

Pune District Education Association's
Annasaheb Magar Mahavidyalaya, Hadapsar, Pune-411028

Department of Microbiology

Certificate course

““The Techniques in Immunology and Molecular Biology””

Aim:

Certificate course in “The Techniques in Immunology and Molecular Biology” has been designed for students to enrich their knowledge for future career in diagnostic labs.

Objectives:

Students can seek a career in testing of clinical samples. This certificate course program will assist them to gain skills and knowledge about diagnostic tests and data analysis.

Course Structure:

The certificate course comprises of theory and practical sessions. The practical sessions will be extensive at par to the hands on training.

After completion of the certificate course by the students, he/she will be awarded certificate to augment their resume for seeking a fine career in future.

Expected certificate course outcome:

The certificate course outcome is aimed on progression pathways of the student:

- i. Can join industry as Technician in diagnostic lab.
- ii. Can become Entrepreneur in small scale unit
- iii. Can become instructor at vocational / ITIs in the subject.
- iv. Can join Advanced Diploma (Vocational) courses under MLT.





P.D.E.A.'s

Annasaheb Magar Mahavidyalaya, Hadapsar, Pune-28

Department of Microbiology (U.G.)

Date:- 20/12/2019

Notice

Certificate Course for Students of T.Y.B.Sc. (Microbiology)

Department of Microbiology has arranged a Certificate Course on "The Techniques in Immunology and Molecular Biology" from 1st January 2020 to 08th February 2020 of 30 lectures duration. The topics covered during course will be different from your regular syllabus. This will help you in pursuing service in diagnostic labs after graduation.

A certificate will be awarded to those students, who will complete the course successfully.

Interested students should enroll their names before 25th December 2019.

Shundab.R
Time table Incharge

[Signature]
Head

Department of Microbiology
Annasaheb Magar Mahavidyalaya
Hadapsar, Pune - 411028

[Signature]
Principal

Annasaheb Magar Mahavidyalaya,
Hadapsar, Pune-411028.

P.D.E.A.'s
Annasaheb Magar Mahavidyalaya, Hadapsar, Pune-28
Department of Microbiology (U.G.)

Date:- 20/12/2019

Syllabus of Certificate Course

SN	Title of Topic	No. of lecture/s required
1	Calibration of Instruments	01
2	Haemodialysis	01
3	Allergen testing	01
4	Immuno diffusion technique	01
5	Radio Immuno diffusion technique	01
6	Detectors in Diagnostics Test	
	d) Fluorescents	01
	e) Radio labelled	01
	f) Biotin avidin	01
7	Stem cells Biology	01
8	Elispot Assay	01
9	Detection of antigen in cells & tissues	01
10	Isolation of leucocytes sub population	01
11	Fluorescent cell sorter	01
12	Immuno histochemistry	01
13	DNA Array	01
14	DNA sequencing	01
15	Protein Array	01
16	PCR	01
17	Primer design	01
18	Plasmid mapping	01
19	Restriction enzymes	01
20	SDS PAGE	01
21	DNA Hybridization	01
22	r-RNA finger printing	01
23	Mutation detection	01
24	Blotting Techniques	01
25	Molecular diagnostics techniques	01
26	Molecular Biology in forensic science	01
27	Genotoxicity	01

Prepared by:

Dr. Patil N.N.
Mr. Deshpande M.V.
Dr. Khisti U.V.
Dr. Shinde S.R.
Ms Jagtap P.D.
Mrs. Sherkar S.D.
Mrs. Borade U.B.

Approved by

(Handwritten signatures)
MB
SPL
Rajpurohit
Sherkar
BoradeUB

(Handwritten signature)
for Head

Department of Microbiology
Annasaheb Magar Mahavidyalaya
Hadapsar, Pune - 411028

P.D.E.A.'s
Annasaheb Magar Mahavidyalaya, Hadapsar, Pune-28
Department of Microbiology (U.G.)

