

Shri Shivaji Education Society's Board for HigherEducationVidyanagarKarad.





YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Course code:-CCF02

DEPARTMENT OF BIOTECHNOLOGY

SHORT TERM COURSE

INDUSTRIAL BIOTECHNOLOGY

2023-24

Index

Total Students: 20

Duration: 03 Months

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Estd. 1958



Il Be One with the downtrodden and the underprivileged Il Shri Shivaji Education Society Karad, Board For Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Vidyanagar, KARAD - 415 124 Dist. Satara (Maharashtra) 02164 - 271356, 271357 Fax: 02164-271356, e-mail: prinyccsk@gmail.com

Reacredited B++ Level by NAAC, Bangalore

AN ISO 9001-2015 CERTIFIED COLLEGE REG. NO.: RQ91/5237

Department of Biotechnology

Year 2023-2024

Syllabus Approved Letter

Date: 01/11/2023

The IQAC Committee has approved the syllabus of the short term course to be conducted by the Department of Biotechnology.

Sr. No.	Name of The Course	Type of The Course
1	Industrial Biotechnology	Short Term Course

Spatil.
Co-ordinator

Short term Course

1QAC/Coordinator

Co-ordinator

Biotech. Dept.

Principal

Estd. 1958



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Department of Biotechnology Certificate course In "Industrial Biotechnology"

Year 2023-2024 Board of Studies (BOS)

Date: 05 /11/2023

Certificate Course in "Industrial Biotechnology" is going to start in the Department of Biotechnology, Yashwantrao Chavan College of Science, Karad. Following committee is constituted for syllabus framing of the said course

Board of Studies (BOS) members

Sr.No	Members	Designation	Signature
1	Principal Dr. S. B. Kengar	Chairman	ann)
2	Prof. Dr. S. H. Burungale	IQAC Coordinator	Jumy .
3	Mrs. J. S . Patil	Course Coordinator	Fratil.
4	Dr. A. A. Raut	Subject Expert	Rand



Course Contents

Unit No.	Title	No. of Hours
1	Biofertilizers:	10
	a) Introduction, overview of various agricultural and	
	biochemical products produced usingmicroorganisms.	
	b) Definition and types, importance of biofertilizers in agriculture.	
	c) Characteristics of biofertilizers – Rhizobium, Azotobacter, Azospirillum, PSB microorganisms, Cyanobacteria, Azolla, Mycorrhizae.	
	d) Production Technology.	
2	Biopesticide Introduction, overview of various agricultura and biochemical products producedusing microorganisms.	10
	a) Definition and types, importance of biopesticides in agriculture b) Characteristics of Biopesticide c) Production Technology.	
3	List of Practical's	.10
	1. Production of Rhizobium biofertilizer.	
	2. Isolation of Azotobacter from soil sample.	
	3. Laboratory production of Azofertilizer using isolate.	
	4. Isolation of Azospirillum from soil.	
	5. Production of Azospirillum biofertilizer.	
	6. Isolation of BGA	



Date: 05/11/2023

All the Students of the B. Sc. III are hereby informed that the Department of Biotechnology is going to run a short-term course entitled as "Industrial Biotechnology" Interested Candidates enrol their names to Mrs. J.S. Patil (course Co-ordinator) on or before 20th November 2023.



Short Term Course
"Industrial Biotechnology"
Year 2023 - 2024
Name of the Enrolled Students

Date: 01 /12/2023

Sr. No.	Roll No.	Name of the Students	Signature
1	3001	Adsule Prathamesh Bhaskar	BAdsule
2	3002	Bhosale Harshvardhan Ajay	HBhosale.
3	3003	Chavan Sanjana Anil	(B)
4	3004	Chavan Sanskar Pratap	Shavon
5	3005	Jadhav Madhura Sudhakar	Madhow
6	3006	Jadhav Rutuja Vikram	Rodhau.
7	3007	Kajave Shritej Rajaram	shrital shrital
8	3008	Kale Saniya Dayanand	5. P. Kale
9	3009	Kolhapure Sayali Vidyasagar	5
10	3010	Kumbhar Nikhil Chandrakant	Kumbhoery,
11	3011	Latey Riya Ranjit	of feel
12	3012	Patil Manasi Arvind	Matil
13	3013	Patil Vedashri Sanjay	Vatil_
14	3014	Salunkhe Rutuja Krushnat	Rhalunkhe
15	3015	Shinde Pranali Shankarrao	sphinde
16	3016	Tate Utkarsha Vasant	Water.
17	3017	Thorat Shivam Dattatray	Shorat
18	3018	Varpe Rutuja Shivaji	Evorpe.
19	3019	Yadav Vaishnavi Prakash	11 imai
20	3020	Mane Rugved	RMone
			11,5



