

Ref: BIHER/BIST/MIBT/SPL/2021_

Date:25.09.2021

Permission Letter

From

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

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

Respected Sir.

SUB: Permission to conduct Value Added Course-Regd.

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 the M/s Protein. So please permit us to conduct the value added course on Certificate Course on Molecular Techniques and their applications from 09.10.2021 to 28.11.2021

Thanking you

Vo-Ordinator

Dr. V. JANAKIDEVI, M.Sc., M.Phil., Ph.D.

Associate Professor,
Department of Microbiology and Biotechnology,
Faculty of Arts and Science,
Bharath Institute of Higher Education and Research,
Channai 630 ***.

HOD

R.V. ce

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,
Chennal - 73.



BHARATH INSTITUTE OF HIGHER EDUCATION AND RESEARCH [Declared as Deemed to be University under section 3 of U.G. Act, 1956]

CHENNAL 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

P. Vices

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	U21M1016	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 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.



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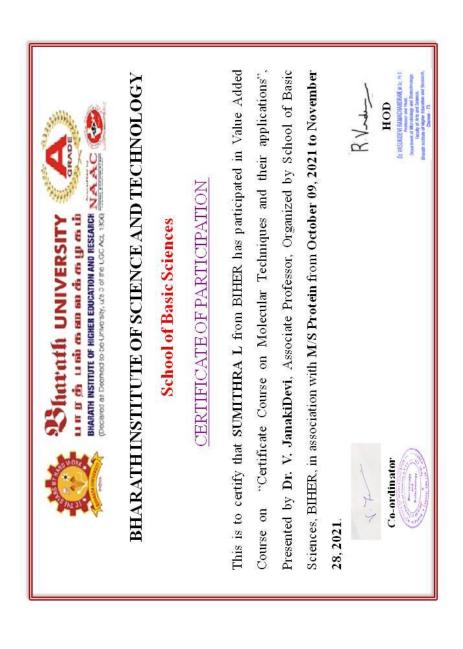
CHENNAI - 73.

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

		No. of			
		lecture			
S.No	Syllabus details	Hours	Date	Time	Lecture Name
	DNA - Introduction - Isolation of chromosomal DNA		00 10 2021	10.00 am-	
1	from bacteria, plant and animals	2 Hrs	09.10.2021	12.00 pm	Dr.V.Janaki devi
1	Types of isolation techniques - Agarose Gel	21113		12.00 pm	D1. V.Sanaki devi
	electrophoresis - Determination of DNA using		10.10.2021	10.00 am-	
2	qualitative and quantitative analysis.	2 Hrs	1011012021	12.00 pm	Dr.V.Janaki devi
	1		1 5 10 2021	10.00 am-	
3	Isolation of plasmid DNA - Quantification methods.	2 Hrs	16.10.2021	12.00 pm	Dr.V.Janaki devi
	RNA - Introduction - Types of RNA - Isolation of		17.10.2021	10.00 am-	
4	RNA from bacteria, plant and animals	2 Hrs	17.10.2021	12.00 pm	Dr.V.Janaki devi
	RNA - Types of isolation techniques - Agarose Gel	2 1115	22.10.2021	10.00 am-	DIVIOUNUI GOVI
5	electrophoresis	2 Hrs	23.10.2021	12.00 pm	Dr.V.Janaki devi
	Determination of RNA using qualitative and			•	
	quantitative analysis.		24.10.2021	10.00 am-	
6	•	2 Hrs		12.00 pm	Dr.V.Janaki devi
	PCR analysis - Primer Design - Annealing Temp		30.10.2021	10.00 am-	
7	setting - PCR Cocktail preparation	2 Hrs	30:10:2021	12.00 pm	Dr.V.Janaki devi
	Types and Applications - Interpretation of PCR		31.10.2021	10.00 am-	
8	analysis	2 Hrs		12.00 pm	Dr.V.Janaki devi
0	DE DOD C	0.11	06.11.2021	10.00 am-	D W I 1' 1 '
9	RT PCR - Gene expression studies	2 Hrs		12.00 pm 10.00 am-	Dr.V.Janaki devi
10	DNA sequencing	2 Hrs	07.11.2021	10.00 am- 12.00 pm	Dr.V.Janaki devi
10	Protein analysis - Isolation - Quantification - SDS	2 1118		12.00 pm	Di. V.Janaki devi
11	PAGE	2 Hrs	13.11.2021	12.00 pm	Dr.V.Janaki devi
- 11	2D Gel Electrophoresis - Blotting Techniques -	2 1113		10.00 am-	Di. v.sunuki devi
12	Introduction	2 Hrs	14.11.2021	12.00 pm	Dr.V.Janaki devi
			20.11.2021	10.00 am-	
13	Blotting Techniques, types and applications	2 Hrs	20.11.2021	12.00 pm	Dr.V.Janaki devi
	Applications of molecular techniques - Disease		21.11.2021	10.00 am-	
14	diagnosis	2 Hrs	21.11.2021	12.00 pm	Dr.V.Janaki devi
			27.11.2021	10.00 am-	
15	Identification of strains	1 Hrs	27.11.2021	11.00 pm	Dr.V.Janaki devi
1.0		4 77	28.11.2021	11.00 am-	D 111
16	Molecular markers and their applications	1 Hrs		12.00 pm	Dr.V.Janaki devi

