

# VIVEKANAND COLLEGE, KOLHAPUR.

## STATEMENT OF SYLLABUS COVERED

Year : 2021 - 20 22

Term : I<sup>st</sup> / II<sup>nd</sup>

Name of the Teacher : Dr. D. S. Gaikwad.

Department : Biotech (Entire)

Class	Subject	Syllabus Assigned	Syllabus Covered	Syllabus Not to Covered	Remarks
BSc-I Sem I	DSC-A chemistry	Unit -1 Basic concepts in chemistry Acids - Bases Analytic & Industrial chemistry Reaction kinetics	AU covered	—	
		unit -2 Thermodynamics Structure and bonding concept of Hybridization Hydrogen bonding	AU covered	—	

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DEPARTMENT OF BIOTECHNOLOGY (ENTIRE)  
VIVEKANAND COLLEGE, KOLHAPUR  
(EMPOWERED AUTONOMOUS)



*D. Gaikwad*  
(Dr. D. S. Gaikwad)

# VIVEKANAND COLLEGE, KOLHAPUR.

## STATEMENT OF SYLLABUS COVERED

Year : 2021 - 2022

Term : I<sup>st</sup> / II<sup>nd</sup>

Name of the Teacher : Dr. A. A. Patravale

Department : Biotech (Entire)

Class	Subject	Syllabus Assigned	Syllabus Covered	Syllabus Not to Covered	Remarks
BSC-I Sem II	DSC-B Chemistry	Unit - I Fundamentals and mechanistic Basis of organic reaction.  stereochemistry Titrimetric Analysis & Gravimetric Analysis.  chemistry of Natural products.			

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(Dr. A. A. Patravale)

# VIVEKANAND COLLEGE, KOLHAPUR.

## STATEMENT OF SYLLABUS COVERED

Year : 2021 - 2022

Term : I<sup>st</sup> / II<sup>nd</sup>

Name of the Teacher : Miss. N.A. Patel.

Department : Biotech (Entire)

Class	Subject	Syllabus Assigned	Syllabus Covered	Syllabus Not to Covered	Remarks
Bsc-I Sem II	Dsc-B Animal science	unit - 2 - understanding the diversity of life, 3- domain system six kingdom system.	AI covered.		
		unit - 2 - Host parasite relationship. Types of tissues Applied Zoology	AI covered		

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*[Signature]*

(Miss. N. A. Patel)

# VIVEKANAND COLLEGE, KOLHAPUR.

## STATEMENT OF SYLLABUS COVERED

Year : 20 21 - 20 22

Term : I<sup>st</sup> / II<sup>nd</sup>

Name of the Teacher : Dr. A. R. Kasarkar

Department : Biotech (Entire)

Class	Subject	Syllabus Assigned	Syllabus Covered	Syllabus Not to Covered	Remarks
B.Sc-I Sem I	DSC-A plant science	Unit-1 plant Diversity.	All covered	—	
		Taxonomy of Angiosperms.			
		Taxonomy of Angiosperms sexual production in angiosperms.	AU covered	—	
		Unit-2 - Fruit seed, plant Anatomy	AU covered.	—	

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A.R.K.

(Dr. A. R. Kasarkar)



# VIVEKANAND COLLEGE, KOLHAPUR.

## STATEMENT OF SYLLABUS COVERED

Year : 2021 - 2022

Semester: \_\_\_\_\_  
Term : I<sup>st</sup> / II<sup>nd</sup>

Department : Biotech (Entire)

Name of the Teacher : Miss Kumbhar

Department : PSc-B

Class	Subject	Syllabus Assigned	Syllabus Covered	Syllabus Not to Covered	Remarks
BSc-I sem-II	PSc-B biostatistics	Unit-1 - Intro- duction to statistics & collection of data. Graphical representation	Au covered	—	
		Unit-2 - correlation & regression probability & testing of hypothesis.	Au covered	—	
		Limits of probability.			