Short Term Course

"Certificate Course in Industrial Biotechnology"

Year 2023-2024
Theory/ Practical Time Table

Dec. 2023 to feb.2024

Lect. Time	Mon	Tues
0.50.0.40	G32	G32
8.50-9.40	JSP	SSN
0.40.10.20	G32	G32
9.40-10.30	VRP	JSP

Pract. Time	SAT
8.50-9.40	Biotechnology Lab
9.40-10.30	JSP/SSN

NR

1 Bracketed Numbers denotes Lecture Hall Numbers.

2 All concerned should note and follow.

3. G: Lecture hall In Golden Jubilee Building

Co- Coordinator

spatil.

Short term course

co-coordinator

Biotech. Dept.

SSNalawade



Short Term Course

"Certificate Course in Industrial Biotechnology"
Year 2023-2024

Date: 28 /11/2023

All the students those who are enrolled their names for this course are hereby informed that their theory lecture is going to start from 4th Dec. 2023. All concerned should note and follow



Short Term Course

"Certificate Course in Industrial Biotechnology"

Year 2023- 2024

Final Exam Question Paper

Marks: 30

Q.1 Choose the correct alternative given below (20)Select the most correct alternative from the following and tick the correct answer in the question paper itself.

- 1. . With our present-day lifestyles, what is a major cause of concern?
- a) Inflation b) Poverty c) Illiteracy
 - d) Environmental Pollution

2 Why is there a need to switch to organic farming?

a) Increasing poverty

- b) Increasing road accidents
- c) Increasing environmental pollution
- d) Increasing population
- 3. Which of the following is not a type of manure?
- a) Farmyard manure
- b) Compost manure
- c) Platinum manure
- d) Green manure
- 4. Which of the following is not used as a bio-fertiliser?
- a)Bacteria
- b)Algae
- c)Cyanobacteri
- 5. Rhizobium is a free-living bacterium that fixes atmospheric nitrogen.
- a)True
- b) False
- 6. Which of the following is not a free-living Nitrogen-fixing bacteria?
- a) Azotobacter
- b) Clostridium
- c) Klebsiella
- d) Xanthomona
- 7. Which of the following is an aerobic nitrogen-fixing bacterium?
- a) Azotobacter
- b) Clostridium c) Rhodospirillum d) Rhodopseudomonas
- 8. Which of the following bacteria cannot fix atmospheric nitrogen?
- a) Nostoc b) Anabaena c) Oscillatoria d) Lactobacillus
- 9. Presence of which of the following elements is required for nitrogen fixation? a)Phosphorus b)Carbon c)Silver d) Oxygen
- 10. In paddy fields, cyanobacteria serve as an important bio-fertiliser. a)True b) False



Q.2) Answer the following in short

(10)

- 1. Write application of biofertilizer in agriculture
- 2. Write characteristics of biofuel



Yashwantrao Chavan College of Science, Karad Department of Biotechnology Short Term Course 2023-24 Industrial Biotechnology Practical Examination

Q.1. Isolation of Azotobacter from soil sample

(20 marks)

Q. 2. Isolation of rhizobium from root nodules

(20 marks)



Yashwantrao Chavan College of Science, Karad Department of Biotechnology

Short term Course – Industrial Biotechnology (2023-24)