Date:- 20/12/2019

Time Table of Certificate Course

S.No.	Title of Topic	Name of the Speaker	Date	Timing
1	Calibration of Instruments	Dr.Khisti U.V.	01/01/2020	9.00am to 10.00am
2	Haemodialysis	Dr.Khisti U.V.	02/01/2020	4.30pm to 5.30pm
3	Allergen testing	Dr.Khisti U.V.	03/01/2020	4.30pm to 5.30pm
4	Immuno diffusion technique	Dr.Khisti U.V.	04/01/2020	4.30pm to 5.30pm
5	Radio Immuno diffusion technique	Dr.Shinde S.R.	06/01/2020	9.00am to 10.00am
6	Detectors in Diagnostios Test	Dr.Shinde S.R.	07/01/2020	9.00am to 10.00am
	a) Fluorescents	Dr.Shinde S.R.	08/01/2020	4.30pm to 5.30pm
	b) Radio labelled	Dr.Shinde S.R.	09/01/2020	4.30pm to 5.30pm
	c) Biotin avidin	Mr.Deshpande M.V.	10/01/2020	9.00am to 10.00am
7	Stem cells Biology	Mr.Deshpande M.V.	11/01/2020	9.00am to 10.00am
8	Elispot Assay	Mr.Deshpande M.V.	13/01/2020	9.00am to 10.00am
9	Detection of antigen in cells & tissues	Mr.Deshpande M.V.	14/01/2020	9.00am to 10.00am
10	Isolation of leucocytes sub population	Dr.Patil N.N.	16/01/2020	9.00am to 10.00am
11	Fluorescent cell sorter	Dr.Patil N.N.	17/01/2020	9.00am to 10.00am
12	Immuno histochemistry	Dr.Patil N.N.	20/01/2020	9.00am to 10.00am
13	DNA Array	Mrs.Sherkar S.D.	21/01/2020	9.00am to 10.00am
14	DNA sequencing	Mrs.Sherkar S.D.	22/01/2020	9.00am to 10.00am
15	Protein Array	Mrs.Sherkar S.D.	23/01/2020	9.00am to 10.00am
16	PCR	Mrs.Sherkar S.D.	24/01/2020	9.00am to 10.00am
17	Primer design	Mrs. Borade U.B.	25/01/2020	9.00am to 10.00am
18	Plasmid mapping	Dr.Patil N.N.	27/01/2020	9.00am to 10.00am
19	Restriction enzymes	Mrs. Borade U.B.	28/01/2020	4.30pm to 5.30pm
20	SDS PAGE	Mrs. Borade U.B.	29/01/2020	9.00am to 10.00am
21	DNA Hybridization	Mrs. Borade U.B.	30/01/2020	4.30pm to 5.30pm
22	r-RNA finger printing	Ms.Jagtap P.D.	01/02/2020	9.00am to 10.00am
23	Mutation detection	Mrs. Borade U.B.	03/02/2020	9.00am to 10.00am
24	Blotting Techniques	Ms.Jagtap P.D.	04/02/2020	9.00am to 10.00am
25	Molecular diagnostics techniques	Ms.Jagtap P.D.	05/02/2020	9.00am to 10.00am
26	Molecular Biology in forensic science	Ms.Jagtap P.D.	07/02/2020	9.00am to 10.00am
27	Genotoxicity	Ms.Jagtap P.D.	08/02/2020	9.00am to 10.00am

Shinde R.
Time table Incharge Department of Microbiology
Annasaheb Magar Mahavidyalaya
Hadapsar, Pune - 411028

Amruti S.
Principal
Annasaheb Magar Mahavidyalaya,
Hadapsar, Pune-411028.



PDEA's Annasaheb Magar Mahavidyalaya, Hadapsar, Pune- 411028
 Certificate Course of Microbiology Department (Year 19-20)
 Title :- The Techniques in Immunology and Molecular Biology

Duration : 01/01/2020 to 04/02/2020

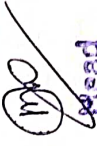
SN	Student Name / Date	01/01/20	02/01/20	03/01/20	04/01/20	05/01/20	06/01/20	07/01/20	08/01/20	09/01/20	10/01/20	11/01/20	12/01/20	13/01/20	14/01/20	15/01/20	16/01/20	17/01/20	18/01/20	19/01/20			
1	Borawake Prathamesh Maruti	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM		
2	Chinchkar Shambhavi Suresh	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	
3	Devadhe Nikita Subhash	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	
4	Dhumal Shreyash Rajendra	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM
5	Gaikwad Manali Mahaveer	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM
6	Ghule Rutuja Devidas	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM
7	Jagdale Purva Mahadev	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM
8	Kalbor Pratik Vaman	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM
9	Kale Preeti Prakash	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM
10	Kale Sahil Ramesh	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM
11	Kamthe Pratik Dnyaneshwar	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM
12	Karale Prajaktia Prakash	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM
13	Khade Sanket Bhausaheb	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM
14	Khaladkar Karan Vitthal	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM
15	Lende Snehal Balu	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM
16	Mane Sunil Dashrath	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM
17	Patil Avishkar Ramrao	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM
18	Pawar Abhishek Ganesh	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM
19	Pawar Apurva Sindya Babu	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM
20	Rakh Bhagyashree Madhav	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM
21	Shivankar Akash Ankush	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM
22	Sonawale Dhananjay Mahadeo	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM
23	Tamhane Shriraj Sandip	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM
24	Vetal Ashwini Lubhan	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM
25	Waghmode Pradip Babu	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM
Name & Sign of the Teacher																							
NRP - Dr. Patil Neha N.																							
MVD - Mr. Deshpande Mangesh V.																							
UVK - Dr. Khisti Ujwala V.																							
SRS - Dr. Shinde Shibhangi R.																							