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S.K.  
(Miss. Kumbhar)

# VIVEKANAND COLLEGE, KOLHAPUR.

## STATEMENT OF SYLLABUS COVERED

Year : 2021 - 2022

Term : I<sup>st</sup> / II<sup>nd</sup>

Name of the Teacher : Miss. V. B. Kankekar

Department : Biotechnology (Entire)

Class	Subject	Syllabus Assigned	Syllabus Covered	Syllabus Not to Covered	Remarks
B.Sc. - III	Basics in Genetic Engineering	Unit - I	} All covered	-	
Sem - IV	BSE-BJT-E	- Enzymes in r-DNA technology			
		- Bacteriophage vectors			
		- Plant vector - Nucleic acid hybridization.			
		Unit - II	} All covered	-	
		- DNA sequencing & Blotting technique			
		- Probe preparation - Radiolabelling			

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Permit  
 (Miss. V. B. Kankekar)

Class	Subject	Syllabus Assigned	Syllabus Covered	Syllabus Not to Covered	Remarks
B.Sc. - III	DSE-1355-F				
sem-VI		Unit - I			
	Advances in Genetic Engineering	- Isolation of Gene - PCR & its application - Genomic library - Primer designing	All covered	—	
		Unit - II			
		- cloning methodologies - Screening of recombinants - Applications of r-DNA technology	All covered	—	

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*Rmkulka*  
(Miss. V. B. Kankekar)  
(Signature of the Teacher)

# VIVEKANAND COLLEGE, KOLHAPUR.

## STATEMENT OF SYLLABUS COVERED

Year : 2021-2022

Term : I<sup>st</sup> / II<sup>nd</sup>

Name of the Teacher : Mr. R. R. Mane.

Department : Biotech (Entire)

Class	Subject	Syllabus Assigned	Syllabus Covered	Syllabus Not to Covered	Remarks
BSC-I sem-I	DSC-A computer	Unit - 1. Computer basics operating system office operation	All covered.		
		Unit - 2 Database Management System. Basic of bioinformatics	All covered		
sem II	DSC-B computer	Unit - 1 - Introduction to programming			





# VIVEKANAND COLLEGE, KOLHAPUR.

## STATEMENT OF SYLLABUS COVERED

Year : 2021 - 2022 →

Term : I<sup>st</sup> / II<sup>nd</sup>

Name of the Teacher : Miss. Shrushti V. Sarnalk

Department : Biotech (EnHre)

Class	Subject	Syllabus Assigned	Syllabus Covered	Syllabus Not to Covered	Remarks
B.Sc J	Microbiology J	Unit J History, introduction, morphology and cytology, viruses Bacterial taxonomy,	All covered	-	
		Unit II concept of sterilization, and staining procedure.	All covered	-	
		06 Practicals	All covered	-	

Class	Subject	Syllabus Assigned	Syllabus Covered	Syllabus Not to Covered	Remarks
B.Sc I	Microbiology	Unit I <u>II</u> Culture media and Pure culture techniques methods of isolation.	All covered		
		Unit II Water microbiology Air microbiology medical microbiology	All covered		
		OS Practicals	All covered.		

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(Signature of the Teacher)  
 (Miss. S.V. Sarnaik)

# VIVEKANAND COLLEGE, KOLHAPUR.

## STATEMENT OF SYLLABUS COVERED

Year : 2021 - 2022

Term : 1<sup>st</sup> / II<sup>nd</sup>

Name of the Teacher : Ms. Parya. D. Patil

Department : Biotechnology (Ent)

Class	Subject	Syllabus Assigned	Syllabus Covered	Syllabus Not to Covered	Remarks
B.Sc I Biotech (Ent) Sem I	Biotechniques & Instrumentation DSC-A	Unit I :- Protein Purification Centrifugation	All covered	—	
		Unit II :- Microscopy, UV-visible spectroscopy	All covered	—	
	Practical	Practical :- 02	All covered	—	
B.Sc I Biotech (Ent) Sem II	Cell Biology DSC-B	Unit I :- Cell Structure	All covered	—	
		Unit II :- Cytoskeleton Assembly	All covered	—	
	Practical	Practical :- 03	All covered	—	



Class	Subject	Syllabus Assigned	Syllabus Covered	Syllabus Not to Covered	Remarks
B.Sc II Biotech (Ent) Sem IV	Plant Tissue Culture DSC 1350 c	Unit I :- Introduction Laboratory, Culture Medium	All covered	—	
		Unit II :- Anther & Pollen Culture, Organogenesis	All covered	—	
	Practical	05	All covered		
B.Sc II Biotech (Ent) Sem IV	Animal Tissue Culture DSC 130 D	Unit I :- Introduction, Culture Media, Characterization	All covered	—	
		Unit II :- Scale up, Contamination, Application	All covered	—	
	Practical	05	All covered	—	

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Priyad Patil

Ms. P. D. Patil  
(Signature of the Teacher)



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## STATEMENT OF SYLLABUS COVERED

Year : 2021-2022

Term : I<sup>st</sup> / II<sup>nd</sup>

Name of the Teacher : Vinaya Namdev More.