Mark list

Roll. No.	Name of Student	Mid- course exam (Out of 30)	Final Exam (Out of 30)	Practical Exam (Out of 40)	Total (Out of 100)
Roll No.	Name of Student	21	24	40	85
3001	Adsule Prathamesh Bhaskar	22	25	40	87
3002	Bhosale Harshvardhan Ajay	21	20	40	81
3003	Chavan Sanjana Anil	21	24	40	85
3004	Chavan Sanskar Pratap	25	25	40	90
3005	Jadhav Madhura Sudhakar	19	27	40	86
3006	Jadhav Rutuja Vikram	21	28	40	89
3007	Kajave Shritej Rajaram	21	26	40	87
3008	Kale Saniya Dayanand	17	24	40	81
3009	Kolhapure Sayali Vidyasagar	21	25	40	86
3010	Kumbhar Nikhil Chandrakant	21	26	40	87
3011	Latey Riya Ranjit	25	20	40	85
3012	Patil Manasi Arvind	19	25	40	84
3013	Patil Vedashri Sanjay	21	27	40	88
3014	Salunkhe Rutuja Krushnat	21	19	40	80
3015	Shinde Pranali Shankarrao	22	20	40	82
3016	Tate Utkarsha Vasant	21	24	40	85
3017	Thorat Shivam Dattatray	21	20	40	81
3018	Varpe Rutuja Shivaji	25	27	40	92
3019	Yadav Vaishnavi Prakash	19	28	40	87



Yashwantrao Chavan College of Science, Karad

Department of Biotechnology

Short term Course – Industrial Biotechnology (2023-24)

CO attainment

Average Attainment	Target Attainment level	Remark
3	Level 5	Target achieved

Course code	Course Title	% of students above 60 % of Final exam marks	Level of attainment Final exam	80% of attainment Level in Final exam (I)	% of students above 80 % of mid-course exam marks	Level of attainment	20% of attainment Level in mid-course exam (II)	Attainment of course(I+II)
Short term	Industrial Biotechnology	93.00	3	2.4	75.00	2	0.4	2.8



	By using below attainment levels 1,2,3 for the Percent of students in B					
	For internal exam					
Level Less than 60% of students scoring more than averag marks						
Level 2	60% - 80% of students scoring more than average marks					
Level 3	more than equal to 80% of students scoring more than average marks					

Short Term Course

"Certificate Course in Industrial Biotechnology"

Year 2023 - 2024

Result

No. of Students Enrolled	No. of Students Appeared	Pass	Fail	Result %
20	20	20	00	100



YASHWANTRAO CHAVAV COLLEGE OF SCIENCE, KARAD

Department of Biotechnology

Short Term Course

"Certificate Course in Industrial Biotechnology"

Year 2023-2024

Report

For this course Total 20 students are enrolled and 20 students are appeared for the exam. This course was conducted in Dec. 2023 to Feb. 2024. Department of Biotechnology Satisfactorily conducted this course.

Chavan College of Solling BIOTECHNOLOGY Soll

Career Oriented Courses/ Certificate Courses/ Add on Courses / Value Added Courses/ Skill Based Courses/ Short Term Courses Year 2023- 24

Sr. No.	Name of Add on /	Duration of the	Number of the
	Certificate Programs Offered	Course	Students Enrolled
1.	Industrial Biotechnolgy	3 Months	20



Short Term Course

"Certificate Course in Industrial Biotechnology"

