

VIVEKANAD COLLEGE KOLHAPUR (EMPOWERED AUTONOMOUS INSTITUTE)

STATEMENT OF SYLLABUS COVERED

Year- 2024-25

Term-I & II

Name of Teacher: Mr. Ashutosh Laxman Upadhye

Department: P.G. Biotechnology

Class	Subject	Syllabus assigned	Syllabus Covered	Syllabus not to be covered	Remark
M.Sc. I Sem-I	Environmental Biotechnology and Ecology	Unit I & II Environmental Biotechnology			
		Environmental Pollution And Toxicology	All covered	---	
		Unit III & IV			
		Concepts and Function of Ecosystem	All covered	---	
		Unit- IV			
		Electrophoretic techniques Radioisotope techniques	All covered	---	
M.Sc. I Sem-II	Molecular Biology	Unit I and Unit II			
		Experimental Evidence for	All covered	---	

		<p>DNA as a Genetic Material: Properties and Function of •DNA: - Organization of genome, Nucleic Acid Biosynthesis: DNA Replication Prokaryotic and eukaryotic replication DNA Damage: -</p>			
M.Sc. II Sem-III	Advances in Genetic Engineering	<p>Unit- I & II Restriction enzymes Vectors Nucleic Acid Hybridization and Sequencing</p>		---	
		Unit-III & IV			
		<p>Principle of PCR and its use in Genetic engineering Applications of Genetic Engineering</p>	All covered	---	

M.Sc. II Sem-IV	Bioinformatics	Unit-I & II			
		Introduction to Bioinformatics Introduction to Databases Primary Genomic sequence Databases: Overview of Available Bioinformatics: Human Genome Project (HGP) Eukaryotic genomes with special reference to model organisms:	All covered	---	
		Unit-III & IV Phylogenetic Analysis Drug Designing	All covered		

Signature of Head of Department

(Mr A.L.O. Padhy)

M. SC. CO-ORDINATOR
 DEPARTMENT OF BIOTECHNOLOGY
 Signature of Teacher

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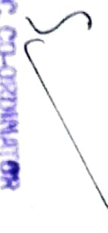
Term-I to IV


Name of Teacher: - **Dr. Mahesh Prakash Marre**

Department: - **P. G. Biotechnology**

Class	Subject	Syllabus assigned	Syllabus Covered	Syllabus not to covered	Remark
M.Sc. I Sem-I	Research Methodology	Unit-I & II	All covered	---	
		Fundamentals of Research Methodology, Interpretation, and results			
		Unit- II & III			
		Report writing, Tools in Research, Research Methodology in Biotechnology	All covered	---	
		Unit- IV			
		Electrophoretic techniques Radioisotope techniques	All covered	---	
M.Sc. I Sem-I	Practical- MIN2IMBT19	Techniques in Environmental Biotechnology & Cell Biology	All covered	---	
M.Sc. I S.m-II	Molecular Biology	Unit-III and Unit-IV			
		Translation in prokaryote and Eukaryote Genetic Code Regulation of gene expression in prokaryote and eukaryote	All covered	---	
M.Sc. II Sem-III	Plant Biotechnology	Unit- I & II			
		Plant Protection Secondary metabolites	All covered	---	
M.Sc. II Sem-III	Practical-Lab course-III	Techniques in Plant Biotechnology Unit-III & IV	All completed	---	

		Transgenic techniques in plant biotechnology. Concept of Plant tissue culture	All covered	---	
M.Sc. II Sem-IV	Animal Biotechnology	Unit-I & II Introduction to animal tissue culture Major equipment's required Establishment of primary cell culture Cell viability and proliferation assays Generation of chimeric, and knockout mice and their characterization. Gene editing	All covered	---	
		Unit-III & IV Livestock improvement Applications of cell culture in veterinary Applications of Stem cell therapies Applications of stem cells in tissue repair and regeneration	All covered		
M.Sc. II Sem-IV	Practical DSC21MBT49	Techniques in Molecular Cell Biology	All completed	---	


M. SC. CO-ORDINATOR
Signature of Head of Department
 VEDANAND COLLEGE, KOLHAPUR
 (2022-23)


LECTURER
DEPARTMENT OF BIOTECHNOLOGY
 VEDANAND COLLEGE, KOLHAPUR
 (2022-23)