. KALGINATHAN	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	8220754401	4	Good
3	n.dhanan2924@gmail.com	N.DHANUSH	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9223674312	5	Excellent
4	viperviper720@gmail.com	A.Divya	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9238886325	5	Valuable Webinar
5	ishwarih3471@gmail.com	R. Ishwarya	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9139254185	5	very informative
6	- jenijaishankar2020@	Jaya Rekha	Bharath Institute of Higher	Student	Department of Microbiology and	8780316072	5	Excellent

	gmail.com -		Education and Research, Chennai.		Biotechnology			
7	kneelaveni636@gmail.com	JAYA SURIYA V A	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	7305615818	3	Good
8	babykanchu69@gmail.com	Jishnu pradeep	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9361167513	3	Good
9	lakshmivelu0912@gmail.com	B. Nisha lakshmi	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	8754478231	4	Informative webinar
10	lavanlavan Kumar662@gmail.com	M.Lokesh	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9962515533	5	useful
11	mahaguru3909@gmail.com	Malini. D	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9962340821	4	Thanks for organizing such a nice webinar
12	kaniravikaniravi@gmail.com	M. Megavarshini	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9941178850	3	Good

13	Manojkumar.p2002mk@gmail.com	Nithyasree P N	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9361664281	4	Good
14	amohanapriya253@gmail.com	Durga Chennakesava rao. Pamarthi	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	7339002019	4	Good
15	aramonika0@gamil.com	W.Rokhia kathun	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	8704001516	4	Nice
16	mmoses3732@gmail.com	SANDHIYA. T	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	7358307269	4	Good
17	Nivedhak477@gmail.com	B VAISHNAVI	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	8754430212	4	very informative
18	pavisri0811@gmail.com	Chanakya Hazarika	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9025465221	4	Useful session
19	22ram2003@gmail.com	Purusothama n	Bharath Institute of Higher Education	Student	Department of Microbiology and Biotechnology	9047334943	4	Good

			and Research, Chennai.					
20	rajsamuel641@gmail.com	Vignesh K	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	63794331 25	4	Informa tive weninar
21	mshellytan ya03@gmail.com	D. THANGAD URAI	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	81051335 01	5	useful
22	angelsowm iya.s@gmail.com	ARUNKUM AR. B	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	73058704 62	5	Good
23	subashreal me05c@gmail.com	Malvika sinha	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	93841714 85	5	Nice
24	agalyamicro@gmail.com	Thandra keerthi	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	94440882 47	4	Informa tive weninar
25	ajith.micro 08@gmail.com	Srimanthula Mahirthana	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	94444620 90	4	useful
26	aneenaanil	Gitanjali	Bharath	Student	Department of	62388521	4	Nice

	1@gmail.com	Sharma	Institute of Higher Education and Research, Chennai.		Microbiology and Biotechnology	98		topics
27	anjalivijayan1002@gmail.com	D.nethaji	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	7591922295	4	Very useful study material
28	dropout2y5@gmail.com	L. Ashwani	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	8838849196	5	Good
29	mc12262002@gmail.com	Srinath.B	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	7825938540	4	Good
30	thulasipriya1022@gmail.com	Akash K	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	8051771999	4	useful
31	crazydayan7@gmail.com	G.Bharath	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	8807242387	3	Not bad
32	rdhanalakhmi.micro@gmail.com	H.Bharath	Bharath Institute of Higher Education and	Student	Department of Microbiology and Biotechnology	9944589334	5	Good

			Research, Chennai.					
33	ezhilarasi12micro@gmail.com	Catherin Jenita	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	7448477025	4	Excellent
34	fayashusain08@gmail.com	Devi Gopal	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	7592896292	4	Good
35	mgowri694@gmail.com	P.Divya	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology		5	Good
36	gowrip0720@gmail.com	S K Ezhilarasi	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	8925646251	4	Good
37	gurumoorthi.micro@gmail.com	S. P. GIRINATH	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9600581866	5	Excellent
38	hariprasadmicro25@gmail.com	Harini. G	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	8610422604	5	Valuable Webinar
39	Keerthana.micro1@g	Kamala	Bharath Institute of	Student	Department of Microbiology	9094016082	4	Informative

	amil.com	lakshmi S	Higher Education and Research, Chennai.		and Biotechnology			weninar
40	kumutha2002.micro@gmail.com	S. Kaviyarasu	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	8939180658	4	Informative weninar
41	liyamole.microbiology@gmail.com	KEERTHIK A S	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	6235481274	5	Very good
42	lokesh.micro3113@gmail.com	K.MEGANATHAN	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9790845873	5	The lecturer gave a detailed explanation
43	mahalakshmi2003.micro@gmail.com	Pavithra R	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9360332391	4	Good
44	manjula.microbiology@gmail.com	RAJESH V	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9150472373	3	Not bad
45	Monikamani1828@gmail.com	Rakshitha.S	Bharath Institute of Higher Education and Research,	Student	Department of Microbiology and Biotechnology	9566177241	5	Good

			Chennai.					
46	Monisha.micro1731@gmail.com	Salman Basha .H	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9087023653	5	Verymuch informative. Trainer explained in a detailed manner
47	muruga1996tec@gmail.com	Samuvel B	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9361476607	4	Good
48	Nitishkumar saravana n97@gmail.com	Sandhya.J	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9578103836	4	Excellent
49	nivetha29032003@gmail.com	M. Selvapriya	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9791055732	5	Excellent
50	meenamari48@gmail.com	D.sherlin	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9514897471	4	Good
51	porchelvan1707.micro@gmail.com	Sherly Karunya	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9791799340	5	Good
52	pradeep30	SUBHASHR	Bharath	Student	Department of	73056195	4	Good

	2002@gmail.com	EE P.M.	Institute of Higher Education and Research, Chennai.		Microbiology and Biotechnology	16		
53	priyadhars hinimicro0 703@gmail l.com	L. Sumithra	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	88256980 46	4	Good
54	rameshpus hpa.micro2 003@gmail l.com	Sundar.p	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	90259774 83	4	Very useful
55	senaraj005 @gmail.co m	A.suthish	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	90037958 83	5	Informa tive weninar
56	hi.micro@ gmail.com	Swapna Biswas	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	87544235 70	5	Valuabl e Webina r
57	vrvrakul00 3@gmail.c om	P. J. URJITHA	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	99876543 10	4	Valuabl e Webina r
58	phadiyan3@gmail.com	T.vasanth vedhamanick am	Bharath Institute of Higher Education and	Student	Department of Microbiology and Biotechnology	73657900 82	3	Need time manage ment

			Research, Chennai.					
59	dibt.micro@gmail.com	Vindhya.E	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9976356792	3	Okay
60	Devi an@gmail.com	Vinitha.S	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	8735462980	4	Fair