Year 2023-2024

Attendance Sheet December

							SCOLLIDO	0			
Roll	Name of the Students				Dates and	d Signatu	re of the	Student	S		
No.		4-12-23	5/12/23	9/12/23	Maks	12/12/23	612/13	B112/23	HINDS	23/2/23	26/12/23
3001	Adsule Prathamesh Bhaskar	DBP	BBP	DBP	DBP	ABP	ABP	ABP	ABP	ABP	ABP
3002	Bhosale Harshvardhan Ajay	HBhosalte	HBhosel	e HBhosok	HBhasalt	Heroigh	HPHOSINE	H Bho Soll B	HBhasale	Who the	4Bhorale
3003	Chavan Sanjana Anil	Brava	Drive-	Provin	Bross.	Pravos.	grand.	Douces	Broxo.	Promo,	Draver
3004	Chavan Sanskar Pratap	Thawar	Shavar	Schowar	schooler	Schausen	The state of the s			Schows	schovan
3005	Jadhav Madhura Sudhakar	MS	JUS	IMS	IMS	THIS	TIMB	IM	TIME	7.57.5	FW
3006	Jadhav Rutuja Vikram	RJadhau	Radhas	Badhar	R Tadhas	6 Jadhan	R. Tadho	6. Laghan	R. Todhan	2. Jahou	e Jadhau
3007	Kajave Shritej Rajaram		shrita	shrita	Shrita .	Shritei	Shrita'	shrity	The second second	Switz	Shritel
3008	Kale Saniya Dayanand	5. P. Kale	s.D. Kale	5.0. Kale	s. P. Kale	s.D.kale	S.D. Kale	s. O Kale	5. p. kale	5.D.kale	s.O.kale
3009	Kolhapure Sayali Vidyasagar	G	\$	\$	\$	\$	\$	\$	\$	\$	\$
3010	Kumbhar Nikhil Chandrakant	W.C.X	MC.K	N.C.K	N.c.K	N.CK	M.C.K	NCK	N.c.k	N.c.K	W.F.
3010		McK	WC:K	N.C.K	N.c.K	N.CK	M.C.K	NCK	N.c.k	N.ck	<u></u>



3011	Latey Riya Ranjit	Waley	Water	Katuy	Koly	Notes)	Waterd	Weders	Nates	Notus	Notes
3012	Patil Manasi Arvind	Model	Mpatil	Martin	Mostel	Mate	Modil	Martil	Medil	Matil	Month
3013	Patil Vedashri Sanjay	Plati	Pati	Pati	Pati	Hati	Pati	Patil	Pati	Patie	Patil
3014	Salunkhe Rutuja Krushnat	Q.Salunkhe	R. Sollunkhe	RSdunkhe	Solunkhe	R.Salunkhe	R. Sallunkhe		P. Salunkin	2. Salunthe	Solunkhe
3015	Shinde Pranali Shankarrao		pss 	pss	pss		PSS	PSS	pss 	PSS	PSS.
3016	Tate Utkarsha Vasant		U.V. Tate	JUSTATE	O.V. TOP	O.V.Tate	U.V. fate	U.V. Tota	U.V. Tate	v.v.tate	U.V. Tate
3017	Thorat Shivam Dattatray	s.Thorat	s.Thorat	3. more	S. Thore	- S.Thand	S. Tharat	S. Thorat		-s.Thorat	S.Thord
3018		D		BS. VCTCRE	-		-		B)s varie		BS varge
3019	Yadav Vaishnavi Prakash	Majohnav	Voidmai	Vairmen	Objethment	Voidhou	Voidhnou	Vaikhna	Vilhnout	Obidhrax	Vaidhnow
3001	Adsule Prathamesh Bhaskar	Adsules	ads ule	Adsule	Adule	Adsule	Adsule	Adsole	Adsule	Adoutes	Adsule



Short Term Course

"Certificate Course in Industrial Biotechnology"

Year 2023-2024

Attendance Sheet Jan

Roll	Name of the Students				Dates and	l Signatu	re of the	Students	5		
No.		1-1-24	2-1-24	6-1-24	8-1-24	9-1-24	13-1-24	16/1124	201124	22/1/24	23/1/24
3001	Adsule Prathamesh Bhaskar	ABP	ABB	ABP	ABP	ABP	ABP	ABP	ABP	ABP	ABP.
3002	Bhosale Harshvardhan Ajay	Henosale	HBhosale	- HBhosale	HB hosale	-HBhasale	HBhosale	H.Bhosale	uBhasak	HBnosale	HB hosale
3003	Chavan Sanjana Anil	Brane.	grz.	Dr.	Dor	an.	Dring.	Bry:	Que-	Draz.	Onz.
3004	Chavan Sanskar Pratap	schowen	schoulan	schouan	Shouten	schalar	Schower	schowar	schonar	Scholan	sdravan
3005	Jadhav Madhura Sudhakar	TIME	TIME	TIME	TAN	J.MS	334	Ser	TIME	7370	Sinc
3006	Jadhav Rutuja Vikram	Epoplar	e. Todhan	P. Johan	e. tadhar	e Jathay	e. odhav	E.Jadha	6. Tadhan	6. Jadhan	e. Jodhove
3007	Kajave Shritej Rajaram	Shritd	Shrity	shriti	shrity'	shrity'	shrity	Shrity	styltu.	Shrita	shritd
3008	Kale Saniya Dayanand	S.D.Kale	5.0.kale	s.o.kale	S.D. Kale	5.0. Kare	5.0. × are	5.D. Kale	S.O.kale	5.0. Kale	5. Dikale
3009	Kolhapure Sayali Vidyasagar	#	\$	\$	\$	\$	\$. 6	4	\$	\$
3010	Kumbhar Nikhil Chandrakant	M.c.K	H.c.k	M.C.K	N.c.K	N.C.K	M.C.K	M.C.K	Micik	M.C.K	N.C.K