Department : Biotech (Entire)

Class	Subject	Syllabus Assigned	Syllabus Covered	Syllabus Not to Covered	Remarks
Bsc-I sem-I	DSC-B 1338 Develop- mental biology.	Unit-1 - plant development - plant meristem organization, embryology, Gametogenesis & fertilization. Unit-2- Animal development - embryology, fertilization, Regeneration.	All covered		
Bsc-II sem-III	DSC-1345 Genetics	unit-1- Mendel law of Inheri- tance, Deviations of mendel law Crossing over	All Covered.		

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Class	Subject	Syllabus Assigned	Syllabus Covered	Syllabus Not to Covered	Remarks
		unit-2 - changes in chromosome, mutation, plasmid Genetic diseases	All covered		
BSc-II (IV)	DSC-1345D Immunology	Introduction of types of immunity cells & organs of immune system. Unit-2 - Ag, Ab structure, reaction Immune response Hypersensitivity	All covered.		

S. Y.  
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V. N. More  
(Signature of the Teacher)



# VIVEKANAND COLLEGE, KOLHAPUR.

## STATEMENT OF SYLLABUS COVERED

Year : 2021 - 2022

Term : I<sup>st</sup> / II<sup>nd</sup>

Name of the Teacher : Miss V.N. Arekar

Department : Biotachnology (Entire)

Class	Subject	Syllabus Assigned	Syllabus Covered	Syllabus Not to Covered	Remarks
B.Sc I Biotachnology (Entire) Sem-I	Biotachnology for Human Welfare - I	Unit I - Introduction to Biotachnology - Origin, Scope & importance, branches of biotachnology Unit II - Agricultural Biot- -echnology, Introduction & scope. Biofertilizer - Defini- -tion, field applications production of biopesticides.	Covered		
B.Sc I Biotachnology (Entire) Sem-I	Biotachnology for Human Welfare - II	- Health Biotachnology - Unit I - Vaccines - History development of forensic science in India. II Forensic science in India & Perspective of forensic science Practical - Human Welfare <del>Practical</del>	Covered		6 practical covered.
B.Sc III Biotachnology (Entire) Sem - II	Developmental Biology (Plant & Animal)	U-I - Plant development Meristem organization. Plant Embryology Gametogenesis U-II - Polyembryony Animal embryology Differentiation & Regeneration	Covered		

Class	Subject	Syllabus Assigned	Syllabus Covered	Syllabus Not to Covered	Remarks
B.Sc III Biotech (Entire) Sem - VI	Application of Biotechnology in health	Unit I- Stem cells & Transgenic technology Vaccines - Principle & Practices Monoclonal Antibodies Unit - II Public Health - Introduction DNA sample preparation, Methods of Diagnosis.			

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# VIVEKANAND COLLEGE, KOLHAPUR.

## STATEMENT OF SYLLABUS COVERED

Year : 2023 - 2024

Term : I<sup>st</sup> / II<sup>nd</sup>

Name of the Teacher : Miss. Srushti V. Sarnik Department : Biotech (Entire)

Class	Subject	Syllabus Assigned	Syllabus Covered	Syllabus Not to Covered	Remarks
B.sc III	Industrial Biotechnology	Unit I			
		Introduction to Industrial Biotechnology microbial screening scale up and Strain Improvement.	All covered	-	
		Unit II			
		Fermentation media, Downstream process and product recovery	All covered	-	
		06 Practicals	All covered	-	

Class	Subject	Syllabus Assigned	Syllabus Covered	Syllabus Not to Covered	Remarks
B.Sc III	Food and microbial Biotechnology	Unit I Microbial Production of industrial Product, Enzyme production, dairy products.	All covered	-	
		Unit II Food spoilages, preservation and toxicity, impact of GM food.	All covered	-	
		06 Practical	All covered	-	

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(Miss. S. V. Sarndar)

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# VIVEKANAND COLLEGE, KOLHAPUR.