Value Added Course

Certificate Course on Molecular Techniques and their applications



S.no	Email Address	Name of the Participant	Name of the College / Industry	Design ation	Department	Phone number	Rating for the certific ate course	Feed back
1	abi066114@gmail.c om	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@g mail.com	DHANUSH N	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9043474227	4	Good
3	info@kavihairenterp rises.com	DIVYA A	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9789060586	4	Excellent
4	ishwaryaishwarya43 1@gmail.com	ISHWARYA R	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9361209819	5	Excellent
5	preethamunusamy72 043@gmail.com	JAYA REKHA M	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	7695993798	4	Good
6	ajasuriya1246@gma il.com	JAYASURIYA V A	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9345393870	4	Good
7	bpradeep2010@yah oo.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@gma il.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	MEGAVARSH INI M	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9841644151	5	Informative weninar
11	shanbharathiraj@gm ail.com	NISHA LAKSHMI B	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9444029830	5	Valuable Webinar
12	nithyasree469@gma il.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@gmai l.com	ROKHIA KATHUN W	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9884441448	3	Okay
15	murugavelmurugave 10106@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	chanakyahazarika15 1@gmail.com	CHANAKYA HAZARIKA	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	8472910655	4	Excellent
19	kalkinathan11@gma il.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.co m	VIGNESH K	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	6382562533	5	Excellent
23	arunsweet8825@gm ail.com	ARUNKUMAR B	Bharath Institute of Higher Education	Student	Department of Microbiology and Biotechnology	7401240188	5	Valuable Webinar

			and Research,					
			Chennai.					
24	sinhamalvika03@g mail.com	MALVIKA SINHA	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	8002197042	4	Informative weninar
25	thandra78@gmail.c om	THANDRA KEERTHI	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9282147433	4	Informative weninar
26	nikhilravirala@gmai l.com	NIKHIL	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9550281138	5	Very good
27	srimanthulamahirtha na04@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	sharmagitanajali780 1@gmail.com	GITANJALI SHARMA	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	8009805388	4	Good
29	nethajidhansekaran2 002@gmail.com	NETHAJI D	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9842212019	3	Not bad
30	akashk090204@gm ail.com	AKASH K	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9500078585	5	Good
31	johnnydepp1336@g mail.com	BHARATH G	Bharath Institute of Higher	Student	Department of Microbiology and	7305831336	4	Nice

			Education		Biotechnology			
			and Research, Chennai.					
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@g mail.com	CATHERIN JENITA S	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9677072019	4	very informative
34	devig682004@gmai l.com	DEVI G	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9943673705	4	Useful
35	divyajoe1619@gmai 1.com	DIVYA P	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9003189831	4	Good
36	girinathknight42@g mail.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@gmai l.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,		and Biotechnology			
40	keerthukutty230@g mail.com	KEERTHIKA S	Chennai. Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9940462003	4	Informative weninar
41	megakarth172@gma il.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	rakshithasrinivasan8 92@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@gmai 1.com	SANDHYA.J	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	8122558108	4	Good
48	Priya2003sm06gmai 1	SELVA PRIYA M	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	8807469493	5	Good
49	ssherlin39@gmail.c om	SHERLIN D	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	6380183584	5	Valuable Webinar
50	sherlucherub10@gm ail.com	SHERLY KARUNYA N	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@gm ail.com j	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@gm ail.com	SWAPNA BISWAS	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9140640343	5	Useful
56	urjitha754@gmail.c om	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	vasanthvedhamanic kammicro19@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@gma il.com	VINITHA S	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9941420385	4	Good
60	girinathknight42@g mail.com	VINSTAN INFAN A	Bharath Institute of Higher Education and Research, Chennai.	Student	Department of Microbiology and Biotechnology	9176028905	5	Informative weninar