3011	Latey Riya Ranjit	Westerd	Water	Kelley	Water	Hotel	Noted	New	Water	Notes	Rates
3012	Patil Manasi Arvind	Moutil	Mpatle	Montil	Whatir	Wester	Martin	Martin	Matil	Martin	Meetil
3013	Patil Vedashri Sanjay	Adoty	Sarry	Vati	Vatil	Sati	Hati	Patil	Patil	Hatil	Patil
3014	Salunkhe Rutuja Krushnat	R. Salunkhe	Q. Salunkne	R. Salunkhe	2. Schunkne	R. Sallent Ma	R.Salunk	R.salankh	R.salankh	R. Salunkte	R. Salun khe
3015	Shinde Pranali Shankarrao	PSS	PSS	PSS		PSS	PSS_	pss.	pss	PSS.	PSS
3016	Tate Utkarsha Vasant	uvrate	wrote	uvrate	uviare.	WTake	. UVTaec	whole	uviate	.UVTabo	.uvTate_
3017	Thorat Shivam Dattatray			S. Thorat	S. Thorat		1110			S. Thorat	S. Thorat
3018	[문항시] 이 시작하는 것은 것이다. [문화 문화 [문화] 중화 중화 [문화] 다른 이 교육이라고 [문화]	-			R.S. varle			-			R3. Var Re
3019	Yadav Vaishnavi Prakash		Voithnow				Voishran	Vaithan	Voirhnai	claighnan	Dairhor
3001	Adsule Prathamesh Bhaskar	Risano Adsulo	Adsell	Adsule	Adsule	Adsole	Adays	Adaule	Adsule		Adsure



Short Term Course

"Certificate Course in Industrial Biotechnology"

Year 2023-2024

Attendance Sheet Jan - Feb

Roll	Name of the Students				Dates and	l Signatui	re of the	Students			
No.		27/1124	29/1/24	301124	312124	5/2/24	612124	10/2/24	12/2/24	13/2/24	17/2/24
3001	Adsule Prathamesh Bhaskar	ABP	ABP	ABP	ABP	ABP	ABP	ABP	ABP	ABP	ABP.
3002	Bhosale Harshvardhan Ajay	BBhosele	HBhosale	HBhosale	Hishosale	HBhoselle	HBhosale	HBhosale	HBhosale	HBhosale	HBhosale
3003	Chavan Sanjana Anil	Oraz-	Broo.	Dra.	9	Do.	De.	D.	Dr.	B.	Dr.
3004	Chavan Sanskar Pratap						100				
3005	Jadhav Madhura Sudhakar	55	2775	Jims	3:115	7.77	511.	2119	THY	The	7778
3006	Jadhav Rutuja Vikram	e:todray)	Brognes	R. Jadhal	6.jodhon	R. Jodhou	R.Jalla	k. Jalhou	k. Jahan	R. Jadhau	R. Jadhay
3007	Kajave Shritej Rajaram	Shritd	shriti	Shrita	Shvita	shrital	<u>Shrity</u>	Shriti	shrity.	shrity	Smiti
3008	Kale Saniya Dayanand	5.0. Kale	S.D. kale	5.D.Kalo	s.D.kale	S.D. Kale	spikale	s.D.kale	S.Dikale	3. D. Kale	S. D. Kale
3009	Kolhapure Sayali Vidyasagar	6	\$	\$	\$	\$	8	\$		8	\$
3010	Kumbhar Nikhil Chandrakant	N.C.K	N.c.k	M.c.k	N.c.k	N.c.k	N.C.K	N.ck	N.ck	Nc.k	N.c.K