## STATEMENT OF SYLLABUS COVERED

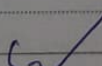
Year : 2021-2022

Term : I<sup>st</sup> / II<sup>nd</sup>

Name of the Teacher : Mr A. L. Upadhye.


Department : Biotechnology

Class	Subject	Syllabus Assigned	Syllabus Covered	Syllabus Not to Covered	Remarks
B.Sc-III	Bioinformatics	Unit I Introduction to Bioinformatics. Introduction to genomics.	All Covered	—	
		Unit I & II Pub Med, Sequence alignment and phylogenetic Analysis	All Covered	—	
		Unit II Drug designing.	All Covered	—	
		Practical 5	All Covered	—	

  
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(Mr A. L. Upadhye)

# VIVEKANAND COLLEGE, KOLHAPUR.

## STATEMENT OF SYLLABUS COVERED

Year : 20 - 20

Term : I<sup>st</sup> / II<sup>nd</sup>

Name of the Teacher : Mr A.L. Upadhye.

Department : Bio technology.

Class	Subject	Syllabus Assigned	Syllabus Covered	Syllabus Not to Covered	Remarks
B.Sc-II	Molecular Biology	Unit-I I Experimental Evidences for DNA as genetic material.	All Covered	-	
		Unit I and II Organisation of genome & Nucleic Acid Biosynthesis	All Covered	-	
		Unit II DNA Replication and DNA Repair	All Covered.	-	
		Practical 5	All Covered.	-	

Class	Subject	Syllabus Assigned	Syllabus Covered	Syllabus Not to Covered	Remarks
B.Sc-II	Molecular Biology-II	Unit I. Transcription. in Prokaryotic and Eukaryotic	All Covered.	—	
		Unit I & II Genetic Code. Translation in Prokaryotes and Eukaryotes.	All Covered.	—	
		Unit II Regulation of Gene expression. DNA Damage.	All Covered	—	
		Practical 5	All Covered	—	

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VIVEKANAND COLLEGE, KOLHAPUR  
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(Mrs A.L. Upadhye)

# VIVEKANAND COLLEGE, KOLHAPUR.

## STATEMENT OF SYLLABUS COVERED

Year : 2021 - 2022

Term : I<sup>st</sup> / II<sup>nd</sup>

Name of the Teacher : Mr. S. G. Kulkarni

Department : Biotech (Entire)

Class	Subject	Syllabus Assigned	Syllabus Covered	Syllabus Not to Covered	Remarks
		plant hormone. Secondary metabolite concept	AU covered	—	
BSC-II (sem III)	DSC-1347 C- metabolic pathway	Unit-1 - Introduction to metabolism, carbohydrate metabolism,	AU covered	—	
		Unit-2 - Carbohydrates lipid metabolism	AU covered.	—	

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Respiration  
Anaerobic respiration



(Mr. S. G. Kulkarni)



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Term : I<sup>st</sup> / II<sup>nd</sup>

Name of the Teacher : Mr. S. G. Kulkarni

Department : Biotech (Entire)

Class	Subject	Syllabus Assigned	Syllabus Covered	Syllabus Not to Covered	Remarks
B.Sc-I	DSC-A	Unit - 1 - origin of life pH, pKa value, nucleic acids	AU covered	—	
Sem-I	biochemi- -stry	unit 2 - carbohy- -drates, lipids physical properties chemical properties	AU covered	—	
Sem-II	DSC-B	Unit - 1 - protein	AU covered	—	
	biochemistry	unit-2 Enzymes	AU covered	—	

Class	Subject	Syllabus Assigned	Syllabus Covered	Syllabus Not to Covered	Remarks
BSc-II (sem III)	DSC1346 C- Biophy- sics & Enzymology	Unit-1 - Atomic Absorption, Spec- troscopy, X-ray crystallography Unit-2 - NMR ESR, Factors affecting catalytic activity of enzyme Allosteric enzyme.			
BSc-II (sem IV)	DSC-1347 D plant biochemi- stry.	Unit-1 - plant water relation photosynthesis. Unit-2 - Intro- duction to			

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