SDS - Smt. Sherkar Seema D.
 UBB - Smt. Borade Uma B.
 PDJ - Smt. Jagtap Poonam D.

Head
 Department of Microbiology
 Annasaheb Magar Mahavidyalaya
 Hadapsar, Pune - 411028

Duration : 01/01/2020 to 04/02/2020

SN	Student Name / Date	21/01/20	22/01/20	23/01/20	24/01/20	25/01/20	26/01/20	27/01/20	28/01/20	29/01/20	30/01/20	31/01/20	01/02/20	02/02/20	03/02/20	04/02/20	05/02/20	06/02/20	07/02/20	
1	Borawake Prathamesh Maruti	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM
2	Chinchkar Shambhavi Suresh	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM
3	Devadhe Nikita Subhash	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM
4	Dhumal Shreyash Rajendra	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM
5	Gaikwad Manali Mahaveer	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM
6	Ghule Rutuja Devidas	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM
7	Jagdale Purva Mahadev	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM
8	Kalbhori Pratik Vaman	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM
9	Kale Preeti Prakash	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM
10	Kale Sahil Ramesh	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM
11	Kamthe Pratik Dnyaneshwar	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM
12	Karale Prajakta Prakash	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM
13	Khade Sanket Bhausaheb	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM
14	Khaladkar Karan Vitthal	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM
15	Lende Snehal Balu	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM
16	Mane Sunil Dashrath	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM
17	Patil Avishkar Ramrao	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM
18	Pawar Abhishek Ganesh	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM
19	Pawar Apurva Sindyabapu	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM
20	Rakh Bhagyashree Madhav	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM
21	Shivankar Akash Ankush	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM
22	Sonawale Dhananjay Mahadeo	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM
23	Tamhane Shiraj Sandip	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM
24	Vetal Ashwini Lubhan	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM
25	Waghmode Pradip Babu	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM
Name & Sign of the Teacher		Borade	Borade	Borade	Borade	Borade	Borade	Borade	Borade	Borade	Borade	Borade	Borade	Borade	Borade	Borade	Borade	Borade	Borade	Borade
NNP - Dr. Patil Neha N.		SDS	SDS	SDS	SDS	SDS	SDS	SDS	SDS	SDS	SDS	SDS	SDS	SDS	SDS	SDS	SDS	SDS	SDS	SDS
MVD - Mr. Deshpande Mangesh V.		UBB	UBB	UBB	UBB	UBB	UBB	UBB	UBB	UBB	UBB	UBB	UBB	UBB	UBB	UBB	UBB	UBB	UBB	UBB
UVK - Dr. Khisti Ujwala V.		PDJ	PDJ	PDJ	PDJ	PDJ	PDJ	PDJ	PDJ	PDJ	PDJ	PDJ	PDJ	PDJ	PDJ	PDJ	PDJ	PDJ	PDJ	PDJ
SRS - Dr. Shinde Shibhangi R.																				


 Head
 Department of Microbiology
 Annasaheb Magar Mahavidyalaya
 Hadapsar, Pune - 411028



P.D.E.A.'s

Annasaheb Magar Mahavidyalaya, Hadapsar, Pune-28


Department of Microbiology (U.G.)


Date:- 09/02/2020

REPORT

On Certificate Course for Students of T.Y.B.Sc. (Microbiology)

Department of Microbiology has conducted a Certificate Course on "The Techniques in Immunology and Molecular Biology" from 1st January 2020 to 08th February 2020 of 30 lectures duration. This course was conducted for pursuing service in diagnostic labs after graduation. Twenty five students participated and completed the course.


Course
coordinator


Head
Department of Microbiology
Annasaheb Magar Mahavidyalaya
Hadapsar, Pune - 411028

Vice principal


Principal
Principal
Annasaheb Magar Mahavidyalaya,
Hadapsar, Pune-411028.



P. D. E. A's Annasahab Nagar Mahavidyalaya,

Hadapsar, Pune - 411028.

C E R T I F I C A T E O F A P P R E C I A T I O N

This certificate is awarded to

Name of the student: Jagadale Purva Mahadev

Class: T.Y. BSc **Year:** 2019 - 20

For successful completion of Certificate course entitled

The Techniques in Immunology and Molecular Biology.

M. Deshpande

N. Patil

R. Joshi

P. M. Malay

P. N. Shelke

Course coordinator
Mr. M. V. Deshpande

Head
Dr. Mrs. N. N. Patil

IQAC Coordinator
Dr. R. P. Joshi

Vice-Principal
Dr. P. P. Malay

Principal
Dr. P. N. Shelke