BIOTECHNOLOGY

3011	Latey Riya Ranjit	Water	Wolus	Valus	Westerd.	Hary	Harry	Hous	Theoley	Rolly	Keeles
3012	Patil Manasi Arvind	Mactin	MApatie	Mpatil	Mpatu	Madil	Marite	Marth	Whatin	Martie	Mpatie
3013	Patil Vedashri Sanjay	Pati	Par	Deti	Pati	Asti	Patr	Hatil	Det	What's	Wats
3014	Salunkhe Rutuja Krushnat	& colluntate	Q.Salunkhe	2. Solvenhere	R.Solunkhe	2. Solvenine	Q. Sallankin	A.Salunkh	R.Salunkh	A Salankhe	R.Salunkh
3015	Shinde Pranali Shankarrao	PSS.	PSS -	pss_	PSS	pss_	PSS	BSS -	PSS _	PSS	PSS
3016	Tate Utkarsha Vasant	J.V. Tota	U.V. Texte	U.V. Take	U.V. Tate	UN Porte	U.V. Tota	U.V.Tate	0.V. 40.10	U.V. TOX	U.V. Tate
3017		s. Thorat	S. Thosat	S. Thosat	S. Thosat	Name of the last o	S. Thost	S. Thosat	5. Thooat	S. Thorat	S. Thora
3018	Varpe Rutuja Shivaji	BSVOOPE	Brodge	BScarp	OS/ODDE	COLOTPE	BRONTE	Bross	BROWS	ES/ORE	BRIONES
3019	Yadav Vaishnavi Prakash	vaishnavi	vaishna	vaishnavi	vaishnavi	vaishnow	vaishnain	vaishnovi	vaishnari	vaishnail	Jaishnavi
3020			RMone	R. Mane			R. Mane				R. Mans



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YASHWANTRAO CHAVAV COLLEGE OF SCIENCE, KARAD

Department of Biotechnology

Short Term Course

"Certificate Course in Industrial Biotechnology"

Year 2023-2024

Sr.No.	Criteria	Excellent	Good	Average	Poor
1.	Curriculum Content	18	02	_	_
2.	Gratification about Lecture	19	01	_	(m)
3.	Gratification about Practical	20	00		-
4.	Hands on Training	20	-	-	_
5.	Knowledge get from the course	18	02		_
6.	The course if beneficial for Students and Parents	19	01		_



 $\scriptstyle\rm II$ Be one with the downtrodden and the underprivileged $\scriptstyle\rm II$

Shri Shivaji Education Society, Vidyanagar, Karad Board for Higher Education's, Vidyanagar Karad's

Yashwantrao Chavan College of Science, Karad

Vidyanagar, Karad - 415 124.

 An ISO 9001: 2015 Certified College Reaccredited B⁺⁺ Level by NAAC, Bangalore.







This is to certify that Mr.	Miss. Yoday Vale	chravi et Term Cours	Reakash se (3 Months) in Indi	estial
of Class B.Sc. III	nus completed sites			
Biotechnology			conducted by	the department of
CLUSTON STATE OF THE STATE OF T	ing the academic year 20	025-2024		
			λ	9

Course Co-ordnator

Course Co-ordnator

 $\scriptstyle\rm II$ Be one with the downtrodden and the underprivileged $\scriptstyle\rm II$

Shri Shivaji Education Society, Vidyanagar, Karad Board for Higher Education's, Vidyanagar Karad's

Yashwantrao Chavan College of Science, Karad

Vidyanagar, Karad - 415 124.

• An ISO 9001 : 2015 Certified College Reaccredited B⁺⁺ Level by NAAC, Bangalore.





Short Term Course Certificate of Completion

of Class B. 50. III has Completed Short Term Course (3)	Months) in Industrial
Biotechnology during the academic year 2023 - 2024	conducted by the department of
The state of the s	

 $\scriptstyle\rm II$ Be one with the downtrodden and the underprivileged $\scriptstyle\rm II$

Shri Shivaji Education Society, Vidyanagar, Karad Board for Higher Education's, Vidyanagar Karad's

Yashwantrao Chavan College of Science, Karad

 Vidyanagar, Karad - 415 124. Reaccredited B⁺⁺ Level by NAAC, Bangalore.
 An ISO 9001 : 2015 Certified College





Short Term Course Certificate of Completion

This is to certify that	Mr./Miss. Jadhav Madhura Sud	bakaa.
of Class B.Sc. TT	has Completed Short Term Course (3 Mos	
Biotechnology		conducted by the department of
	during the academic year 2023 - 2024	

Course Co-ordnator

II Be one with the downtrodden and the underprivileged II

Shri Shivaji Education Society, Vidyanagar, Karad Board for Higher Education's, Vidyanagar Karad's

Yashwantrao Chavan College of Science, Karad

• Vidyanagar, Karad - 415 124.•

Reaccredited B⁺⁺ Level by NAAC, Bangalore.
 An ISO 9001 : 2015 Certified College





Short Term Course Certificate of Completion

This is to certify that Mr./Miss. Thorest Shivam Dal	talear
of Class B.Sc. III has Completed Short Term Course (3)	
Biotechnology.	conducted by the department of
during the academic year 2023 - 2024	







 $\scriptstyle II$ Be one with the downtrodden and the underprivileged $\scriptstyle II$

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Short Term Course Certificate of Completion

This is to certify that Mr./Miss. kajave shrifej Rajavam
of Class B.5c.711 has Completed Short Term Course (3 Months) in Industrial
Biotechnology conducted by the department of
during the academic year 2023 - 2024

Course Co-ordnator

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Short Term Course Cottlette of Completion

This is to certify that Mr./Miss. Chavan Sanjana Anil
of Class B-Sc TIL has Completed Short Term Course (3 Months) in Industrial
Biotechnology conducted by the department of
Biotechnology during the academic year 2023 - 2024
Course Co-ordinator Head of the Department IQAC Co-ordinator Principal

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Short Term Course Cettificate of Completion

This is to certify that Mr./Miss	Rutyja Vikson	
of Class B·Sc III has Completed Short Te	erm Course (3 Months) in	lustrial
Biotechnology	conducted by th	e department of
Biotechoology during the academic year 2023	- 20 24	
Spatil. Head of the Department	Zumy	and less

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Short Term Course Cettificate of Completion

This is to certify that Mr.,		Riga R		
of Class B.Sc. TIT	has Completed Short Terr	n Course (3 Mo	onths) in	Loieteubo
Biotechnology			_ conducted by	y the department of
Biotechnology dur	ing the academic year 2023 -	2024		
TSPatil.	Head of the Department	HOAG CO-	ordinator	Principal

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Short Term Course Cottlicate of Completion

This is to certify that Mr./Miss. Take Utkgosha Vasant of Class B-Sc. III has Completed Short Term Course (3 Months) in Industrial Conducted by the department of			
		This is to certify that Mr./Miss. Tate Utkasha Vasoo	}
Biotechnoology conducted by the department of	oj	of Class B-Sc. The has Completed Short Term Course (3 Months) in	Industrial
	1	<u>Riotechnoology</u> conducted	by the department of
Biotechnology during the academic year 2025 - 2024	_	Biotechnology during the academic year 2025 - 2024	
1			9/1

SPON.

Course Co-ordnator

Head of the Department

IQAC Co-ordinator

Principal

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Short Term Course Cottificate of Completion

This is to certify that Mr./	Miss. Jarpe	Rutuja	Shivaji	
of Class B.Sc the	has Completed Short	Term Course (3	Months) in	Industrial
Biotechnology		4	conducted	by the department of
Biotechoology duri	ing the academic year 202	5-204		
	18,			9/1
SPOSI	Head of the Department	IOAC	Co-ordinator	Principal